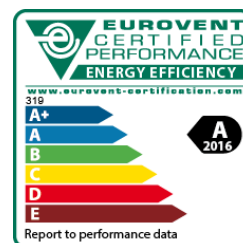


Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		020	
Air density		1.200	kg/m ³
Supply air flow		6,290	m ³ /h
Static pressure drop	Outdoor air duct	70	Pa
	Supply air duct	180	Pa
Extract air flow		4,720	m ³ /h
Static pressure drop	Extract air duct	170	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		33.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		22.0	°C
Supply air temperature, winter		22.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.84	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		68.8	%
Eurovent Energy Efficiency Class		A	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-70	68
Damper, duct mounted					-4	
End section					-13	
Filter	2.13				-131	
Rotary heat exchanger	3.01	-18.3/9.4	33.0/25.4		-223	
Fan				2.09	750	
Cooling coil, water, in casing	2.55		26.4/22.0	10.98	-96	
Heating coil, water, in casing		10.4/22.0		24.49	-20	
End section					-13	
Supply air duct					-180	77
Extract air duct					-170	66
End section					-7	
Filter	1.51				-78	
Rotary heat exchanger	2.26	22.0/-14.9	22.0/32.1		-158	
Fan				1.45	639	
End section					-10	
Damper, duct mounted					-2	
Exhaust air duct					-30	80

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

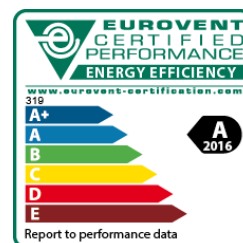
Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	79	74	74	75	72	70	68	68	dB	77	dB(A)
To outdoor air duct	76	75	75	64	56	53	49	52	dB	68	dB(A)
To extract air duct	73	72	73	61	53	51	50	53	dB	66	dB(A)
To exhaust air duct	78	73	75	77	74	73	71	71	dB	80	dB(A)
To surroundings	71	63	56	60	45	44	41	44	dB	59	dB(A)

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		020	
Air density		1.200	kg/m ³
Supply air flow		6,290	m ³ /h
Static pressure drop	Outdoor air duct	70	Pa
	Supply air duct	180	Pa
Extract air flow		4,720	m ³ /h
Static pressure drop	Extract air duct	170	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		33.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		22.0	°C
Supply air temperature, winter		22.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.84	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		68.8	%
Eurovent Energy Efficiency Class		A	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-70	68
Damper, duct mounted					-4	
End section					-13	
Filter	2.13				-131	
Rotary heat exchanger	3.01	-18.3/9.4	33.0/25.4		-223	
Fan				2.09	750	
Cooling coil, water, in casing	2.55		26.4/22.0	10.98	-96	
Heating coil, water, in casing		10.4/22.0		24.49	-20	
End section					-13	
Supply air duct					-180	77
Extract air duct					-170	66
End section					-7	
Filter	1.51				-78	
Rotary heat exchanger	2.26	22.0/-14.9	22.0/32.1		-158	
Fan				1.45	639	
End section					-10	
Damper, duct mounted					-2	
Exhaust air duct					-30	80

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	79	74	74	75	72	70	68	68	dB	77	dB(A)
To outdoor air duct	76	75	75	64	56	53	49	52	dB	68	dB(A)
To extract air duct	73	72	73	61	53	51	50	53	dB	66	dB(A)
To exhaust air duct	78	73	75	77	74	73	71	71	dB	80	dB(A)
To surroundings	71	63	56	60	45	44	41	44	dB	59	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity

Supply air

1 Damper, duct mounted, TBSA-5-100-040-2-1

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 4 Pa

1 End section, outdoor air

Static pressure drop 13 Pa

1 Filter

Filter class ePM1 50% (F7)

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303046

2x(592x592x520-10)

Velocity in the filter section	2.13	m/s
Recommended design pressure drop	131	Pa
Initial pressure drop	81	Pa
Final pressure drop	181	Pa

1 Rotary heat exchanger, GOLD020FRXP01

Rotary heat exchanger of type RECOsorpctic

Sorption treated

Speed controlled

Pressure drop, supply air 223 Pa

Pressure drop, extract air 158 Pa

Extra pressure drop in extract air side (damper) to ensure the right flow direction 187 Pa

Purging flow including leakage 351 m³/h

Temperature efficiency of supply air according to EN308 (81.2% at the same airflow) 68.8 %

Humidity efficiency, supply air, winter 66.8 %

Humidity efficiency, supply air, summer 56.9 %

Annual energy efficiency, dry conditions 73.2 %

Supply air side, winter	In	Out	
Air temperature	-18.3	9.4	°C
Relative humidity	70	47	%
Heating power		73.84	kW

Extract air side, winter	In	Out	
Air temperature	22.0	-14.9	°C
Relative humidity	30	98	%

Supply air side, summer	In	Out	
Air temperature	33.0	25.4	°C
Relative humidity	70	70	%
Cooling power		58.38	kW

Extract air side, summer	In	Out	
Air temperature	22.0	32.1	°C
Relative humidity	50	63	%

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

Isolated with internal flexible connection and rubber anti-vibration mounting	
Standard connection, internal	
Supply air flow	6,290 m³/h
The fan system effect is included in the fan performances	
Design static pressure (wet conditions)	750 Pa
Static pressure rise in the SFPv calculation	683 Pa
Temperature rise caused by the fan	1.0 °C
Min speed	280 rpm
Speed in the SFPv calculation	1,670 rpm
Design speed	1,723 rpm
Max speed	1,890 rpm
Design electric power to motor(s)	2.09 kW
Electric power to motor(s) in the SFPv calculation	1.89 kW
Rated motor power	2.40 kW
Motor option	1
Motor code	DOMEL 748.3.492
Number of fans/motors in the air stream	1
Overall static efficiency drive	62.6 %
Maximum motor efficiency (incl. motor control 92.0%)	95.0 %
Efficiency grade; FMEG, plenum fan, incl. motor control	72
Regulation(EU)No 327/2011 overall efficiency	66.7 %
Specific fan power efficiency	1.08 kW/(m³/s)

1 Cooling coil, water, in casing, TCKA020G01

Article number: 80559101	
Valve kit heating/cooling	
Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 6.3)	
Capacity variant	1
No.of tube rows	4
No.of circuits	9
Connection number	32 ext.
Fin spacing	2.5 mm
Cooling	
Pressure drop, dry	80 Pa
Pressure drop, wet	96 Pa
Air velocity	2.55 m/s

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303046

	In	Out	
Air temperature	26.4	22.0	°C
Relative humidity	66	85	%

Sensible coil capacity	9.34	kW
Required total coil capacity	10.98	kW
Excess capacity of the coil	97	%
Amount of drained water	0.020	l/min

	In	Out	
Liquid temperature	7.0	12.0	°C

Flow of liquid	0.571	l/s
Liquid pressure drop	10.7	kPa
Liquid volume of the coil	11	l
Liquid type	Ethylene-glycol	
Ethylene-glycol	30	%/kg
Nom. pipe connection size, valve	20	ext.
Liquid pressure drop, open valve	10.6	kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-063-1

1 Heating coil, water, in casing, TCLA020G01

Article number: 32990001

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 2.5)

Capacity variant	1
No. of tube rows	1
No. of circuits	5
Connection number	20 ext.
Fin spacing	2.0 mm
Pressure drop	20 Pa
Air velocity	2.43 m/s

	In	Out	
Air temperature	10.4	22.0	°C
Relative humidity	44	21	%

Required coil capacity	24.49	kW
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Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303046

Excess capacity of the coil 43 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 0.320 l/s
Liquid pressure drop 14.6 kPa
Liquid volume of the coil 2 l
Liquid type Ethylene-glycol
Ethylene-glycol 35 %/kg
Nom. pipe connection size, valve 15 ext.
Liquid pressure drop, open valve 21.2 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-025-1

1 End section, supply air

Static pressure drop 13 Pa

Quantity Extract air

1 End section, extract air

Static pressure drop 7 Pa

1 Filter

Filter class ePM10 60% (M5)
2x(592x592x520-10)

Velocity in the filter section 1.51 m/s
Recommended design pressure drop 78 Pa
Initial pressure drop 28 Pa
Final pressure drop 128 Pa

1 Rotary heat exchanger, GOLD020FRXP01

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+
Withdrawable fan with integrated airflow measurement
Direct drive with speed controlled EC motor

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

Isolated with internal flexible connection and rubber anti-vibration mounting	
Standard connection, internal	
Extract air flow	4,720 m³/h
The fan system effect is included in the fan performances	
Design static pressure (wet conditions)	639 Pa
Static pressure rise in the SFPv calculation	589 Pa
Temperature rise caused by the fan	0.9 °C
Min speed	280 rpm
Speed in the SFPv calculation	1,481 rpm
Design speed	1,529 rpm
Max speed	1,890 rpm
Design electric power to motor(s)	1.45 kW
Electric power to motor(s) in the SFPv calculation	1.33 kW
Rated motor power	2.40 kW
Motor option	1
Motor code	DOMEL 748.3.492
Number of fans/motors in the air stream	1
Overall static efficiency drive	62.0 %
Maximum motor efficiency (incl. motor control 92.0%)	95.0 %
Efficiency grade; FMEG, plenum fan, incl. motor control	72
Regulation(EU)No 327/2011 overall efficiency	66.7 %
Specific fan power efficiency	0.94 kW/(m³/s)
1	End section, exhaust air
Static pressure drop	10 Pa
1	Damper, duct mounted, TBSA-5-100-040-2-1
Damper motor: With spring return	
Damper blade: Insulated	
Static pressure drop	2 Pa

Quantity

Accessories

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

GOLD F RX

Unit size	020	
Supply air flow	6,290	m³/h
Extract air flow	4,720	m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)

Unit type: bidirectional ventilation unit; NVRU, BVU

Other heat recovery (rotary heat exchanger)

Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 81.2 %

Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014

The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	2.13	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	2,194	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	81	Pa
HRS	223	Pa
Casing; inlet	13	Pa
Casing; outlet	13	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.6	%

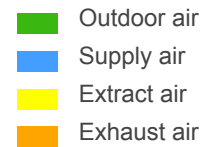
Extract air

Face velocity, filter section	1.51	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	701	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	28	Pa
HRS	158	Pa
Casing; inlet	7	Pa
Casing; outlet	10	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.0	%

Project: VATP6
Unit name: PN-1 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303046

Efficiency bonus E 2018	247	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	851	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,118	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	6,336	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	6,552	m³/h



Connection size		
outdoor air	1,000 x 400	mm
supply air	1,000 x 400	mm
extract air	1,000 x 400	mm
exhaust air	1,000 x 400	mm

Project: VATP6
Unit name: PN-1
Unit ID: AD-10000303046
11 / 1.0.20180816.1150138
Date: 12/09/2018

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303049

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		012	
Air density		1.200	kg/m ³
Supply air flow		3,820	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	170	Pa
Extract air flow		3,820	m ³ /h
Static pressure drop	Extract air duct	130	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		25.2	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.70	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.8	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303049

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	64
Damper, duct mounted					-2	
Connection frame					-1	
Filter	1.66				-130	
Rotary heat exchanger	2.61	-18.3/11.8	27.0/24.5		-181	
Recirculation part					-	
Fan				0.90	533	
Heating coil, water, in casing		12.5/18.0		7.09	-17	
Connection frame					-1	
Supply air duct					-170	77
Extract air duct					-130	66
Connection frame					-1	
Filter	1.57				-91	
Recirculation part					-	
Rotary heat exchanger	2.61	18.0/-12.1	24.0/26.5		-192	
Fan				1.08	604	
End section					-30	
Damper, duct mounted					-9	
Exhaust air duct					-30	81

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	80	74	74	72	72	72	66	64	dB	77	dB(A)
To outdoor air duct	76	72	70	60	50	48	44	44	dB	64	dB(A)
To extract air duct	77	74	72	61	52	51	49	50	dB	66	dB(A)
To exhaust air duct	82	77	77	75	76	76	71	68	dB	81	dB(A)
To surroundings	73	65	56	56	45	45	39	39	dB	57	dB(A)

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303049

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		012	
Air density		1.200	kg/m ³
Supply air flow		3,820	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	170	Pa
Extract air flow		3,820	m ³ /h
Static pressure drop	Extract air duct	130	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		25.2	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.70	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.8	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303049

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	64
Damper, duct mounted					-2	
Connection frame					-1	
Filter	1.66				-130	
Rotary heat exchanger	2.61	-18.3/11.8	27.0/24.5		-181	
Recirculation part					-	
Fan				0.90	533	
Heating coil, water, in casing		12.5/18.0		7.09	-17	
Connection frame					-1	
Supply air duct					-170	77
Extract air duct					-130	66
Connection frame					-1	
Filter	1.57				-91	
Recirculation part					-	
Rotary heat exchanger	2.61	18.0/-12.1	24.0/26.5		-192	
Fan				1.08	604	
End section					-30	
Damper, duct mounted					-9	
Exhaust air duct					-30	81

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	80	74	74	72	72	72	66	64	dB	77	dB(A)
To outdoor air duct	76	72	70	60	50	48	44	44	dB	64	dB(A)
To extract air duct	77	74	72	61	52	51	49	50	dB	66	dB(A)
To exhaust air duct	82	77	77	75	76	76	71	68	dB	81	dB(A)
To surroundings	73	65	56	56	45	45	39	39	dB	57	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity	Supply air
1	Damper, duct mounted, TBSA-5-100-040-2-1
	Damper motor: With spring return
	Damper blade: Insulated
	Static pressure drop 2 Pa
1	Connection frame , outdoor air
	Static pressure drop 1 Pa
1	Filter

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303049

Filter class ePM1 50% (F7)	
2x(490x592x370-8)	
Velocity in the filter section	1.66 m/s
Recommended design pressure drop	130 Pa
Initial pressure drop	80 Pa
Final pressure drop	180 Pa

1 Rotary heat exchanger, GOLD012FRXP01X

Rotary heat exchanger of type RECOsorpTic

Sorption treated

Speed controlled

Pressure drop, supply air 181 Pa

Pressure drop, extract air 192 Pa

Extra pressure drop in extract air side (damper) to ensure the right flow direction 122 Pa

Purging flow including leakage 227 m³/h

Temperature efficiency of supply air according to EN308 (82.8% at the same airflow) 82.8 %

Humidity efficiency, supply air, winter 80.4 %

Humidity efficiency, supply air, summer 71.9 %

Annual energy efficiency, dry conditions 86.7 %

Supply air side, winter	In	Out	
Air temperature	-18.3	11.8	°C
Relative humidity	70	49	%
Heating power		50.30	kW

Extract air side, winter	In	Out	
Air temperature	18.0	-12.1	°C
Relative humidity	40	100	%

Supply air side, summer	In	Out	
Air temperature	27.0	24.5	°C
Relative humidity	70	58	%
Cooling power		17.85	kW

Extract air side, summer	In	Out	
Air temperature	24.0	26.5	°C
Relative humidity	50	64	%

1 Recirculation part

Mixing ration(RCA/SUP) at design winter outdoor temperature 0 %

1 Fan

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303049

Fan of type GOLD Wing+	
Withdrawable fan with integrated airflow measurement	
Direct drive with speed controlled EC motor	
Isolated with internal flexible connection and rubber anti-vibration mounting	
Standard connection, internal	
Supply air flow	3,820 m³/h
The fan system effect is included in the fan performances	
Design static pressure (wet conditions)	533 Pa
Static pressure rise in the SFPv calculation	483 Pa
Temperature rise caused by the fan	0.7 °C
Min speed	300 rpm
Speed in the SFPv calculation	1,742 rpm
Design speed	1,799 rpm
Max speed	2,250 rpm
Design electric power to motor(s)	0.90 kW
Electric power to motor(s) in the SFPv calculation	0.81 kW
Rated motor power	1.60 kW
Motor option	1
Motor code	DOMEL 748.3.292
Number of fans/motors in the air stream	1
Overall static efficiency drive	62.7 %
Maximum motor efficiency (incl. motor control 91.5%)	94.0 %
Efficiency grade; FMEG, plenum fan, incl. motor control	74
Regulation(EU)No 327/2011 overall efficiency	66.8 %
Specific fan power efficiency	0.77 kW/(m³/s)

1 Heating coil, water, in casing, TCLA012G01

Article number: 32899101	
Valve kit heating/cooling	
Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 1)	
Capacity variant	1
No.of tube rows	1
No.of circuits	4
Connection number	20 ext.
Fin spacing	2.0 mm
Pressure drop	17 Pa
Air velocity	2.26 m/s

Project: VATP6
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	In	Out	
Air temperature	12.5	18.0	°C
Relative humidity	47	33	%

Required coil capacity 7.08 kW

Excess capacity of the coil 167 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 0.093 l/s

Liquid pressure drop 2.2 kPa

Liquid volume of the coil 2 l

Liquid type Ethylene-glycol

Ethylene-glycol 35 %/kg

Nom. pipe connection size, valve 15 ext.

Liquid pressure drop, open valve 11.1 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-010-1

1 Connection frame , supply air

Static pressure drop 1 Pa

Quantity Extract air

1 Connection frame , extract air

Static pressure drop 1 Pa

1 Filter

Filter class ePM10 60% (M5)

2x(490x592x370-8)

Velocity in the filter section 1.57 m/s

Recommended design pressure drop 91 Pa

Initial pressure drop 41 Pa

Final pressure drop 141 Pa

1 Recirculation part

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303049

1 Rotary heat exchanger, GOLD012FRXP01X

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Extract air flow 3,820 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 604 Pa

Static pressure rise in the SFPv calculation 554 Pa

Temperature rise caused by the fan 0.8 °C

Min speed 300 rpm

Speed in the SFPv calculation 1,861 rpm

Design speed 1,915 rpm

Max speed 2,250 rpm

Design electric power to motor(s) 1.08 kW

Electric power to motor(s) in the SFPv calculation 0.99 kW

Rated motor power 1.60 kW

Motor option 1

Motor code DOMEL 748.3.292

Number of fans/motors in the air stream 1

Overall static efficiency drive 62.8 %

Maximum motor efficiency (incl. motor control 91.5%) 94.0 %

Efficiency grade; FMEG, plenum fan, incl. motor control 74

Regulation(EU)No 327/2011 overall efficiency 66.8 %

Specific fan power efficiency 0.88 kW/(m³/s)

Accessories

Quantity	Product	Article name
1	Fan outlet upwards	TBXZ-1-92-12

1 End section, exhaust air

Static pressure drop 30 Pa

1 Damper, duct mounted, TBSA-3-000-050-1-1

Damper motor: With spring return

Project: VATP6
Unit name: PN-2 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303049

Damper blade: Uninsulated	
Static pressure drop	9 Pa

Quantity	Accessories
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GOLD F RX

Unit size	012
Supply air flow	3,820 m³/h
Extract air flow	3,820 m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)
Unit type: bidirectional ventilation unit; NVRU, BVU
Other heat recovery (rotary heat exchanger)
Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 82.8 %
Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014
The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	1.66	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	1,321	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	80	Pa
HRS	181	Pa
Casing; inlet	1	Pa
Casing; outlet	1	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.7	%

Extract air

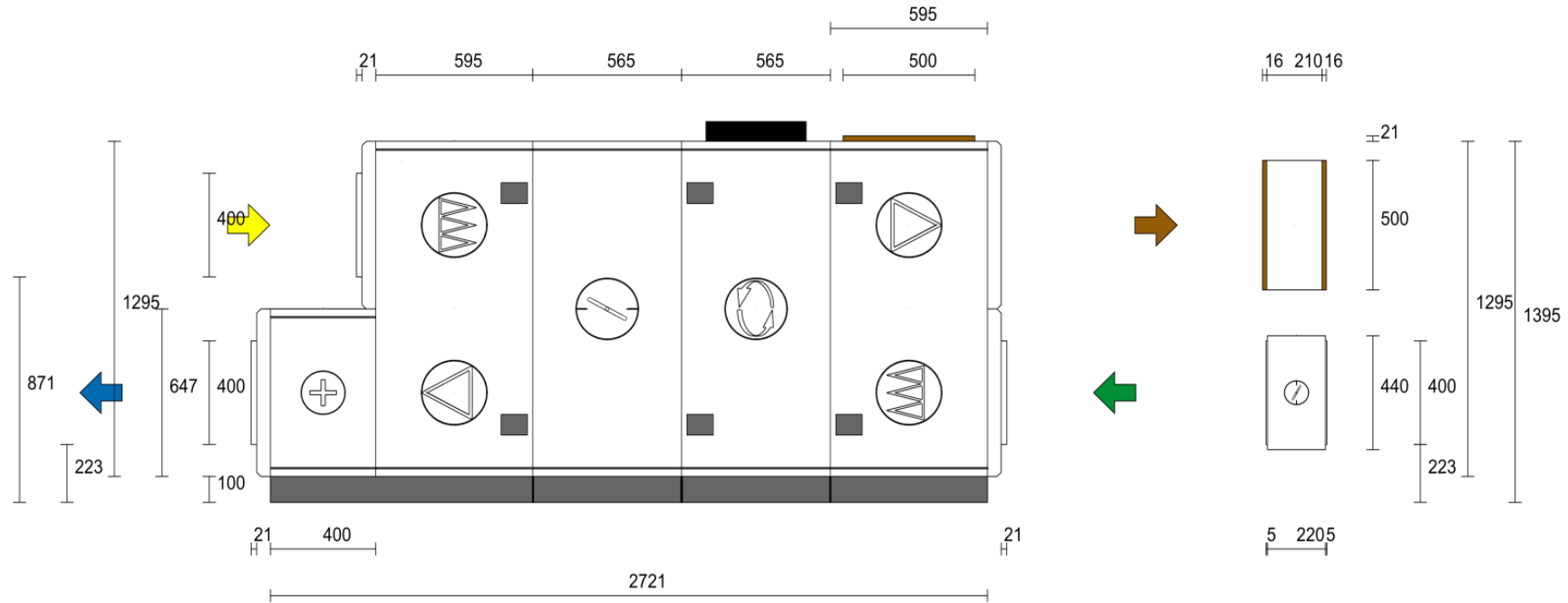
Face velocity, filter section	1.57	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	833	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	41	Pa
HRS	192	Pa
Casing; inlet	1	Pa
Casing; outlet	30	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.8	%

Project: VATP6
Unit name: PN-2 - Design data

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Efficiency bonus E 2018	295	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	842	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,236	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	4,212	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	4,788	m³/h

AHU Design
Sketch: Inspection side



GOLD F RX	
Unit size	012
Total weight	643 kg
Duct Component Weight	20 kg
Length, max	2,825 mm
Height, max	1,471 mm
Width, max	1,199 mm

Connection size		
outdoor air	1,000 x 400	mm
supply air	1,000 x 400	mm
extract air	1,000 x 400	mm
exhaust air	0 x 250	mm

Project: VATP6
Unit name: PN-2
Unit ID: AD-10000303049
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Date: 12/09/2018

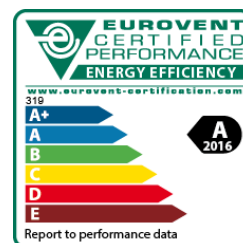
- Outdoor air
- Supply air
- Extract air
- Exhaust air

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		035	
Air density		1.200	kg/m ³
Supply air flow		12,240	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	230	Pa
Extract air flow		12,240	m ³ /h
Static pressure drop	Extract air duct	130	Pa
	Exhaust air duct	130	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	2.22	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.4	%
Eurovent Energy Efficiency Class		A	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 20 A

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	73
Damper, duct mounted					-3	
End section					-12	
Filter	1.95				-119	
Rotary heat exchanger	2.74	-18.3/11.6	27.0/24.5		-194	
Recirculation part					-	
Fan				3.87	689	
Cooling coil, water, in casing	2.25		25.5/24.0	6.10	-74	
Heating coil, water, in casing		12.5/18.0		22.51	-16	
End section					-11	
Supply air duct					-230	83
Extract air duct					-130	75
End section					-10	
Filter	2.88				-102	
Recirculation part					-	
Rotary heat exchanger	2.74	18.0/-11.9	24.0/26.5		-205	
Fan				4.25	709	
End section					-14	
Damper, duct mounted					-3	
Exhaust air duct					-130	89

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	84	79	79	80	77	75	73	73	dB	83	dB(A)
To outdoor air duct	81	80	80	69	61	58	54	57	dB	73	dB(A)
To extract air duct	82	81	82	70	62	60	59	62	dB	75	dB(A)
To exhaust air duct	87	82	84	86	83	82	80	80	dB	89	dB(A)
To surroundings	78	70	63	67	52	51	48	51	dB	66	dB(A)

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		035	
Air density		1.200	kg/m ³
Supply air flow		12,240	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	230	Pa
Extract air flow		12,240	m ³ /h
Static pressure drop	Extract air duct	130	Pa
	Exhaust air duct	130	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	2.22	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.4	%
Eurovent Energy Efficiency Class		A	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 20 A

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	73
Damper, duct mounted					-3	
End section					-12	
Filter	1.95				-119	
Rotary heat exchanger	2.74	-18.3/11.6	27.0/24.5		-194	
Recirculation part					-	
Fan				3.87	689	
Cooling coil, water, in casing	2.25		25.5/24.0	6.10	-74	
Heating coil, water, in casing		12.5/18.0		22.51	-16	
End section					-11	
Supply air duct					-230	83
Extract air duct					-130	75
End section					-10	
Filter	2.88				-102	
Recirculation part					-	
Rotary heat exchanger	2.74	18.0/-11.9	24.0/26.5		-205	
Fan				4.25	709	
End section					-14	
Damper, duct mounted					-3	
Exhaust air duct					-130	89

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	84	79	79	80	77	75	73	73	dB	83	dB(A)
To outdoor air duct	81	80	80	69	61	58	54	57	dB	73	dB(A)
To extract air duct	82	81	82	70	62	60	59	62	dB	75	dB(A)
To exhaust air duct	87	82	84	86	83	82	80	80	dB	89	dB(A)
To surroundings	78	70	63	67	52	51	48	51	dB	66	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity

Supply air

1 Damper, duct mounted, TBSA-4-140-060-2-1

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 3 Pa

Accessories

Quantity	Product	Article name
1	Weather protection for damper actuator	TBLZ-1-45

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

1 End section, outdoor air

Static pressure drop 12 Pa

1 Filter

Filter class ePM1 50% (F7)

3x(592x592x520-10), 3x(592x287x520-10)

Velocity in the filter section 1.95 m/s

Recommended design pressure drop 119 Pa

Initial pressure drop 69 Pa

Final pressure drop 169 Pa

1 Rotary heat exchanger, GOLD035FRXP01X

Rotary heat exchanger of type RECOsorpTic

Sorption treated

Speed controlled

Pressure drop, supply air 194 Pa

Pressure drop, extract air 205 Pa

Extra pressure drop in extract air side (damper) to ensure the right flow direction 115 Pa

Purging flow including leakage 639 m³/h

Temperature efficiency of supply air according to EN308 (82.4% at the same airflow) 82.4 %

Humidity efficiency, supply air, winter 80.0 %

Humidity efficiency, supply air, summer 71.5 %

Annual energy efficiency, dry conditions 87.6 %

Supply air side, winter	In	Out	
Air temperature	-18.3	11.6	°C
Relative humidity	70	50	%
Heating power		160.21	kW

Extract air side, winter	In	Out	
Air temperature	18.0	-11.9	°C
Relative humidity	40	100	%

Supply air side, summer	In	Out	
Air temperature	27.0	24.5	°C
Relative humidity	70	58	%
Cooling power		56.87	kW

Extract air side, summer	In	Out	
Air temperature	24.0	26.5	°C
Relative humidity	50	64	%

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Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

1 Recirculation part, TCBR040G01

Mixing ration(RCA/SUP) at design winter outdoor temperature 0 %

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Supply air flow 12,240 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 689 Pa

Static pressure rise in the SFPv calculation 629 Pa

Temperature rise caused by the fan 0.9 °C

Min speed 250 rpm

Speed in the SFPv calculation 1,543 rpm

Design speed 1,577 rpm

Max speed 1,740 rpm

Design electric power to motor(s) 3.87 kW

Electric power to motor(s) in the SFPv calculation 3.56 kW

Rated motor power 5.00 kW

Motor option 2

Motor code DOMEL 749.3.393

Number of fans/motors in the air stream 1

Overall static efficiency drive 60.6 %

Maximum motor efficiency (incl. motor control 90.7%) 93.5 %

Efficiency grade; FMEG, plenum fan, incl. motor control 69

Regulation(EU)No 327/2011 overall efficiency 67.2 %

Specific fan power efficiency 1.05 kW/(m³/s)

1 Cooling coil, water, in casing, TCKA040G01

Article number: 80559301

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 4)

Capacity variant 1

No.of tube rows 4

No.of circuits 20

Connection number 40 ext.

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

Fin spacing 2.5 mm

Cooling

Pressure drop, dry 64 Pa

Pressure drop, wet 74 Pa

Air velocity 2.25 m/s

	In	Out	
Air temperature	25.5	24.0	°C
Relative humidity	55	60	%

Sensible coil capacity 6.04 kW

Required total coil capacity 6.10 kW

Excess capacity of the coil 282 %

Amount of drained water

	In	Out	
Liquid temperature	7.0	12.0	°C

Flow of liquid 0.317 l/s

Liquid pressure drop 1.8 kPa

Liquid volume of the coil 29 l

Liquid type Ethylene-glycol

Ethylene-glycol 30 %/kg

Nom. pipe connection size, valve 15 ext.

Liquid pressure drop, open valve 8.1 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-040-1

1 Heating coil, water, in casing, TCLA040G01

Article number: 32993001

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 2.5)

Capacity variant 1

No. of tube rows 1

No. of circuits 11

Connection number 32 ext.

Fin spacing 2.0 mm

Pressure drop 16 Pa

Air velocity 2.18 m/s

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

	In	Out	
Air temperature	12.5	18.0	°C
Relative humidity	47	33	%

Required coil capacity 22.49 kW

Excess capacity of the coil 184 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 0.294 l/s

Liquid pressure drop 2.9 kPa

Liquid volume of the coil 5 l

Liquid type Ethylene-glycol

Ethylene-glycol 35 %/kg

Nom. pipe connection size, valve 15 ext.

Liquid pressure drop, open valve 17.9 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-025-1

1 End section, supply air

Static pressure drop 11 Pa

Quantity

Extract air

1 End section, extract air

Static pressure drop 10 Pa

1 Filter

Filter class ePM10 60% (M5)

3x(592x592x520-10)

Velocity in the filter section 2.88 m/s

Recommended design pressure drop 102 Pa

Initial pressure drop 52 Pa

Final pressure drop 152 Pa

Accessories

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303052

Quantity	Product	Article name
1	Intake from above, filter	TBXZ-1-91-40

1 Recirculation part, TCBR040G01

1 Rotary heat exchanger, GOLD035FRXP01X

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Extract air flow 12,240 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 709 Pa

Static pressure rise in the SFPv calculation 659 Pa

Temperature rise caused by the fan 1.0 °C

Min speed 250 rpm

Speed in the SFPv calculation 1,603 rpm

Design speed 1,631 rpm

Max speed 1,740 rpm

Design electric power to motor(s) 4.25 kW

Electric power to motor(s) in the SFPv calculation 3.98 kW

Rated motor power 5.00 kW

Motor option 2

Motor code DOMEL 749.3.393

Number of fans/motors in the air stream 1

Overall static efficiency drive 59.7 %

Maximum motor efficiency (incl. motor control 90.7%) 93.5 %

Efficiency grade; FMEG, plenum fan, incl. motor control 69

Regulation(EU)No 327/2011 overall efficiency 67.2 %

Specific fan power efficiency 1.11 kW/(m³/s)

1 End section, exhaust air

Static pressure drop 14 Pa

1 Damper, duct mounted, TBSA-4-140-060-2-1

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 3 Pa

Accessories

Quantity	Product	Article name
1	Weather protection for damper actuator	TBLZ-1-45

Quantity

Accessories

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

GOLD F RX

Unit size	035	
Supply air flow	12,240	m³/h
Extract air flow	12,240	m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)
Unit type: bidirectional ventilation unit; NVRU, BVU
Other heat recovery (rotary heat exchanger)
Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 82.4 %
Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014
The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	1.95	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	4,020	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	69	Pa
HRS	194	Pa
Casing; inlet	12	Pa
Casing; outlet	11	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	60.6	%

Extract air

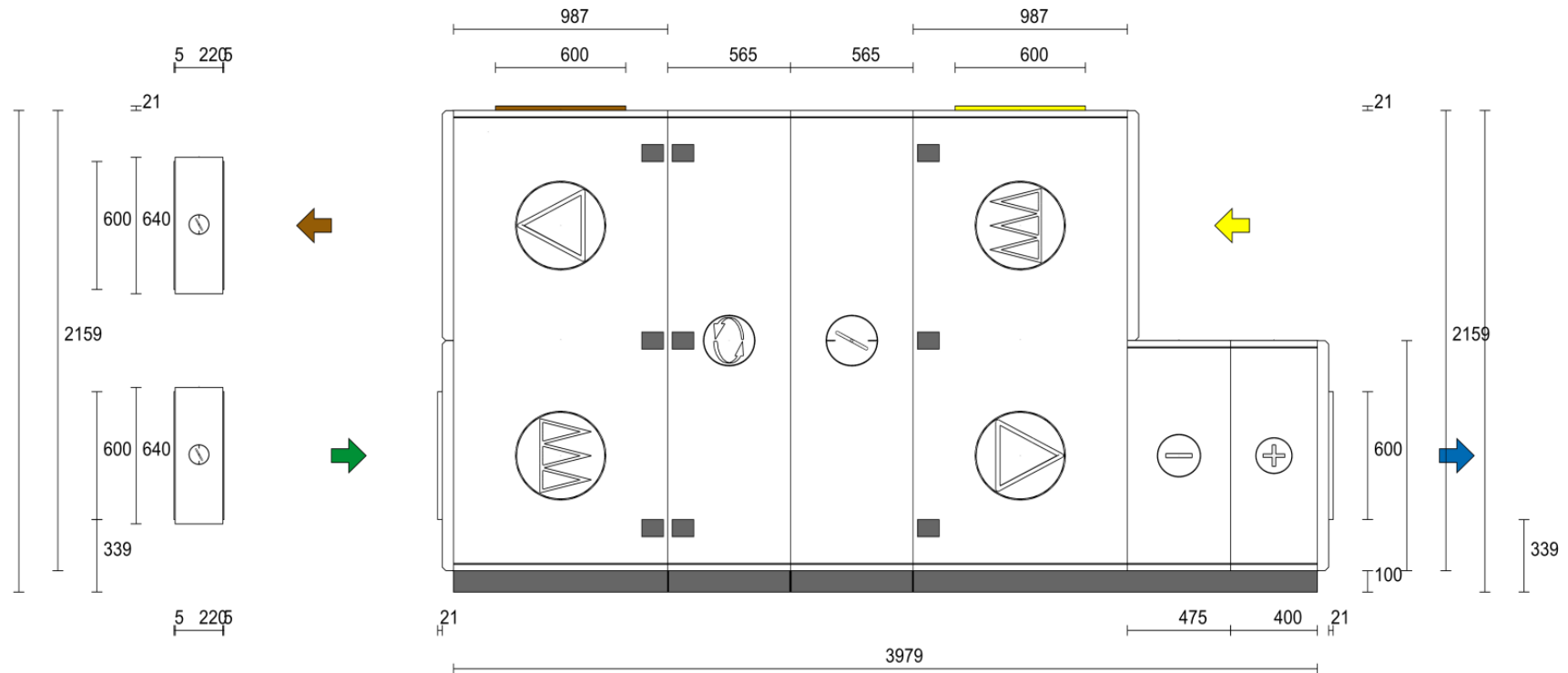
Face velocity, filter section	2.88	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	3,478	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	52	Pa
HRS	205	Pa
Casing; inlet	10	Pa
Casing; outlet	14	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	59.7	%

Project: VATP6
Unit name: PN-3 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303052

Efficiency bonus E 2018	281	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	943	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,081	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	13,180	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	13,680	m³/h

AHU Design
Sketch: Inspection side



GOLD F RX	
Unit size	035
Total weight	1,597 kg
Duct Component Weight	0 kg
Length, max	4,083 mm
Height, max	2,280 mm
Width, max	1,990 mm

Connection size	
outdoor air	1,400 x 600 mm
supply air	1,400 x 600 mm
extract air	1,400 x 600 mm
exhaust air	1,400 x 600 mm

Project: VATP6
Unit name: PN-3
Unit ID: AD-10000303052
11 / 1.0.20180816.1150138
Date: 12/09/2018

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		100	
Air density		1.200	kg/m ³
Supply air flow		29,700	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	300	Pa
Extract air flow		29,700	m ³ /h
Static pressure drop	Extract air duct	180	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.74	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		84.0	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 50 A

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	75
Damper, duct mounted					-1	
End section					-5	
Filter	1.77				-109	
Rotary heat exchanger	2.30	-18.3/12.2	27.0/24.5		-151	
Recirculation part					-	
Fan				8.63	657	
Cooling coil, water, in casing	1.97		27.3/24.0	33.33	-32	
Heating coil, water, in casing		-10.1/18.0		279.86	-23	
End section					-5	
Supply air duct					-300	84
Extract air duct					-180	76
End section					-5	
Filter	1.69				-78	
Recirculation part					-	
Rotary heat exchanger	2.30	18.0/-12.5	24.0/26.5		-160	
Fan				7.05	499	
End section					-7	
Damper, duct mounted					-6	
Exhaust air duct					-30	89

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	85	80	80	81	78	76	74	74	dB	84	dB(A)
To outdoor air duct	82	81	81	70	62	59	55	58	dB	75	dB(A)
To extract air duct	82	81	82	70	62	60	59	62	dB	76	dB(A)
To exhaust air duct	87	82	84	86	83	82	80	80	dB	89	dB(A)
To surroundings	79	71	64	68	53	52	49	52	dB	67	dB(A)

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		100	
Air density		1.200	kg/m ³
Supply air flow		29,700	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	300	Pa
Extract air flow		29,700	m ³ /h
Static pressure drop	Extract air duct	180	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.74	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		84.0	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014	Compliant		2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 50 A

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	75
Damper, duct mounted					-1	
End section					-5	
Filter	1.77				-109	
Rotary heat exchanger	2.30	-18.3/12.2	27.0/24.5		-151	
Recirculation part					-	
Fan				8.63	657	
Cooling coil, water, in casing	1.97		27.3/24.0	33.33	-32	
Heating coil, water, in casing		-10.1/18.0		279.86	-23	
End section					-5	
Supply air duct					-300	84
Extract air duct					-180	76
End section					-5	
Filter	1.69				-78	
Recirculation part					-	
Rotary heat exchanger	2.30	18.0/-12.5	24.0/26.5		-160	
Fan				7.05	499	
End section					-7	
Damper, duct mounted					-6	
Exhaust air duct					-30	89

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	85	80	80	81	78	76	74	74	dB	84	dB(A)
To outdoor air duct	82	81	81	70	62	59	55	58	dB	75	dB(A)
To extract air duct	82	81	82	70	62	60	59	62	dB	76	dB(A)
To exhaust air duct	87	82	84	86	83	82	80	80	dB	89	dB(A)
To surroundings	79	71	64	68	53	52	49	52	dB	67	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity

Supply air

1 Damper, duct mounted, TBSA-4-240-120-2-1

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 1 Pa

Accessories

Quantity	Product	Article name
1	Weather protection for damper actuator	TBLZ-1-45

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

1 End section, outdoor air

Static pressure drop 5 Pa

1 Filter

Filter class ePM1 50% (F7)

10x(592x592x520-10), 5x(592x287x520-10)

Velocity in the filter section 1.77 m/s

Recommended design pressure drop 109 Pa

Initial pressure drop 59 Pa

Final pressure drop 159 Pa

1 Rotary heat exchanger, GOLD100FRXP01

Rotary heat exchanger of type RECOsorpctic

Sorption treated

Speed controlled

Pressure drop, supply air 151 Pa

Pressure drop, extract air 160 Pa

Extra pressure drop in extract air side (damper) to ensure the right flow direction 34 Pa

Purging flow including leakage 1,402 m³/h

Temperature efficiency of supply air according to EN308 (84.0% at the same airflow) 84.0 %

Humidity efficiency, supply air, winter 81.6 %

Humidity efficiency, supply air, summer 72.9 %

Annual energy efficiency, dry conditions 88.9 %

Supply air side, winter	In	Out	
Air temperature	-18.3	12.2	°C
Relative humidity	70	49	%
Heating power		396.69	kW

Extract air side, winter	In	Out	
Air temperature	18.0	-12.5	°C
Relative humidity	40	100	%

Supply air side, summer	In	Out	
Air temperature	27.0	24.5	°C
Relative humidity	70	57	%
Cooling power		140.78	kW

Extract air side, summer	In	Out	
Air temperature	24.0	26.5	°C
Relative humidity	50	64	%

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

1 Recirculation part

Mixing ration(RCA/SUP) at design winter outdoor temperature 0 %

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Supply air flow 29,700 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 657 Pa

Static pressure rise in the SFPv calculation 601 Pa

Temperature rise caused by the fan 0.9 °C

Min speed 200 rpm

Speed in the SFPv calculation 1,147 rpm

Design speed 1,177 rpm

Max speed 1,380 rpm

Design electric power to motor(s) 8.63 kW

Electric power to motor(s) in the SFPv calculation 7.92 kW

Rated motor power 6.50 kW

Motor option 1

Motor code DOMEL 749.3.694

Number of fans/motors in the air stream 2

Overall static efficiency drive 62.8 %

Maximum motor efficiency (incl. motor control 92.5%) 95.5 %

Efficiency grade; FMEG, plenum fan, incl. motor control 70

Regulation(EU)No 327/2011 overall efficiency 69.2 %

Specific fan power efficiency 0.96 kW/(m³/s)

1 Cooling coil, water, in casing, TCKA120G01

Article number: 80256901-10

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 16)

Capacity variant 1

No.of tube rows 2

No.of circuits 10

Connection number 65 ext.

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

Fin spacing	2.5 mm
Cooling	
Pressure drop, dry	26 Pa
Pressure drop, wet	32 Pa
Air velocity	1.97 m/s
Design air flow	29,700 m³/h

	In	Out	
Air temperature	27.3	24.0	°C
Relative humidity	67	82	%

Sensible coil capacity	32.87 kW
Required total coil capacity	33.33 kW
Excess capacity of the coil	159 %
Amount of drained water	

	In	Out	
Liquid temperature	7.0	12.0	°C

Flow of liquid	1.730 l/s
Liquid pressure drop	29.3 kPa
Liquid volume of the coil	55 l
Liquid type	Ethylene-glycol
Ethylene-glycol	30 %/kg
Nom. pipe connection size, valve	32 ext.
Liquid pressure drop, open valve	15.2 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-160-1

1 Heating coil, water, in casing, TCLA120G01

Article number: 80057902-16

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 40)

Capacity variant	2
No. of tube rows	2
No. of circuits	16
Connection number	65 ext.
Fin spacing	3.0 mm
Pressure drop	23 Pa

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303057

Air velocity 1.90 m/s
Design air flow 29,700 m³/h

	In	Out	
Air temperature	-10.1	18.0	°C
Relative humidity	90	11	%

Required coil capacity 279.86 kW
Excess capacity of the coil 56 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 3.650 l/s
Liquid pressure drop 25.2 kPa
Liquid volume of the coil 58 l
Liquid type Ethylene-glycol
Ethylene-glycol 35 %/kg
Nom. pipe connection size, valve 50 ext.
Liquid pressure drop, open valve 10.8 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-400-1

1 End section, supply air

Static pressure drop 5 Pa

Quantity

Extract air

1 End section, extract air

Static pressure drop 5 Pa

1 Filter

Filter class ePM10 60% (M5)
10x(592x592x520-10), 5x(592x287x520-10)

Velocity in the filter section 1.69 m/s
Recommended design pressure drop 78 Pa
Initial pressure drop 28 Pa
Final pressure drop 128 Pa

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

1 Recirculation part

1 Rotary heat exchanger, GOLD100FRXP01

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Extract air flow 29,700 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 499 Pa

Static pressure rise in the SFPv calculation 449 Pa

Temperature rise caused by the fan 0.7 °C

Min speed 200 rpm

Speed in the SFPv calculation 1,090 rpm

Design speed 1,118 rpm

Max speed 1,380 rpm

Design electric power to motor(s) 7.05 kW

Electric power to motor(s) in the SFPv calculation 6.43 kW

Rated motor power 6.50 kW

Motor option 1

Motor code DOMEL 749.3.694

Number of fans/motors in the air stream 2

Overall static efficiency drive 61.1 %

Maximum motor efficiency (incl. motor control 92.5%) 95.5 %

Efficiency grade; FMEG, plenum fan, incl. motor control 70

Regulation(EU)No 327/2011 overall efficiency 69.2 %

Specific fan power efficiency 0.74 kW/(m³/s)

1 End section, exhaust air

Static pressure drop 7 Pa

1 Damper, duct mounted, TBSA-4-250-080-2-1

Damper motor: With spring return

Damper blade: Insulated

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

Static pressure drop

6 Pa

Accessories

Quantity	Product	Article name
1	Weather protection for damper actuator	TBLZ-1-45

Quantity

Accessories

Project: VATP6
Unit name: PN-4 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303057

GOLD F RX

Unit size	100	
Supply air flow	29,700	m³/h
Extract air flow	29,700	m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)

Unit type: bidirectional ventilation unit; NVRU, BVU

Other heat recovery (rotary heat exchanger)

Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 84 %

Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014

The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	1.77	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	8,571	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	59	Pa
HRS	151	Pa
Casing; inlet	5	Pa
Casing; outlet	5	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.8	%

Extract air

Face velocity, filter section	1.69	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	4,543	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	28	Pa
HRS	160	Pa
Casing; inlet	5	Pa
Casing; outlet	7	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	61.1	%

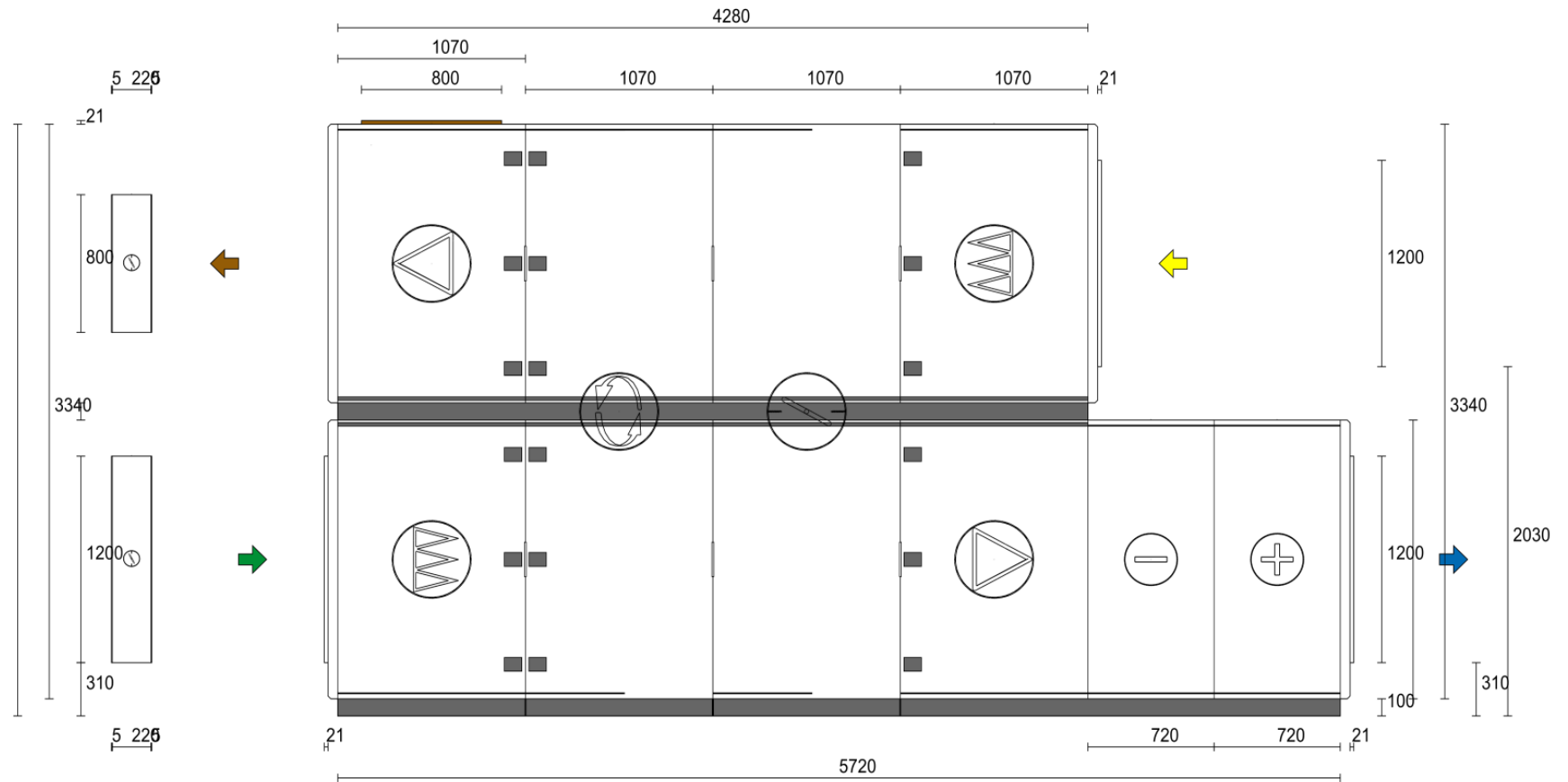
Project: VATP6
Unit name: PN-4 - Design data

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Unit ID: AD-10000303057

Efficiency bonus E 2018	331	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	678	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,131	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	38,560	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	39,600	m³/h

AHU Design

Sketch: Inspection side



GOLD F RX	
Unit size	100
Total weight	4,876 kg
Duct Component Weight	198 kg
Length, max	5,832 mm
Height, max	3,461 mm
Width, max	3,340 mm

Connection size	
outdoor air	2,400 x 1,200 mm
supply air	2,400 x 1,200 mm
extract air	2,400 x 1,200 mm
exhaust air	2,500 x 800 mm

Project: VATP6
Unit name: PN-4
Unit ID: AD-10000303057
11 / 1.0.20180816.1150138
Date: 12/09/2018

- Outdoor air
- Supply air
- Extract air
- Exhaust air

Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303077

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		100	
Air density		1.200	kg/m ³
Supply air flow		30,450	m ³ /h
Static pressure drop	Outdoor air duct	40	Pa
	Supply air duct	310	Pa
Extract air flow		30,400	m ³ /h
Static pressure drop	Extract air duct	150	Pa
	Exhaust air duct	40	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.84	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		83.7	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 50 A

AHU Design

Technical specification, general survey



Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303077

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-40	75
Damper, duct mounted					-1	
End section					-5	
Filter	1.81				-110	
Rotary heat exchanger	2.36	-18.3/12.1	27.0/24.5		-157	
Recirculation part					-	
Fan				9.50	703	
Cooling coil, water, in casing	2.29		27.9/24.0	56.14	-42	
Heating coil, water, in casing		-18.3/18.0		370.66	-24	
End section					-6	
Supply air duct					-310	85
Extract air duct					-150	76
End section					-5	
Filter	1.73				-79	
Recirculation part					-	
Rotary heat exchanger	2.36	18.0/-12.5	24.0/26.5		-165	
Fan				7.68	532	
End section					-7	
Damper, duct mounted					-6	
Exhaust air duct					-40	90

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	86	81	81	82	79	77	75	75	dB	85	dB(A)
To outdoor air duct	83	82	82	71	63	60	56	59	dB	75	dB(A)
To extract air duct	83	82	83	71	63	61	60	63	dB	76	dB(A)
To exhaust air duct	88	83	85	87	84	83	81	81	dB	90	dB(A)
To surroundings	80	72	65	69	54	53	50	53	dB	67	dB(A)

Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303077

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		100	
Air density		1.200	kg/m ³
Supply air flow		30,450	m ³ /h
Static pressure drop	Outdoor air duct	40	Pa
	Supply air duct	310	Pa
Extract air flow		30,400	m ³ /h
Static pressure drop	Extract air duct	150	Pa
	Exhaust air duct	40	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		24.0	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.84	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		83.7	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 50 A

Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303077

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-40	75
Damper, duct mounted					-1	
End section					-5	
Filter	1.81				-110	
Rotary heat exchanger	2.36	-18.3/12.1	27.0/24.5		-157	
Recirculation part					-	
Fan				9.50	703	
Cooling coil, water, in casing	2.29		27.9/24.0	56.14	-42	
Heating coil, water, in casing		-18.3/18.0		370.66	-24	
End section					-6	
Supply air duct					-310	85
Extract air duct					-150	76
End section					-5	
Filter	1.73				-79	
Recirculation part					-	
Rotary heat exchanger	2.36	18.0/-12.5	24.0/26.5		-165	
Fan				7.68	532	
End section					-7	
Damper, duct mounted					-6	
Exhaust air duct					-40	90

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	86	81	81	82	79	77	75	75	dB	85	dB(A)
To outdoor air duct	83	82	82	71	63	60	56	59	dB	75	dB(A)
To extract air duct	83	82	83	71	63	61	60	63	dB	76	dB(A)
To exhaust air duct	88	83	85	87	84	83	81	81	dB	90	dB(A)
To surroundings	80	72	65	69	54	53	50	53	dB	67	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity

Supply air

1 Damper, duct mounted, TBSA-4-240-120-2-1

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 1 Pa

1 End section, outdoor air

Static pressure drop 5 Pa

Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303077

1 Filter

Filter class ePM1 50% (F7)	
10x(592x592x520-10), 5x(592x287x520-10)	
Velocity in the filter section	1.81 m/s
Recommended design pressure drop	110 Pa
Initial pressure drop	60 Pa
Final pressure drop	160 Pa

1 Rotary heat exchanger, GOLD100FRXP01

Rotary heat exchanger of type RECOsorpctic	
Sorption treated	
Speed controlled	
Pressure drop, supply air	157 Pa
Pressure drop, extract air	165 Pa
Extra pressure drop in extract air side (damper) to ensure the right flow direction	80 Pa
Purging flow including leakage	1,436 m³/h
Temperature efficiency of supply air according to EN308 (83.8% at the same airflow)	83.7 %
Humidity efficiency, supply air, winter	81.3 %
Humidity efficiency, supply air, summer	72.7 %
Annual energy efficiency, dry conditions	88.9 %

Supply air side, winter	In	Out	
Air temperature	-18.3	12.1	°C
Relative humidity	70	49	%
Heating power		405.33	kW

Extract air side, winter	In	Out	
Air temperature	18.0	-12.5	°C
Relative humidity	40	100	%

Supply air side, summer	In	Out	
Air temperature	27.0	24.5	°C
Relative humidity	70	58	%
Cooling power		143.86	kW

Extract air side, summer	In	Out	
Air temperature	24.0	26.5	°C
Relative humidity	50	64	%

1 Recirculation part

Mixing ration(RCA/SUP) at design winter outdoor temperature	0 %
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1 Fan

Fan of type GOLD Wing+	
Withdrawable fan with integrated airflow measurement	
Direct drive with speed controlled EC motor	
Isolated with internal flexible connection and rubber anti-vibration mounting	
Standard connection, internal	
Supply air flow	30,450 m³/h
The fan system effect is included in the fan performances	
Design static pressure (wet conditions)	703 Pa
Static pressure rise in the SFPv calculation	631 Pa
Temperature rise caused by the fan	0.9 °C
Min speed	200 rpm
Speed in the SFPv calculation	1,176 rpm
Design speed	1,213 rpm
Max speed	1,380 rpm
Design electric power to motor(s)	9.50 kW
Electric power to motor(s) in the SFPv calculation	8.54 kW
Rated motor power	6.50 kW
Motor option	1
Motor code	DOMEL 749.3.694
Number of fans/motors in the air stream	2
Overall static efficiency drive	62.6 %
Maximum motor efficiency (incl. motor control 92.5%)	95.5 %
Efficiency grade; FMEG, plenum fan, incl. motor control	70
Regulation(EU)No 327/2011 overall efficiency	69.2 %
Specific fan power efficiency	1.01 kW/(m³/s)

1 Cooling coil, water, in casing, TCKA120G01

Article number: 80256902-14	
Valve kit heating/cooling	
Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 25)	
Capacity variant	1
No.of tube rows	2
No.of circuits	14
Connection number	65 ext.
Fin spacing	2.5 mm
Cooling	
Pressure drop, dry	34 Pa

Project: VATP6
Unit name: PN-5 - Design data

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Unit ID: AD-10000303077

Pressure drop, wet	42	Pa
Air velocity	2.29	m/s
Design air flow	34,500	m³/h

	In	Out	
Air temperature	27.9	24.0	°C
Relative humidity	70	87	%

Sensible coil capacity	45.12	kW
Required total coil capacity	56.14	kW
Excess capacity of the coil	132	%
Amount of drained water	0.134	l/min

	In	Out	
Liquid temperature	7.0	12.0	°C

Flow of liquid	2.860	l/s
Liquid pressure drop	27.9	kPa
Liquid volume of the coil	55	l
Liquid type	Ethylene-glycol	
Ethylene-glycol	25	%/kg
Nom. pipe connection size, valve	42	ext.
Liquid pressure drop, open valve	16.9	kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-250-1

1 Heating coil, water, in casing, TCLA120G01

Article number: 80057902-22

Valve kit heating/cooling

Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 40)

Capacity variant	2
No.of tube rows	2
No.of circuits	22
Connection number	65 ext.
Fin spacing	3.0 mm
Pressure drop	24 Pa
Air velocity	1.95 m/s
Design air flow	30,450 m³/h

Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303077

	In	Out	
Air temperature	-18.3	18.0	°C
Relative humidity	70	4	%

Required coil capacity 370.66 kW

Excess capacity of the coil 31 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 4.840 l/s

Liquid pressure drop 18.9 kPa

Liquid volume of the coil 58 l

Liquid type Ethylene-glycol

Ethylene-glycol 35 %/kg

Nom. pipe connection size, valve 50 ext.

Liquid pressure drop, open valve 19.0 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-400-1

1 End section, supply air

Static pressure drop 6 Pa

Quantity Extract air

1 End section, extract air

Static pressure drop 5 Pa

1 Filter

Filter class ePM10 60% (M5)

10x(592x592x520-10), 5x(592x287x520-10)

Velocity in the filter section 1.73 m/s

Recommended design pressure drop 79 Pa

Initial pressure drop 29 Pa

Final pressure drop 129 Pa

1 Recirculation part

1 Rotary heat exchanger, GOLD100FRXP01

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Extract air flow 30,400 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 532 Pa

Static pressure rise in the SFPv calculation 482 Pa

Temperature rise caused by the fan 0.7 °C

Min speed 200 rpm

Speed in the SFPv calculation 1,122 rpm

Design speed 1,149 rpm

Max speed 1,380 rpm

Design electric power to motor(s) 7.68 kW

Electric power to motor(s) in the SFPv calculation 7.05 kW

Rated motor power 6.50 kW

Motor option 1

Motor code DOMEL 749.3.694

Number of fans/motors in the air stream 2

Overall static efficiency drive 61.2 %

Maximum motor efficiency (incl. motor control 92.5%) 95.5 %

Efficiency grade; FMEG, plenum fan, incl. motor control 70

Regulation(EU)No 327/2011 overall efficiency 69.2 %

Specific fan power efficiency 0.80 kW/(m³/s)

1 End section, exhaust air

Static pressure drop 7 Pa

1 Damper, duct mounted, TBSA-4-250-080-2-1

Damper motor: With spring return

Damper blade: Insulated

Static pressure drop 6 Pa

Project: VATP6
Unit name: PN-5 - Design data

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Quantity	Accessories
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Project: VATP6
Unit name: PN-5 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303077

GOLD F RX

Unit size	100	
Supply air flow	30,450	m³/h
Extract air flow	30,400	m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)
Unit type: bidirectional ventilation unit; NVRU, BVU
Other heat recovery (rotary heat exchanger)
Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 83.8 %
Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014
The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	1.81	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	8,952	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	60	Pa
HRS	157	Pa
Casing; inlet	5	Pa
Casing; outlet	6	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.6	%

Extract air

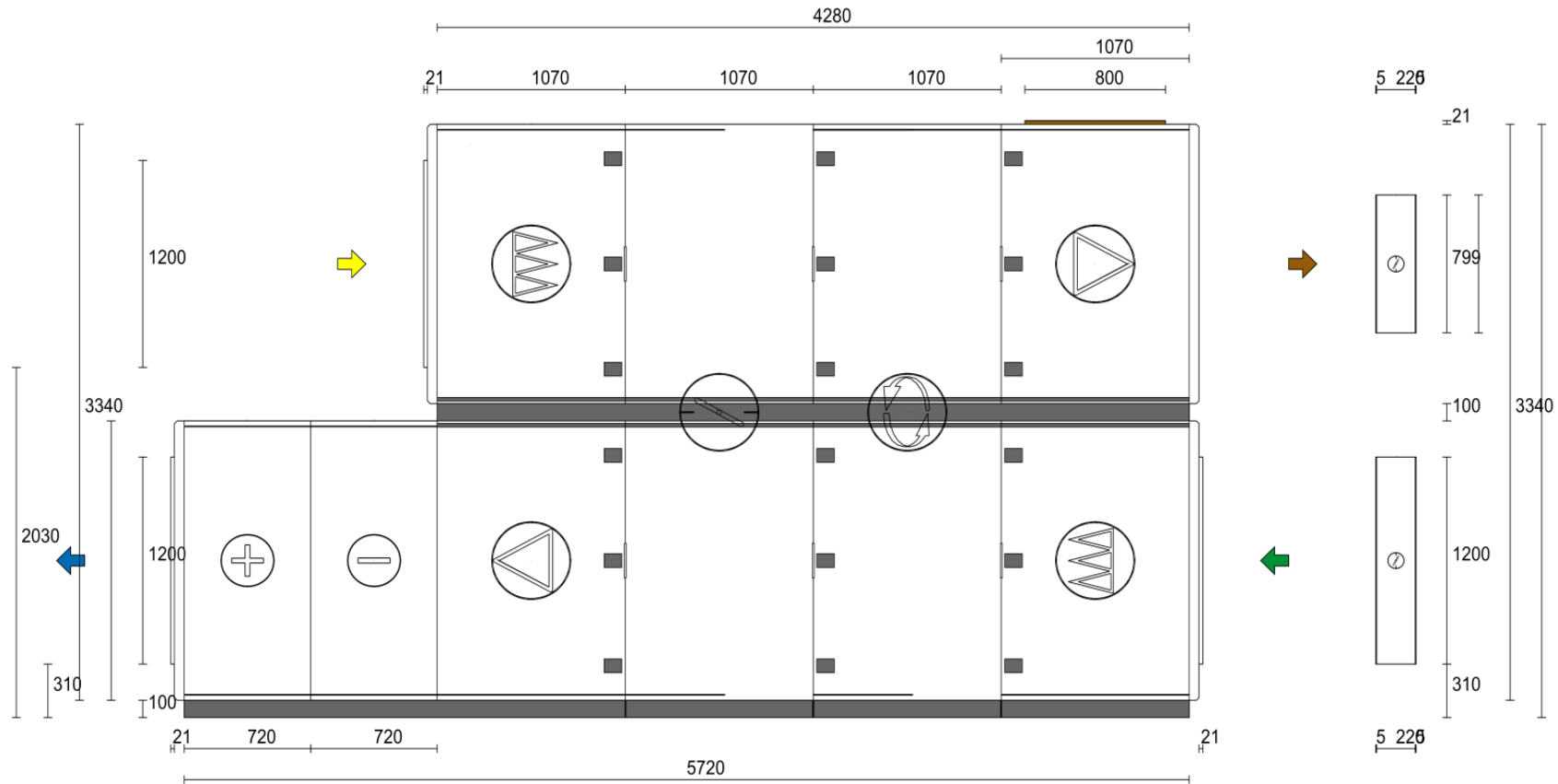
Face velocity, filter section	1.73	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	4,764	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	29	Pa
HRS	165	Pa
Casing; inlet	5	Pa
Casing; outlet	7	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	61.2	%

Project: VATP6
Unit name: PN-5 - Design data

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Efficiency bonus E 2018	324	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	702	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,124	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	38,560	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	39,600	m³/h

AHU Design
Sketch: Inspection side



GOLD F RX	
Unit size	100
Total weight	4,876 kg
Duct Component Weight	198 kg
Length, max	5,832 mm
Height, max	3,461 mm
Width, max	3,340 mm

Connection size	
outdoor air	2,400 x 1,200 mm
supply air	2,400 x 1,200 mm
extract air	2,400 x 1,200 mm
exhaust air	2,500 x 800 mm

Project: VATP6
Unit name: PN-5
Unit ID: AD-10000303077
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- Outdoor air
- Supply air
- Extract air
- Exhaust air

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303080

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		012	
Air density		1.200	kg/m ³
Supply air flow		3,980	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	180	Pa
Extract air flow		3,980	m ³ /h
Static pressure drop	Extract air duct	170	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		25.3	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.79	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.4	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303080

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	65
Damper, duct mounted					-2	
Connection frame					-2	
Filter	1.73				-134	
Rotary heat exchanger	2.72	-18.3/11.6	27.0/24.5		-193	
Recirculation part					-	
Fan				0.98	560	
Heating coil, water, in casing		12.4/18.0		7.55	-19	
Connection frame					-1	
Supply air duct					-180	78
Extract air duct					-170	66
Connection frame					-1	
Filter	1.63				-93	
Recirculation part					-	
Rotary heat exchanger	2.72	18.0/-11.9	24.0/26.5		-204	
Fan				1.18	635	
End section					-33	
Damper, duct mounted					-10	
Exhaust air duct					-30	81

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	80	75	74	72	73	72	67	64	dB	78	dB(A)
To outdoor air duct	76	73	70	60	51	49	44	45	dB	65	dB(A)
To extract air duct	77	74	68	66	55	54	51	50	dB	66	dB(A)
To exhaust air duct	83	79	76	76	77	75	71	68	dB	81	dB(A)
To surroundings	74	67	56	57	46	45	39	39	dB	57	dB(A)

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303080

GOLD F RX
Manufactured by Swegon, Kvånum, Sweden

Basic Data			
Unit size		012	
Air density		1.200	kg/m ³
Supply air flow		3,980	m ³ /h
Static pressure drop	Outdoor air duct	30	Pa
	Supply air duct	180	Pa
Extract air flow		3,980	m ³ /h
Static pressure drop	Extract air duct	170	Pa
	Exhaust air duct	30	Pa
Climate data			Latvia
Design outdoor temperature, summer		27.0	°C
Design outdoor humidity, summer		70	%
Design outdoor temperature, winter		-18.3	°C
Design outdoor humidity, winter		70	%
Supply air temperature, summer		25.3	°C
Supply air temperature, winter		18.0	°C



Key Performance Data			
Specific fan power SFPv	clean filters	1.79	kW/(m ³ /s)
Temperature efficiency of supply air according to EN308		82.4	%
Eurovent Energy Efficiency Class		A+	2016
ErP Commission Regulation (EU) No 1253/2014		Compliant	2018

Casing	
Construction	Frameless, double skinned panels with mineral wool insulation
Panels	56mm thick with 1mm thick steel sheet inside and out. Outer sheet with grey painted finish
Thermal insulation class	T2
Thermal bridging class	TB2
Casing leakage class	L1(M) / L2(R) according to EN 1886:2007 at -400 Pa and +400 Pa
Casing strength	D3(M)
Insulating material	

Electrical connections	
GOLD F	3-phase, 5-wire, 400 V-10/+15%, 50 Hz, 10 A

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303080

Functional sections viewed in the direction of air flow	Velocity m/s	Air Temperature in/out Winter °C	Air Temperature in/out Summer °C	Power kW	Design Pressure drop Pa	Noise Level dB(A)
Outdoor air duct					-30	65
Damper, duct mounted					-2	
Connection frame					-2	
Filter	1.73				-134	
Rotary heat exchanger	2.72	-18.3/11.6	27.0/24.5		-193	
Recirculation part					-	
Fan				0.98	560	
Heating coil, water, in casing		12.4/18.0		7.55	-19	
Connection frame					-1	
Supply air duct					-180	78
Extract air duct					-170	66
Connection frame					-1	
Filter	1.63				-93	
Recirculation part					-	
Rotary heat exchanger	2.72	18.0/-11.9	24.0/26.5		-204	
Fan				1.18	635	
End section					-33	
Damper, duct mounted					-10	
Exhaust air duct					-30	81

Sound power to duct, measured according to ISO 5136
Noise reduction for function section included to duct.
Sound power emitted to surroundings, measured according to ISO 3741

Frequency band	63	125	250	500	1k	2k	4k	8k		All	
To supply air duct	80	75	74	72	73	72	67	64	dB	78	dB(A)
To outdoor air duct	76	73	70	60	51	49	44	45	dB	65	dB(A)
To extract air duct	77	74	68	66	55	54	51	50	dB	66	dB(A)
To exhaust air duct	83	79	76	76	77	75	71	68	dB	81	dB(A)
To surroundings	74	67	56	57	46	45	39	39	dB	57	dB(A)

GOLD-Unit with control system

Components are arranged according to airflow direction

Quantity	Supply air
1	Damper, duct mounted, TBSA-5-100-040-2-1
	Damper motor: With spring return
	Damper blade: Insulated
	Static pressure drop 2 Pa
1	Connection frame , outdoor air
	Static pressure drop 2 Pa
1	Filter

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Filter class ePM1 50% (F7)	
2x(490x592x370-8)	
Velocity in the filter section	1.73 m/s
Recommended design pressure drop	134 Pa
Initial pressure drop	84 Pa
Final pressure drop	184 Pa

1 Rotary heat exchanger, GOLD012FRXP01X

Rotary heat exchanger of type RECOsorpTic

Sorption treated

Speed controlled

Pressure drop, supply air 193 Pa

Pressure drop, extract air 204 Pa

Extra pressure drop in extract air side (damper) to ensure the right flow direction 95 Pa

Purging flow including leakage 236 m³/h

Temperature efficiency of supply air according to EN308 (82.4% at the same airflow) 82.4 %

Humidity efficiency, supply air, winter 80.0 %

Humidity efficiency, supply air, summer 71.5 %

Annual energy efficiency, dry conditions 86.5 %

Supply air side, winter	In	Out	
Air temperature	-18.3	11.6	°C
Relative humidity	70	50	%
Heating power		52.13	kW

Extract air side, winter	In	Out	
Air temperature	18.0	-11.9	°C
Relative humidity	40	100	%

Supply air side, summer	In	Out	
Air temperature	27.0	24.5	°C
Relative humidity	70	58	%
Cooling power		18.50	kW

Extract air side, summer	In	Out	
Air temperature	24.0	26.5	°C
Relative humidity	50	64	%

1 Recirculation part

Mixing ration(RCA/SUP) at design winter outdoor temperature 0 %

1 Fan

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
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Fan of type GOLD Wing+	
Withdrawable fan with integrated airflow measurement	
Direct drive with speed controlled EC motor	
Isolated with internal flexible connection and rubber anti-vibration mounting	
Standard connection, internal	
Supply air flow	3,980 m³/h
The fan system effect is included in the fan performances	
Design static pressure (wet conditions)	560 Pa
Static pressure rise in the SFPv calculation	510 Pa
Temperature rise caused by the fan	0.7 °C
Min speed	300 rpm
Speed in the SFPv calculation	1,801 rpm
Design speed	1,856 rpm
Max speed	2,250 rpm
Design electric power to motor(s)	0.98 kW
Electric power to motor(s) in the SFPv calculation	0.89 kW
Rated motor power	1.60 kW
Motor option	1
Motor code	DOMEL 748.3.292
Number of fans/motors in the air stream	1
Overall static efficiency drive	63.0 %
Maximum motor efficiency (incl. motor control 91.5%)	94.0 %
Efficiency grade; FMEG, plenum fan, incl. motor control	74
Regulation(EU)No 327/2011 overall efficiency	66.8 %
Specific fan power efficiency	0.81 kW/(m³/s)

1 Heating coil, water, in casing, TCLA012G01

Article number: 32899101	
Valve kit heating/cooling	
Incl. actuator, freeze guard sensor, connection cable and valve (kvs = 1)	
Capacity variant	1
No.of tube rows	1
No.of circuits	4
Connection number	20 ext.
Fin spacing	2.0 mm
Pressure drop	19 Pa
Air velocity	2.35 m/s

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303080

	In	Out	
Air temperature	12.4	18.0	°C
Relative humidity	47	33	%

Required coil capacity 7.54 kW
Excess capacity of the coil 160 %

	In	Out	
Liquid temperature	80.0	60.0	°C

Flow of liquid 0.099 l/s
Liquid pressure drop 2.4 kPa
Liquid volume of the coil 2 l
Liquid type Ethylene-glycol
Ethylene-glycol 35 %/kg
Nom. pipe connection size, valve 15 ext.
Liquid pressure drop, open valve 12.6 kPa

Accessories

Quantity	Product	Article name
1	Valve kit, heating and cooling	TBVL-3-010-1

1 Connection frame , supply air

Static pressure drop 1 Pa

Quantity Extract air

1 Connection frame , extract air

Static pressure drop 1 Pa

1 Filter

Filter class ePM10 60% (M5)
2x(490x592x370-8)

Velocity in the filter section 1.63 m/s
Recommended design pressure drop 93 Pa
Initial pressure drop 43 Pa
Final pressure drop 143 Pa

1 Recirculation part

Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
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Unit ID: AD-10000303080

1 Rotary heat exchanger, GOLD012FRXP01X

Accessories and technical data, see supply air

1 Fan

Fan of type GOLD Wing+

Withdrawable fan with integrated airflow measurement

Direct drive with speed controlled EC motor

Isolated with internal flexible connection and rubber anti-vibration mounting

Standard connection, internal

Extract air flow 3,980 m³/h

The fan system effect is included in the fan performances

Design static pressure (wet conditions) 635 Pa

Static pressure rise in the SFPv calculation 585 Pa

Temperature rise caused by the fan 0.8 °C

Min speed 300 rpm

Speed in the SFPv calculation 1,924 rpm

Design speed 1,976 rpm

Max speed 2,250 rpm

Design electric power to motor(s) 1.18 kW

Electric power to motor(s) in the SFPv calculation 1.08 kW

Rated motor power 1.60 kW

Motor option 1

Motor code DOMEL 748.3.292

Number of fans/motors in the air stream 1

Overall static efficiency drive 62.8 %

Maximum motor efficiency (incl. motor control 91.5%) 94.0 %

Efficiency grade; FMEG, plenum fan, incl. motor control 74

Regulation(EU)No 327/2011 overall efficiency 66.8 %

Specific fan power efficiency 0.93 kW/(m³/s)

Accessories

Quantity	Product	Article name
1	Fan outlet upwards	TBXZ-1-92-12

1 End section, exhaust air

Static pressure drop 33 Pa

1 Damper, duct mounted, TBSA-3-000-050-1-1

Damper motor: With spring return

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Damper blade: Uninsulated	
Static pressure drop	10 Pa

Quantity	Accessories
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Project: VATP6
Unit name: PN-6 - Design data

Date: 12/09/2018
11 / 1.0.20180816.1150138
Unit ID: AD-10000303080

GOLD F RX

Unit size	012	
Supply air flow	3,980	m³/h
Extract air flow	3,980	m³/h

Non-residential ventilation unit (exception: multi dwelling residential buildings)
Unit type: bidirectional ventilation unit; NVRU, BVU
Other heat recovery (rotary heat exchanger)
Supply air dry temp. efficiency ratio (Requirement: 2018: 73 %): 82.4 %
Maximum internal leakage (tracer gas) 1 %



ErP Commission Regulation (EU) No 1253/2014
The air handling unit meets the requirements in 2018

Supply air

Face velocity, filter section	1.73	m/s
Energy perf, 6000 h (filter class ePM1 50% (F7) or better)	1,412	kWh/year
Filter class (ePM1 50% (F7) or better)	F7	
Reference filter; ePM1 50% (F7)	84	Pa
HRS	193	Pa
Casing; inlet	2	Pa
Casing; outlet	1	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	63.0	%

Extract air

Face velocity, filter section	1.63	m/s
Energy perf, 6000 h (filter class ePM10 60% (M5) or better)	910	kWh/year
Filter class (ePM10 60% (M5) or better)	M5	
Reference filter; ePM10 60% (M5)	43	Pa
HRS	204	Pa
Casing; inlet	1	Pa
Casing; outlet	33	Pa
Casing; fan system losses	0	Pa
(The fan system effect is included in the fan performances)		
Overall static fan efficiency at the current working point	62.8	%

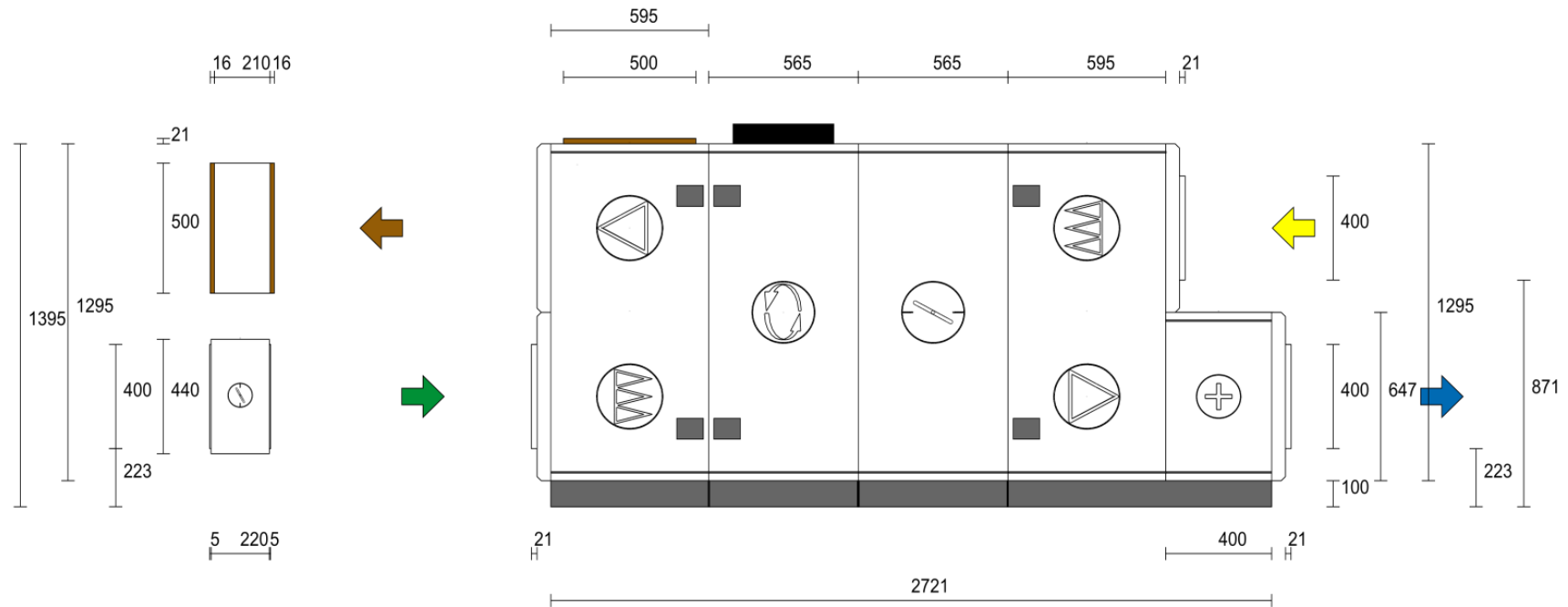
Project: VATP6
Unit name: PN-6 - Design data

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Unit ID: AD-10000303080

Efficiency bonus E 2018	282	W/(m³/s)
Filter correction F 2018	0	W/(m³/s)
Internal specific fan power, SFPint	891	W/(m³/s)
Internal specific fan power, required 2018, SFPint_limit	1,216	W/(m³/s)
Maximum air flow (end section, balanced), required 2018	4,212	m³/h
Maximum air flow (connection frame conn, balanced), required 2018	4,788	m³/h

AHU Design

Sketch: Inspection side



GOLD F RX	
Unit size	012
Total weight	643 kg
Duct Component Weight	20 kg
Length, max	2,825 mm
Height, max	1,471 mm
Width, max	1,199 mm

Connection size		
outdoor air	1,000 x 400	mm
supply air	1,000 x 400	mm
extract air	1,000 x 400	mm
exhaust air	0 x 250	mm

Project: VATP6
Unit name: PN-6
Unit ID: AD-10000303080
11 / 1.0.20180816.1150138
Date: 12/09/2018

- Outdoor air
- Supply air
- Extract air
- Exhaust air