

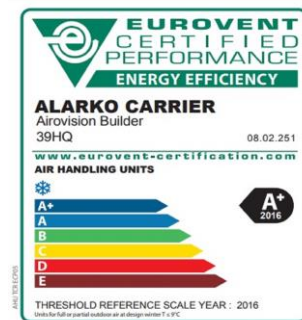
Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

GENERAL DATA

| | |
|-------------------------|---------------------------------------|
| Customer reference | 6.2.1 5000 PHE 09.04 |
| Number off | 1 |
| Location | External (flat roof) |
| Delivery | In sections |
| AHU finish | Outside in standard colour (RAL 7035) |
| Product | Air handling unit |
| AHU configuration | Double deck (opposite) |
| Pallet option | Excluded |
| Lifting Beam | Included |
| Total weight (each) | kg 1415 |
| (Radiated casework SWL) | dB(A) 66 |
| ErP identification code | NRVU / BVU |

Eurovent energy classification



| | | | | | |
|------------------|-------------------|------|------------------|-------------------|------|
| SFP _e | kJ/m ³ | 2.51 | SFP _v | kJ/m ³ | 2.30 |
|------------------|-------------------|------|------------------|-------------------|------|

Calculations conform to the Regulation for bidirectional ventilation unit (BVU) for delivery after 01.01.2018

Ecodesign 1253/2014 2018 BVU after 01.01.2018

Intermediate calculations

| | |
|---|-------|
| E (HR Bonus) (Pa) | 24 |
| F (Filter correction) (Pa) | 0 |
| SFP int_limit (W/(m ³ /s)) | 915.7 |
| SFP int supply air (W/(m ³ /s)) | 350.0 |
| SFP int extract air (W/(m ³ /s)) | 309.7 |
| SFP int (W/(m ³ /s)) | 659.7 |

Supply air unit data

| | |
|-----------------------------|------|
| Airflow (m ³ /s) | 1.39 |
| Static pressure (Pa) | 878 |
| p fan (kW) | 1.90 |
| n fan (%) | 64.2 |
| Fine Filter | Yes |
| dp Fine filter (Pa) | 58 |
| nt nrvu (%) | 74 |
| dp HRS (Pa) | 167 |

Extract air unit data

| | |
|-----------------------------|------|
| Airflow (m ³ /s) | 1.39 |
| Static pressure (Pa) | 699 |
| p fan (kW) | 1.59 |
| n fan (%) | 61.0 |
| Medium Filter | Yes |
| dp Medium filter (Pa) | 15 |
| nt nrvu (%) | 74 |
| dp HRS (Pa) | 174 |

Check

| | |
|--------------------------------------|--------|
| Fan is selected with VSD | Passed |
| Heat recovery | Passed |
| Thermal by-pass facility | Passed |
| SFP int | Passed |
| Filters equipped with pressure gauge | Passed |
| Total check | Passed |

ACCESS DATA

| | | | |
|-------------|----------|---|----------|
| Handle type | L-Handle | Pressure guard at positive pressure doors | Included |
|-------------|----------|---|----------|

EXHAUST DATA

| | | | | |
|---------------------|--------------------------------------|------------------|-------------------|--|
| Type | 39HQ 09.04 | Air volume | m ³ /s | 1.39 |
| Casing construction | GP080 | Internal sheet | | Galvanised 0.80mm |
| Insulation | 60 mm Glasswool 23 kg/m ³ | External sheet | | PUR-PA painted galvanized steel 0.80mm |
| Unit velocity | m/s 1.65 | Profile | | Steel |
| SFP _e | kJ/m ³ 1.15 | SFP _v | kJ/m ³ | 1.08 |

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

| | | | | | | | | | |
|---|-----------|----|-------------|-------------|-------------|----|----|-----|--|
| Mechanical performance according EN1886 | Model box | D1 | L1 (-400Pa) | L1 (+400Pa) | L1 (+700Pa) | F9 | T2 | TB2 | |
| | Real Unit | | L2 (-400Pa) | L2 (+400Pa) | L2 (+700Pa) | | | | |

| | | | | | | | | | |
|--------------------------|----|-----|-----|-----|----|----|----|----|-------|
| (Sound data exhaust SWL) | Hz | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dB(A) |
| | dB | 48 | 65 | 69 | 69 | 72 | 72 | 68 | 77 |
| | dB | 50 | 65 | 69 | 74 | 73 | 72 | 66 | 78 |

SUPPLY DATA

| | | | | |
|-------------------------------------|------------------------|----------------|-------------------|--|
| Glasswool 23 kg/m ³ Type | 39HQ 09.04 | Air volume | m ³ /s | 1.39 |
| Casing construction | GP080 60 mm | Internal sheet | | Galvanised 0.80mm |
| Design outdoor temperature | °C 9.0 | External sheet | | PUR-PA painted galvanized steel 0.80mm |
| Design outdoor temperature (summer) | °C 37.5 | Insulation | | Glasswool 23 kg/m ³ |
| Design outdoor dew point (summer) | °C 16.8 | Profile | | Steel |
| Unit velocity | m/s 1.65 | | | |
| SFPe | kJ/m ³ 1.37 | SFPv | kJ/m ³ | 1.23 |

| | | | | | | | | | |
|---|-----------|----|-------------|-------------|-------------|----|----|-----|--|
| Mechanical performance according EN1886 | Model box | D1 | L1 (-400Pa) | L1 (+400Pa) | L1 (+700Pa) | F9 | T2 | TB2 | |
| | Real Unit | | L2 (-400Pa) | L2 (+400Pa) | L2 (+700Pa) | | | | |

| | | | | | | | | | |
|-------------------------|----|-----|-----|-----|----|----|----|----|-------|
| (Sound data supply SWL) | Hz | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dB(A) |
| | dB | 60 | 64 | 66 | 62 | 59 | 47 | 40 | 66 |
| | dB | 64 | 70 | 77 | 82 | 82 | 79 | 70 | 86 |

In direction of airflow, the unit comprises:

DELIVERY SECTION(S)

| Section | Width (mm) | Height (mm) | Length (mm) | Baseframe (mm) | Weight (kg) | Weight (Lifting Beam) (kg) |
|---------|------------|-------------|-------------|----------------|-------------|----------------------------|
| 1 | 1538 | 738 | 1218 | 62 | 183 | |
| 2 | 1538 | 738 | 418 | 62 | 62 | |
| 3 | 1538 | 738 | 418 | 62 | 82 | |
| 4 | 1538 | 1538 | 1538 | 62 | 512 | |
| 5 | 1538 | 738 | 2338 | 62 | 353 | 21 |
| 6 | 1538 | 738 | -382 | 62 | 28 | |
| 7 | 1538 | 738 | 1378 | 62 | 191 | |

EXHAUST COMPONENTS

INLET

| | | | | |
|-------------------------|----|------------|-----------------|-------------|
| Opening Position | | Full face | Provided with: | |
| Number of openings | | 1 | Opening product | Duct spigot |
| Opening, width x height | mm | 1440 x 640 | | |
| Pressure drop | Pa | 2 | | |

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

| | | | |
|---------------------------|--------------------|------------------------|------------|
| FILTER | | | |
| Filter type | Panel (Synthetic) | Withdrawal method | Side |
| Test method | EN 779 / ISO 16890 | Filter frame material | Galvanised |
| EN 779 Class | M5 | Filter casing material | Galvanised |
| Eurovent Efficiency Class | NA | | |
| ISO 16890 Class | ISO ePM10 50 | | |
| Design pressure drop | Mean pd | | |
| Initial pressure drop | Pa | 51 | |
| Mean pressure drop | Pa | 101 | |
| Final pressure drop | Pa | 151 | |
| Filter length | mm | 48 | |

| | | | |
|----------------|-----|---|---------|
| Filters | | | |
| 592x592 | Qty | 1 | 437x592 |
| 592x287 | Qty | 1 | Qty |
| | | | 1 |

EXTRAS
1 x Pressure gauge wall mounted, Magnehelic 2000

| | | | |
|---------------------|----|---|--|
| INLET PLENUM | | | |
| Air pressure drop | Pa | 0 | |

| | | | |
|--------------------------|----------------|------|-----------------------------|
| FAN | | | |
| Fan type | K3G355PI9305 | | |
| Fan arrangement | Fan Wall - 1x1 | | |
| Air volume | m³/s | 1.39 | Installed motor power |
| External static pressure | Pa | 392 | kW |
| Internal static pressure | Pa | 300 | 2.68 |
| Static pressure ISP+ESP | Pa | 692 | Motor |
| System effect | Pa | 7 | Run |
| Extra static pressure | Pa | 0 | Motor efficiency class |
| Total static pressure | Pa | 699 | IE4 |
| Dynamic pressure | Pa | 68 | Motor nominal speed |
| Total pressure | Pa | 767 | rpm |
| Fan speed | rpm | 2717 | 3230 |
| Max fan speed | rpm | 3230 | Voltage |
| Efficiency (total) | % | 66 | V |
| Fan shaft power | kW | 1.59 | 380-480 |
| | | | Current |
| | | | A |
| | | | 4.1 |
| | | | Abs. motor power incl. F.I. |
| | | | kW |
| | | | 1.59 |
| | | | Control Signal (0-10V) |
| | | | V |
| | | | 7.59 |
| | | | Fan bulkhead material |
| | | | Galvanised |

| | | | | | | | | | |
|----------------------|-----------|----|-----|-----|-----|----|----|----|----|
| (Fan sound data SWL) | Hz | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| Total | Inlet dB | 35 | 49 | 66 | 70 | 70 | 73 | 74 | 70 |
| | Outlet dB | 37 | 51 | 67 | 72 | 78 | 79 | 79 | 74 |

FAN EXTRAS
Inlet cone measuring points

| | | | |
|---------------|-------|-------------|------|
| ACCESS | | | |
| Access type | Hatch | Access side | Left |

EXTRAS
2 x Measuring nipple, 6mm

1 x Fanwall terminal box

| | | | |
|--------------------|--------|-----------|-------------------------|
| RECUPERATOR | | | |
| Winter conditions | | | |
| Exhaust air on | °C/%RH | 22.0 / 40 | Exhaust pressure drop |
| Exhaust air off | °C/%RH | 7.3 / 100 | Pa |
| | | | 167 |
| Summer conditions | | | |
| Exhaust air on | °C/%RH | 27.0 / 47 | Exhaust pressure drop |
| Exhaust air off | °C/%RH | 34.7 / 30 | Pa |
| | | | 167 |
| | | | Exhaust eliminator type |
| | | | Plastic |

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

SUPPLY COMPONENTS

| DOUBLE MIXING BOX | | | | | |
|--|----|------------|---|----|-------------------------------------|
| Opening Position | | Full face | Provided with: | | |
| Number of exhaust openings | | 1 | Opening product | | None |
| Exhaust opening, w x h | mm | 1440 x 640 | Damper | | External, Opposed blades, Aluminium |
| Pressure drop | Pa | 2 | Number of Dampers | | 1 |
| Actuator type | | External | Damper Code | | DMP1358x0558-110-102-6-D1Y1-0 |
| Actuator Side | | Left | Number of Drive shafts (Total) x Torque for one shaft | Nm | 1 x 6 |
| Access side | | None | Provided with: | | |
| Opening Position | | Bottom | Opening product | | None |
| Number of Recirc openings | | 1 | Damper | | Internal, Opposed blades, Aluminium |
| Recirc opening, w x h | mm | 1440 x 320 | Number of Dampers | | 1 |
| Pressure drop | Pa | 35 | Damper Code | | DMP1178x0158-110-102-1-D1Y1-0 |
| Actuator type | | External | Number of Drive shafts (Total) x Torque for one shaft | Nm | 1 x 2 |
| Actuator Side | | Left | Provided with: | | |
| Access side | | None | Opening product | | None |
| Opening Position | | Full face | Damper | | External, Opposed blades, Aluminium |
| Number of openings | | 1 | Number of Dampers | | 1 |
| Fresh air opening, w x h | mm | 1440 x 640 | Damper Code | | DMP1358x0558-110-102-6-D1Y1-0 |
| Pressure drop | Pa | 2 | Number of Drive shafts (Total) x Torque for one shaft | Nm | 1 x 6 |
| Actuator type | | External | Provided with: | | |
| Actuator Side | | Left | Opening product | | None |
| Access side | | None | Damper | | External, Opposed blades, Aluminium |
| Mixing ratio, winter (recirculation air/supply air) in % | % | 0 | Number of Dampers | | 1 |
| | | | Damper Code | | DMP1358x0558-110-102-6-D1Y1-0 |
| | | | Number of Drive shafts (Total) x Torque for one shaft | Nm | 1 x 6 |

EXTRAS (SUPPLY)
1 x Coupling rod for dampers

| FILTER | | | | | |
|---------------------------|-----|--------------------|------------------------|-----|------------|
| Filter type | | Panel (Synthetic) | Withdrawal method | | Side |
| Test method | | EN 779 / ISO 16890 | Filter frame material | | Galvanised |
| EN 779 Class | | G4 | Filter casing material | | Galvanised |
| Eurovent Efficiency Class | | NA | | | |
| ISO 16890 Class | | ISO Coarse 60 | | | |
| Design pressure drop | | Mean pd | | | |
| Initial pressure drop | Pa | 46 | | | |
| Mean pressure drop | Pa | 71 | | | |
| Final pressure drop | Pa | 96 | | | |
| Filter length | mm | 48 | | | |
| Filters | | | | | |
| 592x592 | Qty | 1 | 437x592 | Qty | 1 |
| 592x287 | Qty | 1 | | | |
| ACCESS | | | | | |
| Access type | | Hatch | Access side | | Right |

EXTRAS
1 x Pressure gauge wall mounted, Magnehelic 2000

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

EMPTY SECTION

Pressure drop Pa 0

RECUPERATOR

Recuperator Model SV-085/-C/1395/BSK135

| Winter conditions | | | Bypass type | | Side bypass |
|----------------------|--------|-----------|---------------------------------|----|-------------|
| | | | Bypass damper | | Included |
| Recuperator material | | Aluminium | | | |
| Supply air on | °C/%RH | 2.5 / 62 | Supply total efficiency | % | 78 |
| Supply air off | °C/%RH | 17.8 / 22 | Supply pressure drop | Pa | 167 |
| Total duty | kW | 25.70 | Dry efficiency at equal airflow | % | 74 |
| Summer conditions | | | | | |
| Supply air on | °C/%RH | 37.5 / 30 | Supply total efficiency | % | 73 |
| Supply air off | °C/%RH | 29.8 / 46 | Supply pressure drop | Pa | 167 |
| Total duty | kW | 13.10 | | | |

EXTRAS

1 x Syphone

FILTER

| Filter type | | Bag (Synthetic) | Withdrawal method | | Side |
|---------------------------|----|--------------------|------------------------|--|------------|
| Test method | | EN 779 / ISO 16890 | Filter frame material | | Galvanised |
| EN 779 Class | | F7 | Filter casing material | | Galvanised |
| Eurovent Efficiency Class | | E | | | |
| ISO 16890 Class | | ISO ePM1 50 | | | |
| Design pressure drop | | Mean pd | | | |
| Initial pressure drop | Pa | 59 | | | |
| Mean pressure drop | Pa | 109 | | | |
| Final pressure drop | Pa | 159 | | | |
| Filter length | mm | 500 | | | |

Filters

| | | | | | |
|---------|-----|---|---------|-----|---|
| 592x592 | Qty | 1 | 437x592 | Qty | 1 |
| 287x592 | Qty | 1 | | | |

ACCESS

Access type Hatch Access side Right

EXTRAS

1 x Pressure gauge wall mounted, Magnehelic 2000

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

| CHILLED WATER COIL | | | | Number of coils | | 1 |
|------------------------------|-------------------------------------|---------------------------|-------------------------|-----------------|---------------------|---|
| Coil Code | P25-10AR-5R-22T-1243A-2.0PA-15NC-Cu | 0.36/Al 0.10-1 1/2" | | | | |
| Air volume | m³/s | 1.39 | Fluid | 100% | Water | |
| Duty | kW | 33.12 | Fluid flow rate | l/s | 1.58 | |
| Air on db | °C | 27.0 | Fluid on | °C | 7.0 | |
| Air on wb/RH | °C/% | 19.0/47 | Fluid off | °C | 12.0 | |
| Air off db | °C | 12.5 | Fluid content | l | 11.63 | |
| Air off wb/RH | °C/% | 12.0/95 | Fluid pressure drop | kPa | 39 | |
| Sensible duty | kW | 24.17 | | | | |
| Air pressure drop coil (Dry) | Pa | 73 | Air pressure drop elim. | Pa | 10 | |
| Tubes/fins/connections | | Cu / Al / Fe | Connection type | | Threaded (Right) | |
| Coil frame | | Galvanised | Connection size | | 1 1/2" | |
| Tube thickness | mm | 0.36 | Fin spacing | mm | 2.0 | |
| Tube Diameter | mm | 9.2388 | Fin thickness | mm | 0.10 | |
| Face velocity | m/s | 1.9 | | | | |
| Eliminator | | Plastic – side withdrawal | Eliminator frame | | Galvanised | |
| Drainpan type | | Recessed (sloped) | Drainpan material | | Stainless steel 304 | |
| Drain pipes on drainpan | | 1 | Intermediate drainpan | | No | |
| Condensed Water | l/min | 0.2 | Syphon Type | | Negative | |
| Coil Weight | kg | 41.04 | Xin/Yin/Xout/Yout | mm/mm/ mm/mm | 164/57/76/76 | |

EXTRAS
1 x Syphone

| HOT WATER COIL | | | | Number of coils | | 1 |
|------------------------|-------------------------------------|---------------------|---------------------|-----------------|------------------|---|
| Coil Code | P25-10AR-2R-22T-1248A-2.0PA-12NC-Cu | 0.36/Al 0.10-1 1/4" | | | | |
| Air volume | m³/s | 1.39 | Fluid | 100% | Water | |
| Duty | kW | 25.00 | Fluid flow rate | l/s | 1.21 | |
| Air on db | °C | 10.0 | Fluid on | °C | 45.0 | |
| Air off db | °C | 25.0 | Fluid off | °C | 40.0 | |
| Air pressure drop | Pa | 23 | Fluid content | l | 5.35 | |
| | | | Fluid pressure drop | kPa | 13 | |
| Tubes/fins/connections | | Cu / Al / Fe | Connection type | | Threaded (Right) | |
| Coil frame | | Galvanised | Connection size | | 1 1/4" | |
| Tube thickness | mm | 0.36 | Fin spacing | mm | 2.0 | |
| Tube Diameter | mm | 9.2388 | Fin thickness | mm | 0.10 | |
| Face velocity | m/s | 1.9 | Xin/Yin/Xout/Yout | mm/mm/ mm/mm | 124/54/71/71 | |
| Coil Weight | kg | 22.22 | | | | |

EXTRAS
1 x Syphone

| STEAM HUMIDIFIER | | | | | | |
|--------------------------|------|----------|------------------------|----|---------------------|--|
| Air volume | m³/s | 1.39 | Humidifier supplier | | Condair | |
| Moisture addition | kg/h | 23 | Number of steam lances | | 1 | |
| Air on db | °C | 25.0 | Steam lance length | mm | 1200 | |
| Air on moisture content | g/kg | 2.8 | | | | |
| Air on rh | % | 32 | | | | |
| Air off db | °C | 25.7 | | | | |
| Air off moisture content | g/kg | 6.6 | | | | |
| Air off rh | % | 32 | | | | |
| Steam boiler type 1 | | EL24 | Power each | kW | 18.0 | |
| Max steam capacity, each | kg/h | 24 | Current each | A | 26.0 | |
| Number off | | 1 | Voltage | V | 3x400V, 50/60Hz | |
| Boiler weight, each | kg | 40 | | | | |
| Section length | mm | 960 | Drainpan material | | Stainless steel 304 | |
| Drainpan | | Included | | | | |

Technical Specification

| | |
|---|---|
| Project name : | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.2 AHU Technical Guide / 009 | Eurovent identification number: 08.02.251 |

Note: Electric boilers will be delivered separately (not mounted on the unit). Boiler weights not included in unit weights.

ACCESS
Access type Hatch Access side Right

EXTRAS
1 x Syphone

ANY COMPONENT

Pressure drop Pa 0

INLET PLENUM

Air pressure drop Pa 0

ACCESS
Access type Hatch Access side Right

FAN

| | | | | | | |
|--------------------------|-------------------|------|--|-----------------------------|-----|------------|
| Fan type | K3G400PA2775 | | | Installed motor power | kW | 3.35 |
| Fan arrangement | Fan Wall - 1x1 | | | Motor | | Run |
| Air volume | m ³ /s | 1.39 | | Motor efficiency class | | IE4 |
| External static pressure | Pa | 392 | | Motor nominal speed | rpm | 2750 |
| Internal static pressure | Pa | 482 | | Voltage | V | 380-480 |
| Static pressure ISP+ESP | Pa | 874 | | Current | A | 5.2 |
| System effect | Pa | 4 | | Abs. motor power incl. F.I. | kW | 1.90 |
| Extra static pressure | Pa | 0 | | Control Signal (0-10V) | V | 7.50 |
| Total static pressure | Pa | 878 | | Fan bulkhead material | | Galvanised |
| Dynamic pressure | Pa | 38 | | | | |
| Total pressure | Pa | 916 | | | | |
| Fan speed | rpm | 2240 | | | | |
| Max fan speed | rpm | 2750 | | | | |
| Efficiency (total) | % | 66 | | | | |
| Fan shaft power | kW | 1.90 | | | | |

| | | | | | | | | | |
|----------------------|-----------|----|-----|-----|-----|----|----|----|----|
| (Fan sound data SWL) | Hz | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| Total | Inlet dB | 44 | 65 | 69 | 72 | 74 | 74 | 72 | 65 |
| | Outlet dB | 46 | 64 | 70 | 77 | 82 | 82 | 79 | 70 |

FAN EXTRAS
Inlet cone measuring points

ACCESS
Access type Hatch Access side Right

EXTRAS
2 x Measuring nipple, 6mm 1 x Fanwall terminal box

OUTLET

| | | | | | |
|-------------------------|-----------|------------|--|-----------------|-------------|
| Opening Position | Full face | | | Provided with: | |
| Number of openings | 1 | | | Opening product | Duct spigot |
| Opening, width x height | mm | 1440 x 640 | | | |
| Pressure drop | Pa | 2 | | | |