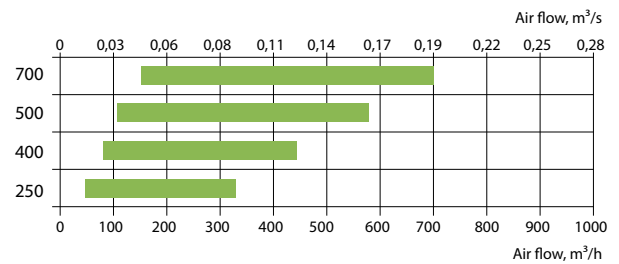


Domekt CF

Air handling units with a counterflow plate heat exchanger



Sizes of Domekt CF units



Advantages of Domekt CF units

Heat energy saving and dehumidification

The counter flow plate heat exchanger maintains high efficiency at a positive outdoor air temperature, which means that during the transitional period, the operating costs are minimal. The humidity in the air of the room is condensed, so this heat exchanger is most suitable for high humidity rooms.

Low noise level

Only perfectly balanced fans with unique geometry are used in all DOMEKT units. All the elements inside the unit are aerodynamically matched. Housings padded with mineral wool and the use of special composite materials ensures a minimum level of noise in the environment.

Enthalpy energy saving

As option it is possible to order unit/s with enthalpic counter flow plate heat exchanger which recovers heat or cold and also controls humidity in premises during winter time.

Totally separated air flows

The supply and exhaust air flows are separated, thus making it possible to utilize heat of the extracted foul air.

Long term efficient operation

The absence of movable parts ensures effective heat exchange and longevity.



Counter flow plate heat exchanger

Advanced counter flow plate heat exchanger

- The patented design ensures the outstanding performance of this exchanger.
- The triangular ducts in the recuperator are arranged so that each one is surrounded by parallel ducts in which the air is in counter flow.
- Each fresh-air duct is surrounded by three ducts filled with warmer exhaust air. Likewise, each duct with exhaust air is surrounded by three fresh-air ducts. This maximizes the surface area over which energy can efficiently be transferred, recaptured and reused.

Enthalpic counter flow plate heat exchanger

- The design uses special patented membranes. Humidity is transferred to supply air – a lower power humidifier may be needed.
- The rooms have a more comfortable microclimate.
- Lower risk of heat exchanger icing.

Anti-frosting Protection. Domekt CF units with counter flow plate heat exchanger and C6 controller are equipped with integrated primary electric heaters for protecting heat exchanger against icing. A special algorithm has been developed – measurement of indoor and outdoor temperature and humidity is being carried out in order to calculate dew point and predict the risk of icing. In the event of increased risk of icing the primary heater is switched on. Such algorithm leads to significant reduction of operating costs and allows to achieve maximum energy efficiency.

Domekt CF range

Unit size	Heat exchanger		Supply/exhaust air filter class		Preheater	Heater			Cooler		Inspection side				Bypass	Control system/panel		
	Condensating	Enthalpic	M5	F7	HE	HE	HW	HCW	CW	DX	R1	R2	L1	L2	Inner	C4		C6
																C4.1	C6.1	C6.2
Domekt CF 250 V	●	○	●	○							○		○		●	●		
Domekt CF 250 F	●	○	●	○	●	●	△	△			○	○	○	○	●		○	○
Domekt CF 400 V	●	○	●	○	●	●	△	△	△	△	○		○		●		○	○
Domekt CF 500 F	●	○	●	○	●	●	△	△	△	△	○	○	○	○	●		○	○
Domekt CF 700 V	●	○	●	○	●	●	△	△	△	△	○		○		●		○	○
Domekt CF 700 H	●	○	●	○	●	●	△	△	△	△	○		○		●		○	○
Domekt CF 700 F	●	○	●	○	●	●	△	△	△	△	○	○	○	○	●		○	○

- standard equipment
- possible choice
- △ ordered separately (duct heater/cooler)

■ Duct connection

H – horizontal
V – vertical
F – false ceiling

■ Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. 0...10 V heater control included in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

■ Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

DX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

■ Inspection side

See p. 116.

■ Bypass

Inner bypass is controlled by smart control system.

■ Control system

C6 Control features:

- Temperature maintenance modes:
Supply air / Extract air / Room / Balance;
- Air flow indication: m³/h; l/s;
- Constant air volume control (CAV);
- Variable air volume control (VAV)*;
- Directly controlled volume (DCV);
- External water coil control;
- External DX unit control;
- Weekly operation schedule;
- Holidays planning;
- Air quality control*;
- Operation on demand*;
- Cool recovery;
- Temperature saving function;
- Free cooling;
- Ventilation control by external contacts;
- Control via internet browser;
- Control with smartphones;
- Filter clogging indication;
- Water mixing system warming-up;
- Rotor warm-up and cleaning function;
- Heat exchanger frost protection;
- Heat exchanger failure indication;
- Water heater frost protection;
- Electric heater overheat protection;
- Low air flow indication;
- Emergency shut down in case of fire;
- Emergency shut down when temperature reaches critical limits;
- Intelligent self-diagnostic;
- Indication of the heat exchanger thermal efficiency (%);
- Indication of heat exchanger energy recovery (kW);
- Energy consumption counters for heater and whole unit (kWh);
- Indication of the whole unit power consumption (kW);
- Specific power (SPI) indication;
- Unit operation parameters history storage and analysis;
- Possibility to choose desired control panel.

* these functions require additional accessories.

Information about control system C4 see in www.komfovent.com.

Domekt CF 250 V

Maximal air flow, m ³ /h	211
Panel thickness, mm	30
Unit weight, kg	41
Supply voltage, V	1~230
Maximal operating current, A	1,7
Thermal efficiency of heat recovery, %	89
Reference flow rate, m ³ /s	0,041
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,44
Filters dimensions BxHxL, mm	145x350x46-M5
Electric power input of the fan drive at reference flow rate, W	33
Electric power input of the fan drive at maximum flow rate, W	90
Electric air heater capacity, kW / Δt, °C	-
Control panel	C4.1
Maintenance space, mm	600



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

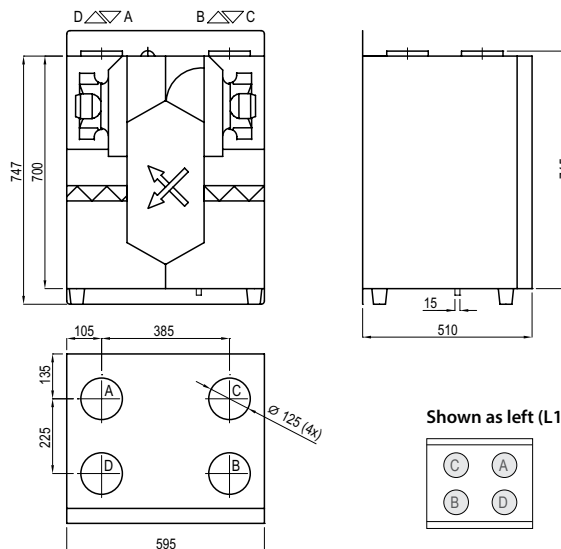
A-weighted sound power level L_{WA}, dB(A) at reference flow rate	
Supply inlet	48
Supply outlet	70
Exhaust inlet	53
Exhaust outlet	70
Casing	49
A-weighted sound pressure level L_{PA}, dB(A) 10 m² normally isolated room, distance from casing – 3 m.	
Surroundings	38

Temperature efficiency

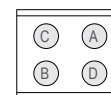
Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	16,6	17,3	17,7	18,1	18,8	22,4	23,2	23,9

indoor +22°C, 20 % RH

Shown as right (R1)

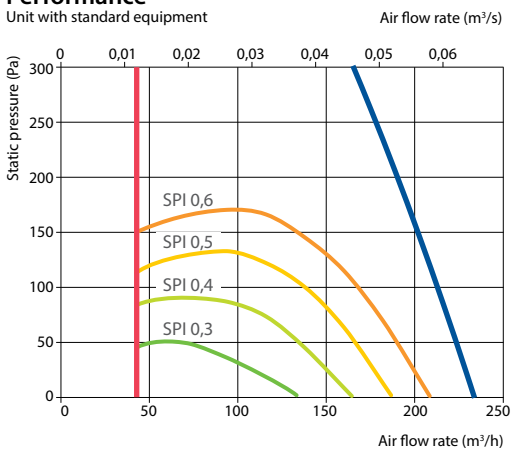


Shown as left (L1)



- A outdoor intake
- B supply air
- C extract indoor
- D exhaust air

Performance



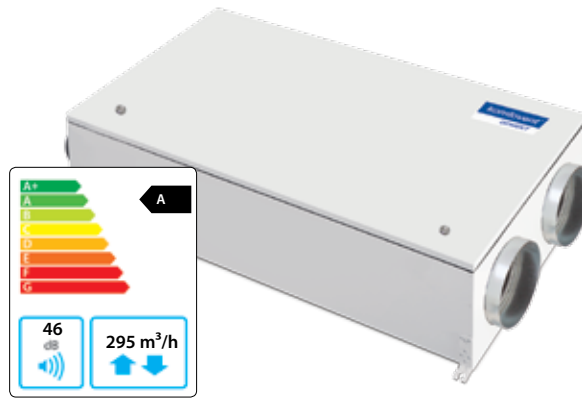
Accessories (p. 108)

Closing damper	AGUJ-M-125+LF230/LM230
Silencer	A/D AGS-125-50-600-M
	B/C AGS-125-50-900-M

Duct electric heater with integrated control	EHC-125-1,0-1f SI/FC
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Domekt CF 250 F

Maximal air flow, m ³ /h	295
Panel thickness, mm	30
Unit weight, kg	52
Supply voltage, V	1~230
Maximal operating current, A	8,3
Thermal efficiency of heat recovery, %	86
Reference flow rate, m ³ /s	0,0574
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,3
Filters dimensions BxHxL, mm	265x250x46-M5
Electric power input of the fan drive at reference flow rate, W	32
Electric power input of the fan drive at maximum flow rate, W	89
Electric air heater capacity, kW / Δt, °C	0,5 / 6,7
Electric preheater capacity, kW / Δt, °C	1 / 13,4
Control panel	C6.1 / 6.2
Maintenance space, mm	300



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA} , dB(A) at reference flow rate

Supply inlet	53
Supply outlet	65
Exhaust inlet	54
Exhaust outlet	65
Casing	46

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35
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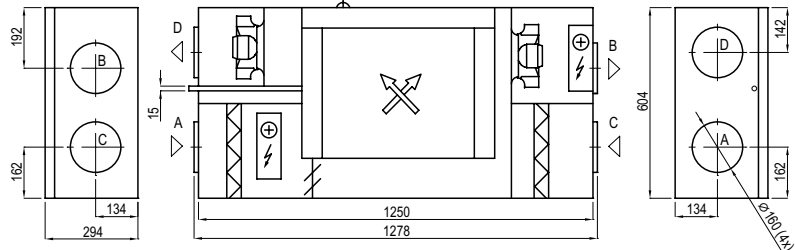
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	16,1*	17,0*	17,0*	17,0	17,9	22,6	23,5	24,4

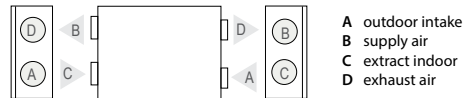
indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as right (R1)

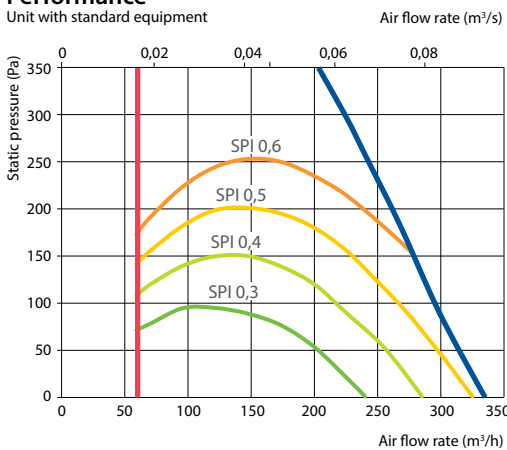


Shown as left (L1)



Performance

Unit with standard equipment



Accessories (p. 108)

Closing damper	AGUJ-M-160+LF230/LM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160

PPU	PPU-HW-3R-15-0,4-W1
2-way valve (water heater)	VVP47.10-0,4
Air heater-cooler	DHCW-160
2-way valve (water cooler)	VVP47.10-1,6

Domekt CF 400 V

Maximal air flow, m ³ /h	390
Panel thickness, mm	30
Unit weight, kg	54
Supply voltage, V	1~230
Maximal operating current, A	HE10.5
Thermal efficiency of heat recovery, %	88
Reference flow rate, m ³ /s	0,0758
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,22
Filters dimensions BxHxL, mm	350x235x46-M5
Electric power input of the fan drive at reference flow rate, W	33
Electric power input of the fan drive at maximum flow rate, W	91
Electric air heater capacity, kW / Δt, °C	0,5 / 5,1
Electric preheater capacity, kW / Δt, °C	1,5 / 15,3
Control panel	C6.1 / 6.2
Maintenance space, mm	600



Acoustic data

A-weighted sound power level L_{WA} , dB(A)
at reference flow rate

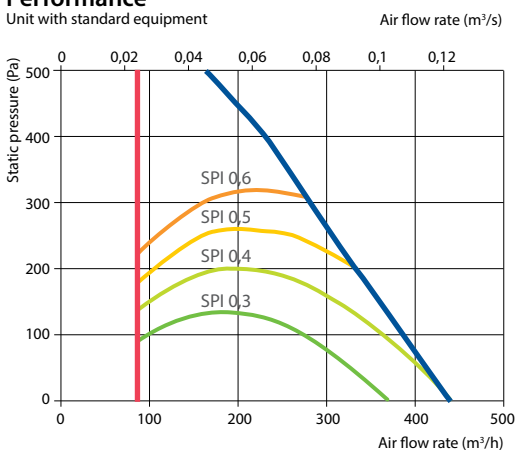
Supply inlet	58
Supply outlet	53
Exhaust inlet	58
Exhaust outlet	53
Casing	41

A-weighted sound pressure level L_{PA} , dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	31
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Performance

Unit with standard equipment



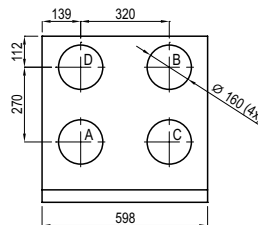
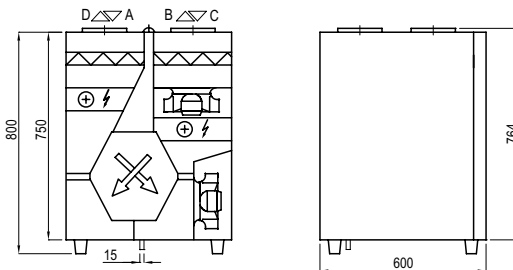
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,4*	17,9*	17,9*	17,9	18,6	22,5	23,2	24,0

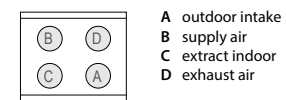
indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)



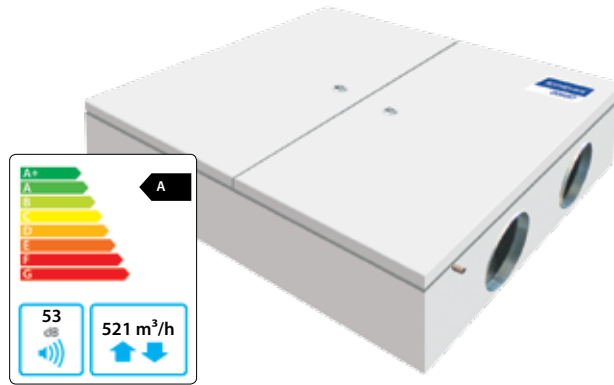
Accessories (p. 108)

Closing damper	AGUJ-M-160+LF230/LM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W1

2-way valve (water heater)	VVP47.10-0,4
Air heater-cooler	DCW-0,4-3 / DHCW-160
2-way valve (water cooler)	VVP47.10-1,6
DX cooler	DCF-0,4-3

Domekt CF 500 F

Maximal air flow, m ³ /h	521
Panel thickness, mm	30
Unit weight, kg	93
Supply voltage, V	1~230
Maximal operating current, A	HE 11,7
Thermal efficiency of heat recovery, %	87
Reference flow rate, m ³ /s	0,1013
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,35
Filters dimensions BxHxL, mm	484x250x46-M5
Electric power input of the fan drive at reference flow rate, W	67
Electric power input of the fan drive at maximum flow rate, W	171
Electric air heater capacity, kW / Δt, °C	0,5 / 3,8
Electric preheater capacity, kW / Δt, °C	1,5 / 11,4
Control panel	C6.1 / 6.2
Maintenance space, mm	520



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA} , dB(A)
at reference flow rate

Supply inlet	56
Supply outlet	70
Exhaust inlet	56
Exhaust outlet	70
Casing	53

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	42
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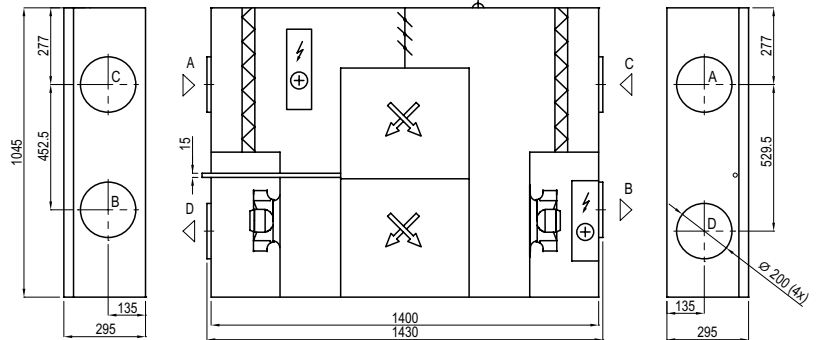
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,4*	18,0*	18,2*	18,2	18,8	22,4	23,2	24,0

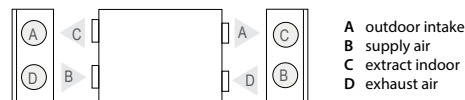
indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as right (R2)

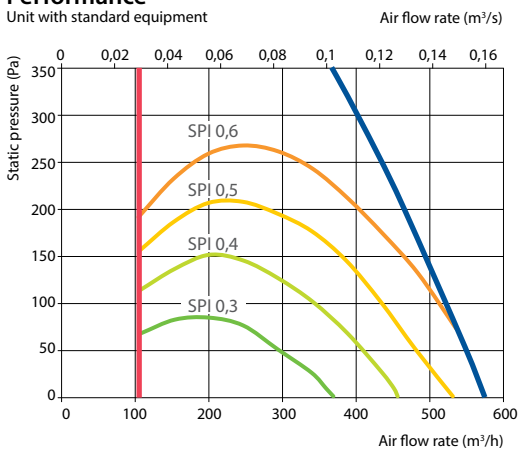


Shown as left (L2)



Performance

Unit with standard equipment



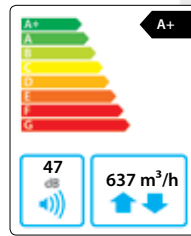
Accessories (p. 108)

Closing damper	AGUJ-M-200+LF230/LM230
Silencer	A/D AGS-200-50-600-M
	B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,4-W1

2-way valve (water heater)	VVP47.10-0,4
Air heater-cooler	DCW-0,5-3 / DHCW-200
2-way valve (water cooler)	VVP47.10-1,6
DX cooler	DCF-0,5-3

Domekt CF 700 V

Maximal air flow, m ³ /h	637
Panel thickness, mm	50
Unit weight, kg	100
Supply voltage, V	1~230
Maximal operating current, A	HE 11,7
Thermal efficiency of heat recovery, %	88
Reference flow rate, m ³ /s	0,1239
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,30
Filters dimensions BxHxL, mm	390x300x46-M5
Electric power input of the fan drive at reference flow rate, W	73
Electric power input of the fan drive at maximum flow rate, W	179
Electric air heater capacity, kW / Δt, °C	0,5 / 3,1
Electric preheater capacity, kW / Δt, °C	1,5 / 9,3
Control panel	C6.1 / 6.2
Maintenance space, mm	1000



The photo is intended for informational purposes only, exact details may vary.



C6.1



C6.2

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	47
Supply outlet	67
Exhaust inlet	47
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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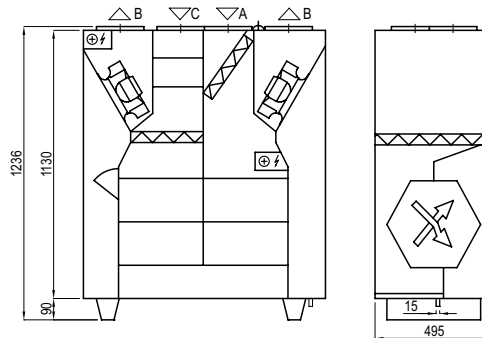
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,3*	17,9*	18,1*	18,1	188	22,4	23,2	23,9

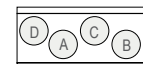
indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as left (L1)



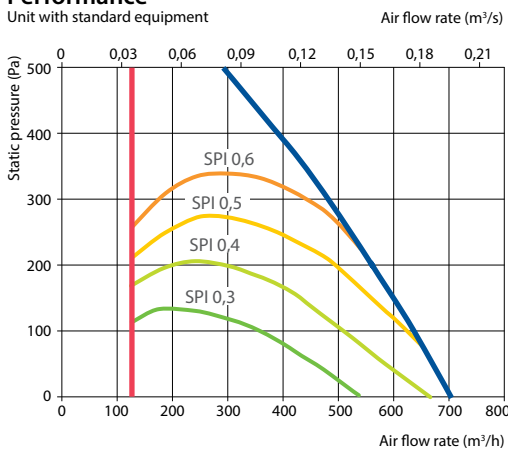
Shown as right (R1)



- A outdoor intake
- B supply air
- C extract indoor
- D exhaust air

Performance

Unit with standard equipment



Accessories (p. 108)

Closing damper	AGUJ-M-200+LF230/LM230
Silencer	A/D AGS-200-50-600-M
	B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,4-W1

2-way valve (water heater)	VVP47.10-0,4
Air heater-cooler	DCW-0,7-5 / DHCW-200
2-way valve (water cooler)	VVP47.10-2,5
DX cooler	DCF-0,7-5
Cooling unit	MOU-18HFN6-KA8243

Domekt CF 700 H

Maximal air flow, m ³ /h	651
Panel thickness, mm	50
Unit weight, kg	115
Supply voltage, V	1~230
Maximal operating current, A	HE 11,7
Thermal efficiency of heat recovery, %	88
Reference flow rate, m ³ /s	0,1266
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,29
Filters dimensions B×H×L, mm	390×300×46-M5
Electric power input of the fan drive at reference flow rate, W	72
Electric power input of the fan drive at maximum flow rate, W	178
Electric air heater capacity, kW / Δt, °C	0,5 / 3,0
Electric preheater capacity, kW / Δt, °C	1,5 / 9,1
Control panel	C6.1 / 6.2
Maintenance space, mm	500



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA} , dB(A) at reference flow rate

Supply inlet	47
Supply outlet	67
Exhaust inlet	47
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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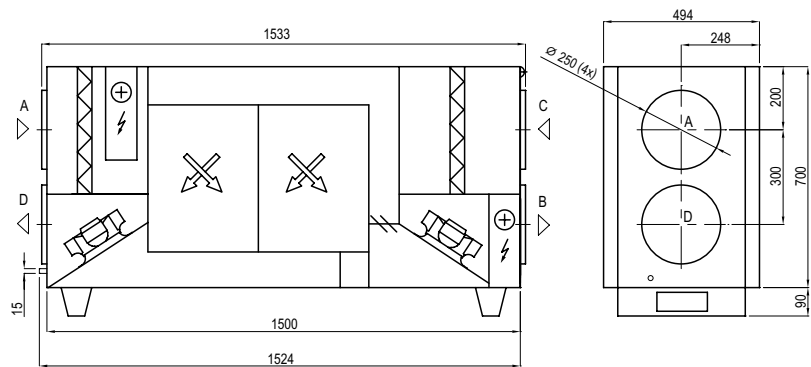
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,2*	17,7*	18,0*	18,0	18,8	22,4	23,2	23,9

indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as right (R1)

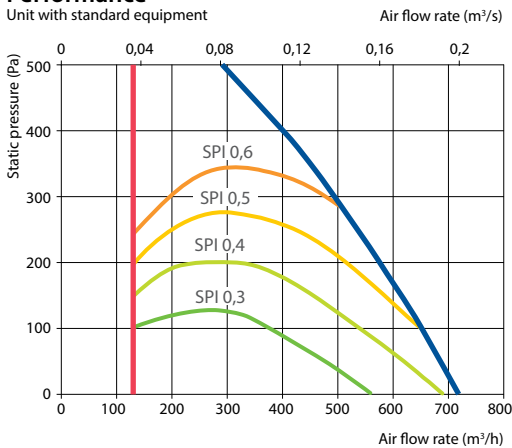


Shown as left (L1)



Performance

Unit with standard equipment



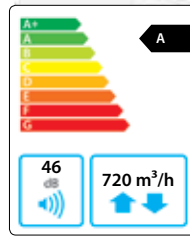
Accessories (p. 108)

Closing damper	AGUJ-M-250+LF230/LM230
Silencer	A/D AGS-250-50-600-M B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W1

2-way valve (water heater)	VVP47.10-0,63
Air heater-cooler	DCW-0,7-5 / DHCW-250
2-way valve (water cooler)	VVP47.10-2,5
DX cooler	DCF-0,7-5
Cooling unit	MOU-18HFN6-KA8243

Domekt CF 700 F

Maximal air flow, m ³ /h	720
Panel thickness, mm	30
Unit weight, kg	81
Supply voltage, V	1~230
Maximal operating current, A	HE 11,7
Thermal efficiency of heat recovery, %	82
Reference flow rate, m ³ /s	0,14
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,27
Filters dimensions BxHxL, mm	400x300x46-M5
Electric power input of the fan drive at reference flow rate, W	70
Electric power input of the fan drive at maximum flow rate, W	177
Electric air heater capacity, kW / Δt, °C	0,5 / 2,8
Electric preheater capacity, kW / Δt, °C	1,5 / 8,3
Control panel	C6.1 / 6.2
Maintenance space, mm	450



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	66
Exhaust inlet	53
Exhaust outlet	66
Casing	46

A-weighted sound pressure level L_{PA}, dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35
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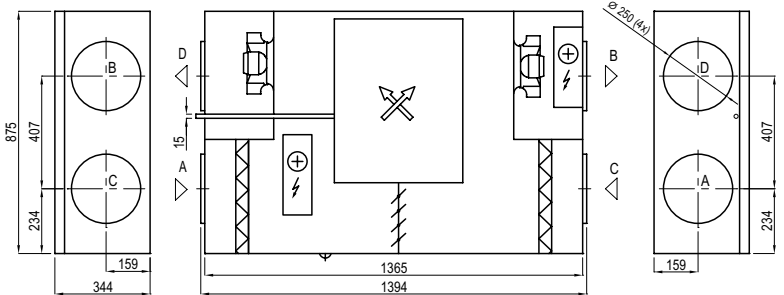
Temperature efficiency

Outside temperature, °C	Winter					Summer		
	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	15,5*	16,1*	16,8*	16,8	17,7	22,5	23,5	24,4

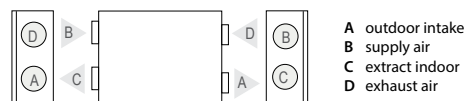
indoor +22°C, 20 % RH

* calculations made after evaluation of the preheater.

Shown as right (R1)

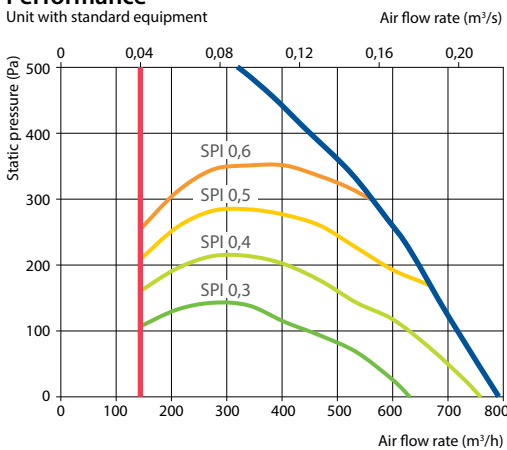


Shown as left (L1)



Performance

Unit with standard equipment



Accessories (p. 108)

Closing damper	AGUJ-M-250+LF230/LM230
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W1

2-way valve (water heater)	VVP47.10-0,63
Air heater-cooler	DCW-0,7-5 / DHCW-250
2-way valve (water cooler)	VVP47.10-2,5
DX cooler	DCF-0,7-5
Cooling unit	MOU-18HFN6-KA8243