

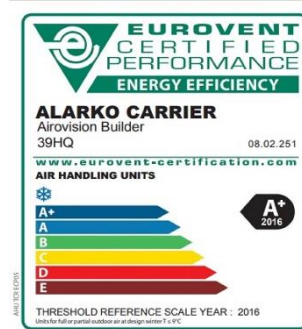
## Technical Specification

|   |   |
|---|---|
| Project name :                                | Airovision Builder version: E1.13 (12-4-2022)(R086)/A |
| Quotation no. : 6.1 AHU Technical Guide / 008 | Eurovent identification number: 08.02.251             |
| Eurovent identification number: 08.02.251     |   |

### GENERAL DATA

|                         |                                       |
|-------------------------|---------------------------------------|
| Customer reference      | 6.1.1 5000 06.06                      |
| Number off              | 1                                     |
| Location                | External (flat roof)                  |
| Delivery                | In sections                           |
| AHU finish              | Outside in standard colour (RAL 7035) |
| Product                 | Air handling unit                     |
| AHU configuration       | Inline                                |
| Pallet option           | Excluded                              |
| Lifting Beam            | Included                              |
| Total weight (each)     | kg 564                                |
| (Radiated casework SWL) | dB(A) 64                              |
| ErP identification code | NRVU / UVU                            |

### Eurovent energy classification



Calculations conform to the Regulation for unidirectional ventilation unit (UVU) for delivery after 01.01.2018

### Ecodesign 1253/2014 2018 UVU after 01.01.2018

#### Intermediate calculations

|                          |       |
|--------------------------|-------|
| SFP int_limit (W/(m³/s)) | 230.0 |
| SFP int (W/(m³/s))       | 89.5  |
| n fan_limit (%)          | 44.7  |

#### Supply air unit data

|                      |      |
|----------------------|------|
| Airflow (m³/s)       | 1.39 |
| Static pressure (Pa) | 731  |
| p fan (kW)           | 1.55 |
| n fan (%)            | 65.3 |
| Fine Filter          | Yes  |
| dp Fine filter (Pa)  | 58   |

#### Check

|                                      |        |
|--------------------------------------|--------|
| Fan is selected with VSD             | Passed |
| n fan_limit                          | 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 |
|-------------|----------|---|----------|

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### SUPPLY DATA

|                                     |                        |                |                   |  |
|-------------------------------------|------------------------|----------------|-------------------|--|
| Glasswool 23 kg/m <sup>3</sup> Type | 39HQ 06.06             | Air volume     | m <sup>3</sup> /s | 1.39                                   |
| Casing construction                 | GP080<br>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 <sup>3</sup>         |
| Design outdoor dew point (summer)   | °C 16.8                | Profile        |                   | Steel                                  |
| Unit velocity                       | m/s 1.64               | SFPv           |                   |  |
| SFPe                                | kJ/m <sup>3</sup> 1.12 |                | kJ/m <sup>3</sup> | 1.00                                   |

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 | 55  | 60  | 64  | 60 | 57 | 47 | 38 | 64    |
|                         | dB | 57  | 61  | 64  | 60 | 57 | 47 | 38 | 65    |
|                         | dB | 61  | 66  | 75  | 80 | 80 | 79 | 68 | 85    |

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       | 1058       | 1058        | 2818        | 62             | 397         | 15                         |
| 2       | 1058       | 1058        | 98          | 62             | 23          |                            |
| 3       | 1058       | 1058        | 898         | 62             | 143         |                            |

### EXHAUST COMPONENTS

### SUPPLY COMPONENTS

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### SINGLE MIXING BOX

|                           |    |           |  |                                     |
|---------------------------|----|-----------|--|-------------------------------------|
| Opening Position          |    | Top       | Provided with:   |                                     |
| Number of Recirc openings |    | 1         | Opening product  | None                                |
| Recirc opening, w x h     | mm | 960 x 320 | Damper   | External, Opposed blades, Aluminium |
| Pressure drop             | Pa | 35        | Number of Dampers  | 1                                   |
| Actuator type             |    | External  | Damper Code  | DMP0858x0218-200-162-1-D1Y1-0       |
| Actuator Side             |    | Left      | Number of Drive shafts (Total) x Torque for one shaft    | Nm 1 x 1                            |
| Access side               |    | None      | Provided with:   |                                     |
| Opening Position          |    | Full face | Opening product  | None                                |
| Number of openings        |    | 1         | Damper   | External, Opposed blades, Aluminium |
| Fresh air opening, w x h  | mm | 960 x 960 | Number of Dampers  | 1                                   |
| Pressure drop             | Pa | 2         | Damper Code  | DMP0858x0858-200-162-5-D1Y1-0       |
| Actuator type             |    | External  | Number of Drive shafts (Total) x Torque for one shaft    | Nm 1 x 5                            |
| Actuator Side             |    | Left      | Mixing ratio, winter (recirculation air/supply air) in % | 0                                   |
| Access side               |    | None      |  |                                     |

### EXTRAS

1 x Coupling rod for dampers

### COMBINED FILTER

|                           |    |                    |                           |    |                    |
|---------------------------|----|--------------------|---------------------------|----|--------------------|
| Primary filter type       |    | Panel (Synthetic)  | Secondary filter type     |    | Bag (Synthetic)    |
| Test method               |    | EN 779 / ISO 16890 | Test method               |    | EN 779 / ISO 16890 |
| EN 779 Class              |    | G4                 | EN 779 Class              |    | F7                 |
| Eurovent Efficiency Class |    | NA                 | Eurovent Efficiency Class |    | C                  |
| ISO 16890 Class           |    | ISO Coarse 60      | ISO 16890 Class           |    | ISO ePM1 50        |
| Design pressure drop      |    | Mean pd            | Design pressure drop      |    | Mean pd            |
| Initial pressure drop     | Pa | 46                 | Initial pressure drop     | Pa | 74                 |
| Mean pressure drop        | Pa | 71                 | Mean pressure drop        | Pa | 124                |
| Final pressure drop       | Pa | 96                 | Final pressure drop       | Pa | 174                |
| Filter casing material    |    | Galvanised         | Filter casing material    |    | Galvanised         |
| Filter frame material     |    | Galvanised         | Withdrawal method         |    | Side               |
| Filter length             | mm | 48                 | Filter length             | mm | 500                |

### Filters

|         |     |   |         |     |   |
|---------|-----|---|---------|-----|---|
| 592x592 | Qty | 1 | 592x592 | Qty | 1 |
| 592x287 | Qty | 2 | 287x592 | Qty | 1 |
| 287x287 | Qty | 1 | 592x287 | Qty | 1 |
|         |     |   | 287x287 | Qty | 1 |

### ACCESS

|             |      |             |       |
|-------------|------|-------------|-------|
| Access type | Door | Access side | Right |
|-------------|------|-------------|-------|

### EXTRAS

2 x Pressure gauge wall mounted, Magnehelic 2000

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| CHILLED WATER COIL           |                                    |                           | Number of coils         |                 | 1                   |
|------------------------------|------------------------------------|---------------------------|-------------------------|-----------------|---------------------|
| Coil Code                    | P25-10AR-5R-34T-763A-2.0PA-15NC-Cu | 0.36/Al 0.10-1 1/2"       |                         |                 |                     |
| Air volume                   | m <sup>3</sup> /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               | 12.50               |
| Air off wb/RH                | °C/%                               | 12.0/95                   | Fluid pressure drop     | kPa             | 42                  |
| Sensible duty                | kW                                 | 24.17                     |                         |                 |                     |
| Air pressure drop coil (Dry) | Pa                                 | 79                        | Air pressure drop elim. | Pa              | 11                  |
| 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                                | 2.1                       |                         |                 |                     |
| 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                                 | 40.29                     | Xin/Yin/Xout/Yout       | mm/mm/<br>mm/mm | 164/57/76/76        |

EXTRAS  
1 x Syphone

| HOT WATER COIL         |                                    |                     | Number of coils     |                 | 1                |
|------------------------|------------------------------------|---------------------|---------------------|-----------------|------------------|
| Coil Code              | P25-10AR-2R-34T-768A-2.0PA-13NC-Cu | 0.36/Al 0.10-1 1/4" |                     |                 |                  |
| Air volume             | m <sup>3</sup> /s                  | 1.39                | Fluid               | 100%            | Water            |
| Duty                   | kW                                 | 28.33               | Fluid flow rate     | l/s             | 1.37             |
| Air on db              | °C                                 | 8.0                 | Fluid on            | °C              | 45.0             |
| Air off db             | °C                                 | 25.0                | Fluid off           | °C              | 40.0             |
| Air pressure drop      | Pa                                 | 25                  | Fluid content       | l               | 6.09             |
|                        |                                    |                     | Fluid pressure drop | kPa             | 16               |
| 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                                | 2.0                 | Xin/Yin/Xout/Yout   | mm/mm/<br>mm/mm | 124/54/71/71     |
| Coil Weight            | kg                                 | 22.10               |                     |                 |                  |

EXTRAS  
1 x Syphone

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| STEAM HUMIDIFIER         |                   |          |                        |    |                     |
|--------------------------|-------------------|----------|------------------------|----|---------------------|
| Air volume               | m <sup>3</sup> /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 | 800                 |
| 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 |                        |    |                     |

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

| ACCESS      |      |             |       |
|-------------|------|-------------|-------|
| Access type | Door | Access side | Right |

EXTRAS  
1 x Syphone

| ANY COMPONENT |    |   |
|---------------|----|---|
| Pressure drop | Pa | 0 |

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

| ACCESS      |      |             |       |
|-------------|------|-------------|-------|
| Access type | Door | Access side | Right |

| FAN                      |                   |                |                             |     |            |                        |     |      |    |
|--------------------------|-------------------|----------------|-----------------------------|-----|------------|------------------------|-----|------|----|
| Fan type                 |                   | K3G400PA2775   |                             |     |            |                        |     |      |    |
| Fan arrangement          |                   | Fan Wall - 1x1 |                             |     |            |                        |     |      |    |
| Air volume               | m <sup>3</sup> /s | 1.39           | Installed motor power       | kW  | 3.35       | Motor                  | Run |      |    |
| External static pressure | Pa                | 392            | Motor efficiency class      |     | IE4        | Motor nominal speed    | rpm | 2750 |    |
| Internal static pressure | Pa                | 336            | Voltage                     | V   | 380-480    | Current                | A   | 5.2  |    |
| Static pressure ISP+ESP  | Pa                | 728            | Abs. motor power incl. F.I. | kW  | 1.55       | Control Signal (0-10V) | V   | 7.00 |    |
| System effect            | Pa                | 4              | Fan bulkhead material       |     | Galvanised |                        |     |      |    |
| Extra static pressure    | Pa                | 0              |                             |     |            |                        |     |      |    |
| Total static pressure    | Pa                | 731            |                             |     |            |                        |     |      |    |
| Dynamic pressure         | Pa                | 38             |                             |     |            |                        |     |      |    |
| Total pressure           | Pa                | 770            |                             |     |            |                        |     |      |    |
| Fan speed                | rpm               | 2101           |                             |     |            |                        |     |      |    |
| Max fan speed            | rpm               | 2750           |                             |     |            |                        |     |      |    |
| Efficiency (total)       | %                 | 68             |                             |     |            |                        |     |      |    |
| Fan shaft power          | kW                | 1.55           |                             |     |            |                        |     |      |    |
| (Fan sound data SWL)     | Hz                | 63             | 125                         | 250 | 500        | 1k                     | 2k  | 4k   | 8k |
| Total                    | Inlet dB          | 43             | 60                          | 65  | 70         | 72                     | 72  | 72   | 63 |
|                          | Outlet dB         | 45             | 61                          | 66  | 75         | 80                     | 80  | 79   | 68 |

FAN EXTRAS  
Inlet cone measuring points



Date: 17/6/2022



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|               |      |             |       |
|---------------|------|-------------|-------|
| <b>ACCESS</b> |      |             |       |
| Access type   | Door | Access side | Right |

|                           |                          |
|---------------------------|--------------------------|
| <b>EXTRAS</b>             |                          |
| 2 x Measuring nipple, 6mm | 1 x Fanwall terminal box |

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|                         |    |           |                 |
|-------------------------|----|-----------|-----------------|
| <b>OUTLET</b>           |    |           |                 |
| Opening Position        |    | Full face |                 |
| Number of openings      |    | 1         | Provided with:  |
| Opening, width x height | mm | 960 x 960 | Opening product |
| Pressure drop           | Pa | 2         | Duct spigot     |