

| Project data | | | | | | | | | | | | | | | | | | |
|-----------------|------|------------|------------|-----------------------|-------|------|-------|-----|-----|-------|--------|-------|----|------|----------------|--------------|-------------------|--|
| Project | | | | | | | | | | | | | | | | | | |
| Handled by | | | | | | | | | | | | | | | | | | |
| Additional info | | | | | | | | | | | | | | | | | | |
| Unit code | Size | qT m3/h | qP m3/h | Heat recovery section | | | Coils | | | | Sounds | | | | Electric motor | | Spec. input power | |
| | | | | Heat | etaTs | etaT | v | qLP | qJP | qLTO | LWP | LWI | PN | IN | SFPv | Clean filter | | |
| | | | | recovery | % | % | m/s | l/s | l/s | dB(A) | dB(A) | dB(A) | kW | A | kW/(m³/s) | kW/(m³/s) | | |
| 1: | 2C | 4655 | | LG | 72.0 | | 2.23 | | | | 0.58 | 82 | 72 | 1.50 | 3.17 | 0.90 | | |
| 1: | 2C | | 5280 | LG | | | 2.53 | | | | 0.58 | 87 | 74 | 2.20 | 4.54 | 1.41 | 2.20 | |
| Total | | 4655 | 5280 | | | | | | | | | | | 3.70 | | | | |

Total electric supply, clean filters 3.23 kW

Common SFP figure of units, clean filters 2.20 kW/(m³/s)

| Abbreviations used: | | Unit |
|---------------------|---|------|
| qT | Supply air flow | m3/h |
| qP | Exhaust air flow | m3/h |
| LL | Plate-type exchanger heat recovery | |
| LG | Water-glycol heat recovery | |
| LR | Rotor heat recovery | |
| etaTs | Entering air temperature efficiency with even air flows | % |
| etaT | Entering air temperature efficiency with designed air flows | % |
| v | Coil face velocity | m/s |
| qLP | Water flow of heating coil | l/s |

| Abbreviations used: | | Unit |
|---------------------|---|-----------|
| qJP | Water flow of cooling coil | l/s |
| qLTO | Fluid flow of heat recovery coil | l/s |
| LWP | Sound power level at unit's pressure side | dB(A) |
| LWI | Sound power level at unit's suction side | dB(A) |
| PN | Fan motor's nominal capacity | kW |
| IN | Fan motor's nominal current (3~400V) | A |
| SFPv | Single unit's nominal input power, clean filter | kW/(m³/s) |
| SFP | Supply-exhaust unit's nominal input power, clean filter | kW/(m³/s) |

Unit:

Project data

Handled by

Unit : 1

Summary data

| | | |
|--------------|------|-------|
| Altitude | 0 | m |
| Air pressure | 1013 | mbar |
| Air density | 1.20 | kg/m3 |

| | Supply unit | | | Exhaust unit | | |
|---------------------------------------|-------------|-----------|--|--------------|------|--|
| Unit size | Recair 2C | | | Recair 2C | | |
| Air flow | 4655 | m3/h | | 5280 | m3/h | |
| External static pressure of the unit | 150 | Pa | | 400 | Pa | |
| Motor power | 1.36 | kW | | 2.14 | kW | |
| Coil face velocity | 2.2 | m/s | | 2.5 | m/s | |
| Face velocity of the unit | 2.2 | m/s | | 2.5 | m/s | |
| Temp. efficiency of the heat recovery | 72.00 | % | | | | |
| SFP, specific fan power | 2.20 | kW/(m³/s) | | | | |

Calculation of the SFP figure includes frequency converter's efficiency 97%

Unit equipped with T-handles

The noise performances in accordance with ISO 3741, ISO 5136 and ISO 7235.

Sound power levels in the unit connections

Supply unit

| Octave band Hz | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | | Tot. | |
|---------------------------|----|-----|-----|-----|----|----|----|----|----|------|-------|
| Pressure side of the unit | 68 | 68 | 68 | 75 | 78 | 74 | 74 | 71 | dB | 82 | dB(A) |
| Suction side of the unit | 70 | 67 | 67 | 73 | 66 | 52 | 39 | 30 | dB | 72 | dB(A) |
| Through the casing | 62 | 57 | 51 | 56 | 60 | 58 | 49 | 40 | dB | 63 | dB(A) |

Exhaust unit

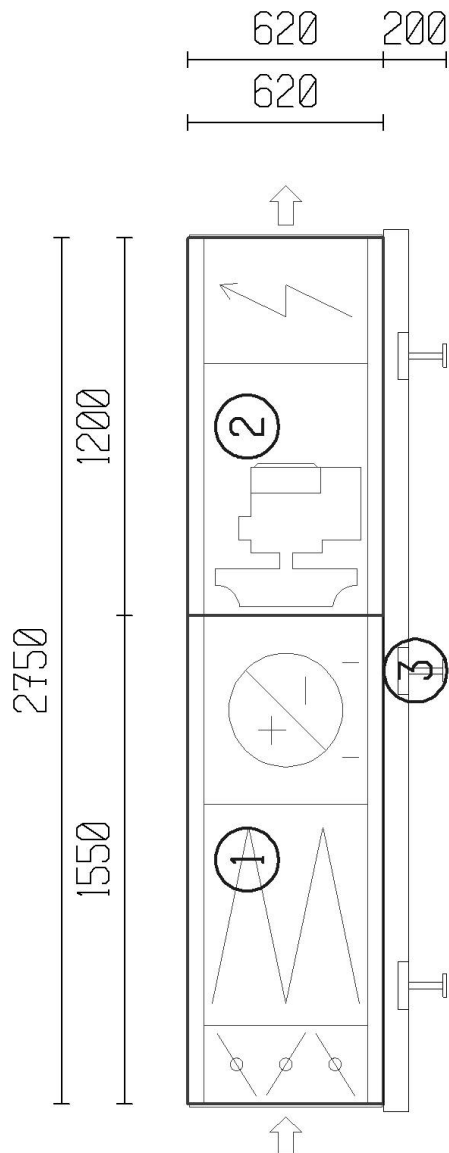
| Octave band Hz | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | | Tot. | |
|---------------------------|----|-----|-----|-----|----|----|----|----|----|------|-------|
| Pressure side of the unit | 72 | 72 | 72 | 80 | 83 | 80 | 81 | 78 | dB | 87 | dB(A) |
| Suction side of the unit | 73 | 70 | 70 | 76 | 69 | 55 | 42 | 33 | dB | 74 | dB(A) |
| Through the casing | 65 | 60 | 54 | 59 | 63 | 61 | 52 | 43 | dB | 66 | dB(A) |

Unit:
Unit code
Unit size 2C
Supply air flow 4655 m³/h
Exhaust air flow 5280 m³/h
Tot. (dry) weight of the unit 386 kg
Additional info
Duct connections supplied with connection flange

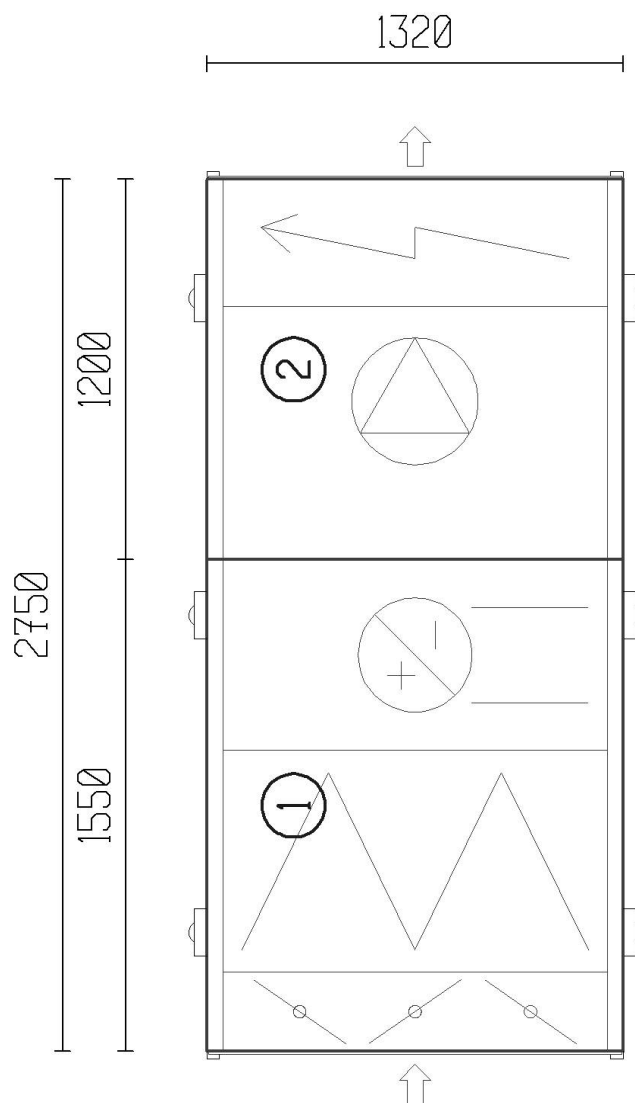
Handled by
Scale

No scale

From the service side



Top view

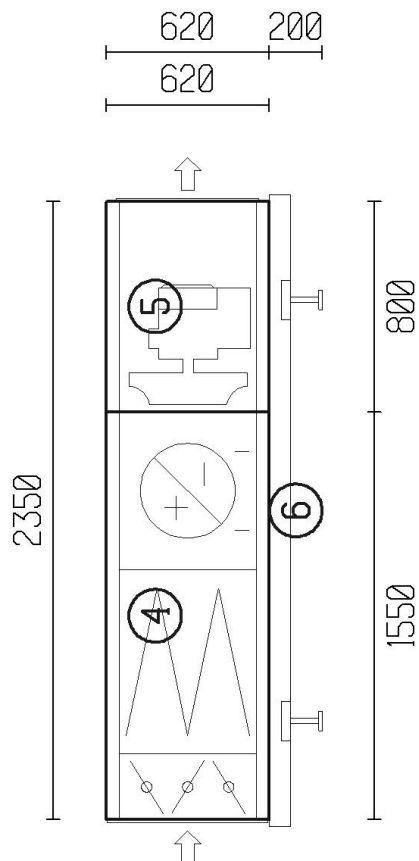


Unit:
Unit code
Unit size 2C
Supply air flow 4655 m³/h
Exhaust air flow 5280 m³/h
Tot. (dry) weight of the unit 342 kg
Additional info
Duct connections supplied with connection flange

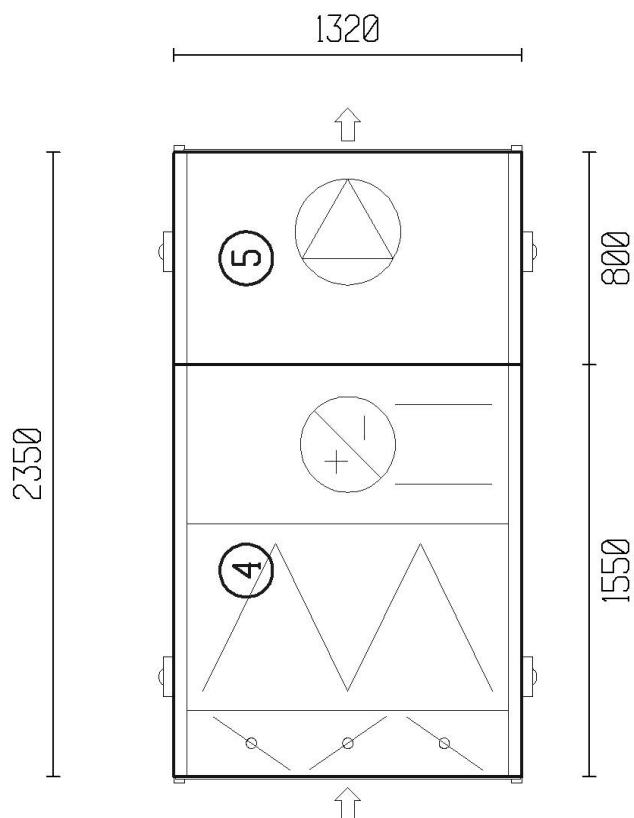
Handled by
Scale

No scale

From the service side



Top view



Unit:

Unit sections and technical data

Supply unit

① CASING 2C L=1550

| | | |
|---|-------------------|----|
| Dimensions (width x height x length) | 1320 x 620 x 1550 | mm |
| Weight, includes the weight of the casing and parts inside the casing | 207 | kg |

DAMPER SECTION 2C L=250

| | | |
|-----------------|-----------------|----|
| Tightness class | Leakage class 4 | |
| Pressure loss | 13 | Pa |
| Torque demand | 8 | Nm |

FILTER SECTION 2C L=700

| | | |
|---------------------------|-------------|----|
| Filter class | F7 | |
| Initial pressure loss | 112 | Pa |
| Calculation pressure loss | 168 | Pa |
| Final pressure loss | 224 | Pa |
| Filter quantity and size | 2x[592x442] | |
| Spare filter set | 1 | pc |

HEAT RECOVERY SECTION 2C Z=12 SUPPLY

| | | |
|---|----------------------------|-------------------|
| Air flow | 4655 | m ³ /h |
| Heating capacity | 60.1 | kW |
| Row number / fin spacing | 12 / 2.0 | mm |
| Face velocity / Pressure loss | 2.2 m/s / 124 | Pa |
| Entering air: temperature / humidity / enthalpy | -23.8 °C / 80 % / -22.8 | kJ/kg |
| Leaving air: temperature / humidity / enthalpy | 14.9 °C / 0 % / 0.0 | kJ/kg |
| Fluid type | Ethylene glycol 30 | % |
| Entering / leaving fluid | 23 / -4 | °C |
| Fluid flow / fluid velocity / pressure loss | 0.58 l/s / 0.88 m/s / 43.2 | kPa |
| Fluid volume | 21 | l |
| Tube connections, flange | DN25 | |

② CASING 2C L=1200

| | | |
|---|-------------------|----|
| Dimensions (width x height x length) | 1320 x 620 x 1200 | mm |
| Weight, includes the weight of the casing and parts inside the casing | 152 | kg |

FAN SECTION 2C 315 ARRANGEMENT1 DIRECT DRIVE

| | | |
|--|---|-------------------|
| Performance value tolerance DIN 24166 | | |
| Manufacturer | Fläkt Woods | |
| Blade type/diameter | Backward curved / D315 | |
| Air flow | 4655 | m ³ /h |
| Connection type | To a chamber | |
| Fan total pressure | 568 | Pa |
| Fan efficiency | 68 | % |
| Electrical total efficiency | 54 | % |
| Motor speed | 3269 | 1/min |
| Maximum speed of revolution | 3364 | 1/min |
| Fan shaft power | 1.08 | kW |
| Fan's maximum power | 3.34 | kW |
| Air flow measurement pressure difference / K value | $\left(q = k \sqrt{\Delta p} \right)$ 2193 Pa / 99.4 | |

DIRECT DRIVEN FAN GPEB310

| | | |
|--------------------------------------|---------------|-------|
| Voltage | 400V/3-v/50Hz | |
| Motor shaft power | 1.08 | kW |
| Nominal capacity | 1.50 | kW |
| Nominal current | 3.17 | A |
| Nominal speed (50 Hz) | 2900 | 1/min |
| Efficiency | 81 | % |
| Motor input power in working point | 1.36 | kW |
| Motor frequency in the working point | 56 | Hz |
| Motor maximum frequency | 58 | Hz |
| Inspection window as standard | | |
| Light IP 44 | | |

Unit:

Switch and cable for light
Air flow meter, analog
HEATING SECTION, ELECTRIC 2C

| | | |
|---|----------------------|------|
| Tube type | | |
| Air flow | 4655 | m3/h |
| Heating capacity | 7.9 | kW |
| Row number / fin spacing | 0 / 0.0 | mm |
| Face velocity / Pressure loss | 2.3 m/s / 11 | Pa |
| Voltage | 400V/3-v/50Hz | Hz |
| Capacity steps/capacity partition | 15.0+7.5+4.0+2.0+1.5 | kW |
| Air temperature, entering / leaving | 14.9 / 20.0 | °C |
| Standard accessories: over heating and fire safety thermostats | | |
| Notice! Electric heater section does not include power control system and equipment for heating power regulation. | | |

③ UNIT BASE 1C-6C L=2800 B=1320 H=200

Adjustable feet with synthetic rubber pad

Weight 27 kg

Exhaust unit
④ CASING 2C L=1550

Dimensions (width x height x length) 1320 x 620 x 1550 mm
Weight, includes the weight of the casing and parts inside the casing 207 kg

DAMPER SECTION 2C L=250

Tightness class Leakage class 4
Pressure loss 17 Pa
Torque demand 8 Nm

FILTER SECTION 2C L=700

Filter class F5
Initial pressure loss 62 Pa
Calculation pressure loss 93 Pa
Final pressure loss 124 Pa
Filter quantity and size 2x[592x442]
Spare filter set 1 pc

HEAT RECOVERY SECTION 2C Z=12 EXHAUST

Air flow 5280 m3/h
Cooling capacity 60.1 kW
Row number / fin spacing 12 / 2.0 mm
Face velocity / Pressure loss 2.5 m/s / 191 Pa
Entering air: temperature / humidity / enthalpy 30.0 °C / 50 % / 65.3 kJ/kg
Leaving air: temperature / humidity / enthalpy 10.3 °C / 100 % / 30.0 kJ/kg
Fluid type Ethylene glycol 30 %
Entering / leaving fluid -4 / 23 °C
Fluid flow / fluid velocity / pressure loss 0.58 l/s / 0.88 m/s / 43.2 kPa
Fluid volume 21 l
Tube connections, flange DN25

⑤ CASING 2C L=800

Dimensions (width x height x length) 1320 x 620 x 800 mm
Weight, includes the weight of the casing and parts inside the casing 113 kg

FAN SECTION 2C 315 ARRANGEMENT1 DIRECT DRIVE

Performance value tolerance DIN 24166
Manufacturer Fläkt Woods
Blade type/diameter Backward curved / D315
Air flow 5280 m3/h
Connection type To a chamber
Fan total pressure 831 Pa
Fan efficiency 70 %
Electrical total efficiency 57 %
Motor speed 3772 1/min

Unit:

| | | |
|--|---|-------|
| Maximum speed of revolution | 3802 | 1/min |
| Fan shaft power | 1.73 | kW |
| Fan's maximum power | 3.34 | kW |
| Air flow measurement pressure difference / K value | $\left(q = k \sqrt{\Delta p} \right)$ 2822 Pa / 99.4 | |

DIRECT DRIVEN FAN GPEB310

| | | |
|--------------------------------------|---------------|-------|
| Voltage | 400V/3-v/50Hz | |
| Motor shaft power | 1.73 | kW |
| Nominal capacity | 2.20 | kW |
| Nominal current | 4.54 | A |
| Nominal speed (50 Hz) | 2880 | 1/min |
| Efficiency | 83 | % |
| Motor input power in working point | 2.14 | kW |
| Motor frequency in the working point | 65 | Hz |
| Motor maximum frequency | 66 | Hz |
| Inspection window as standard | | |

Light IP 44

Switch and cable for light

Air flow meter, analog

⑥ UNIT BASE 1C-6C L=2400 B=1320 H=200

| | | |
|--|----|----|
| Adjustable feets with synthetic rubber pad | | |
| Weight | 21 | kg |