

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 1 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

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|                             |  |                  |         |
|-----------------------------|--|------------------|---------|
| <b>Clerk:</b>               | S.Reifenröther                             | <b>Quantity:</b> | 1 Piece |
| <b>Construction:</b>        | HYD S Inside installation                  |                  |         |
| <b>Base Frame:</b>          | inside galvanized 80 mm, 137,04 kg         |                  |         |
| <b>Base Frame top unit:</b> | Without                                    |                  |         |
| <b>Total Weight:</b>        | Ca. 1375 kg                                |                  |         |
| <b>Thermal Decoupling:</b>  | T2/TB4                                     |                  |         |
| <b>CAL (R)@-400 Pa:</b>     | 0,327 dm <sup>3</sup> /(sm <sup>2</sup> )  |                  |         |
| <b>CAL (R)@+400 Pa:</b>     | 0,403 dm <sup>3</sup> /(sm <sup>2</sup> )  |                  |         |
| <b>Accessories:</b>         | Transport Steel Pipes<br>insulation strips |                  |         |

|                                  |                |
|----------------------------------|----------------|
| <b>Cert. No:</b>                 | 02.03.036      |
| <b>Efficiency Factor Winter:</b> | 0,91           |
| <b>Efficiency Factor Summer:</b> | -              |
| <b>Reference city:</b>           | DK-Hvide Sande |
| <b>Dry bulb temperature:</b>     | 25,30          |
| <b>Wet bulb temperature:</b>     | 20,20          |
| <b>Dew point temperature:</b>    | 17,80          |

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 2 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

**Technical Data Supply Air**

|                                  |       |                 |                                 |                                  |
|----------------------------------|-------|-----------------|---------------------------------|----------------------------------|
| <b>Outside Metal Sheet:</b>      | mm    | 1,0 galvanized  | <b>Unit Size:</b>               | Special                          |
| <b>Inside Metal Sheet:</b>       | mm    | 1,0 galvanized  | <b>Position of Access Side:</b> | Left                             |
| <b>Inside Floor Metal Sheet:</b> | mm    | 53,0 galvanized | <b>Position of Piping Side:</b> | Left                             |
| <b>Wall Thickness:</b>           | mm    | 53,0 galvanized | <b>Insulation Roof/Floor:</b>   | Mineral Wool 99kg/m <sup>3</sup> |
| <b>Dimensions (L x W x H):</b>   | mm    | 4562x1121x825   | <b>Insulation Walls:</b>        | Mineral Wool 99kg/m <sup>3</sup> |
| <b>Air velocity:</b>             | m/sec | 1,85            | <b>Class of Velocity:</b>       | V3                               |
| <b>Weight:</b>                   | kg    | 849             | <b>Design:</b>                  | Standard                         |

**(SUP) Air Inlet Section      GS/GSC/GSC      Weight: 104 kg      Length: 554 mm      Pressure Drop: 24 Pa**

|                                |                               |                                |                 |
|--------------------------------|-------------------------------|--------------------------------|-----------------|
| <b>Connection:</b>             |                               | <b>Damper Size:</b>            |                 |
| <b>Layer:</b>                  | Roof                          | <b>Assembly:</b>               | Inside          |
| <b>Material:</b>               | galvanized                    | <b>Material:</b>               | Aluminium       |
| <b>Design:</b>                 | Damping Connection<br>VDI6022 | <b>Design:</b>                 | Gear            |
| <b>Potential Equalisation:</b> | Yes                           | <b>Tightness:</b>              | Class 2         |
|                                |                               | <b>Shaft Position:</b>         | Inside          |
|                                |                               | <b>Actuator:</b>               | Open/Close 24V  |
| <b>Dimensions (W x H)</b>      | 762 x 314                     | <b>Dimensions (W x H x D):</b> | 762 x 314 x 115 |
| <b>Grating:</b>                | Without                       |                                |                 |

|                 |             |                           |                   |
|-----------------|-------------|---------------------------|-------------------|
| <b>Design:</b>  | Access Door | <b>Condensate Trough:</b> | RAL/V2A (AISI304) |
| <b>Lockers:</b> | Lockers     | <b>Condensate Drain:</b>  | Yes               |
| <b>Hinges:</b>  | 3D-Hinges   |                           |                   |

|                    |                    |               |
|--------------------|--------------------|---------------|
| <b>Accessories</b> |                    |               |
| <b>Item Number</b> | <b>Description</b> | <b>Weight</b> |
|                    | Siphon SN          |               |

**(SUP) Filter      GS/GSC/GSC      Weight: 78 kg      Length: 555 mm      Pressure Drop: 142 Pa**

|                      |     |                            |                      |
|----------------------|-----|----------------------------|----------------------|
| <b>Brand:</b>        | Rox | <b>Filter Maintenance:</b> | Clamp Rail           |
| <b>Spare Filter:</b> | No  | <b>Frame:</b>              | V2A (AISI304)        |
|                      |     | <b>Manometer:</b>          | DPA2500 with display |

|                                 |                  |                                 |                    |
|---------------------------------|------------------|---------------------------------|--------------------|
| <b>1st Filter step</b>          |                  |                                 |                    |
| <b>Filter Type:</b>             | Bag Filter short | <b>Energy Efficiency Class:</b> | C                  |
| <b>Filter Class EN779:2012:</b> | F7               | <b>Filter Surface:</b>          | m <sup>2</sup> 6,5 |
| <b>Filter Class ISO16890:</b>   | ePM1 60%         | <b>Medium:</b>                  | Glass Fibre        |

|                            |                      |                           |                   |
|----------------------------|----------------------|---------------------------|-------------------|
| <b>ΔP Initial:</b>         | Pa                   | 85                        |                   |
| <b>ΔP End:</b>             | Pa                   | 200                       |                   |
| <b>Max. Pressure Drop:</b> | Pa                   | 250                       |                   |
| <b>ΔP Dim:</b>             | Pa                   | 142                       |                   |
| <b>Type/Size/Quantity</b>  | Hi-Flo XLT 7/370 50+ | 592*592*370 mm            | 1 Piece           |
|                            | Hi-Flo XLT 7/370 50+ | 287*592*370 mm            | 1 Piece           |
| <b>Design:</b>             | Access Door          | <b>Condensate Trough:</b> | RAL/V2A (AISI304) |
| <b>Lockers:</b>            | Lockers              | <b>Condensate Drain:</b>  | Yes               |
| <b>Hinges:</b>             | 3D-Hinges            |                           |                   |

|                    |                    |               |
|--------------------|--------------------|---------------|
| <b>Accessories</b> |                    |               |
| <b>Item Number</b> | <b>Description</b> | <b>Weight</b> |
|                    | Siphon SN          |               |

**Plate Heat Exchanger      GS/GS/GS      Weight: 382 kg      Length: 1497 mm      Pressure Drop: 146**

**Software ALAG**  
 [27.03.2025]  
 Version 1.24/4.2



Management System  
 ISO 9001:2015  
 www.tuv.com  
 ID 0910083041

Datasheet: 02037475      Position: 747502  
 Project: McDonalds DK - Ringe      Side: 3 by 10  
 Location:      Date: 15.05.2025  
 Unit: AHU 02      Tender Position:



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

Pa

Brand: Rox      Type: KV-100/P1/0990/BSK116,H  
 Actuator: Without      Diagonal: mm 1387

Technical Data      Supply Air      Extract Air

Operating Mode: Winter

|                                 |      |        |        |
|---------------------------------|------|--------|--------|
| Air Volume:                     | m³/h | 4800   | 4300   |
| Temp. In:                       | °C   | -12    | 22     |
| Rel. Humidity In:               | %    | 90     | 30     |
| Temp. Out:                      | °C   | 13,3   | -1,5   |
| Rel. Humidity out:              | %    | 12,9   | 100    |
| Heat Recovery dry:              | %    | 69,3   | 77,1   |
| Heat Recovery wet:              | %    | 74,4   | 69,3   |
| Condensate:                     | kg/h | 0      | 8      |
| Pressure Drop dry:              | Pa   | 145,99 | 124,36 |
| Pressure Drop wet:              | Pa   | 0      | 0      |
| Pressure drop standard density: | Pa   | 159    | 132    |
| Air velocity:                   | m/s  | 1,7    | 1,5    |
| Total Heat Load:                | kW   | 40,8   |        |

Operating Mode: Summer

|                                 |      |        |        |
|---------------------------------|------|--------|--------|
| Air Volume:                     | m³/h | 4800   | 4300   |
| Temp. In:                       | °C   | 34     | 26     |
| Rel. Humidity In:               | %    | 35     | 50     |
| Temp. Out:                      | °C   | 28,4   | 32,3   |
| Rel. Humidity out:              | %    | 48,1   | 34,8   |
| Heat Recovery dry:              | %    | 70,3   | 78,2   |
| Heat Recovery wet:              | %    | 70,3   | 78,2   |
| Condensate:                     | kg/h | 0      | 0      |
| Pressure Drop dry:              | Pa   | 165,07 | 136,08 |
| Pressure Drop wet:              | Pa   | 0      | 0      |
| Pressure drop standard density: | Pa   | 159    | 132    |
| Air velocity:                   | m/s  | 1,7    | 1,5    |
| Total Heat Load:                | kW   |        | 9,2    |

**Operation Point according to EN13053:2020-05**

|                                      |    |       |       |
|--------------------------------------|----|-------|-------|
| Temp. In:                            | °C | 5,00  | 25,00 |
| relative humidity %:                 | %  | 0,00  | 0,00  |
| Pressure Drop dry:                   | Pa | 152   | 156   |
| PeI HR:                              | kW | 0,63  |       |
| Power Digit:                         | -  | 37,51 |       |
| Energy Efficiency:                   | %  | 71,54 |       |
| electrical Power (auxiliary power):  | W  | 0,00  |       |
| Heat Recovery:                       | %  | 73,50 |       |
| Heat Recovery Class EN13053:2012-02: | -  | H1    |       |

|          |             |                    |                   |
|----------|-------------|--------------------|-------------------|
| Design:  | Access Door | Condensate Trough: | RAL/V2A (AISI304) |
| Lockers: | Lockers     | Condensate Drain:  | Yes               |
| Hinges:  | 3D-Hinges   |                    |                   |

Accessories

| Item Number | Description | Weight |
|-------------|-------------|--------|
|             | Siphon SN   |        |



**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 4 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|                            |                     |                               |  |                              |
|----------------------------|---------------------|-------------------------------|--|------------------------------|
| <b>(SUP) Cooler/Heater</b> | <b>GS/GS/GS</b>     | <b>Weight: 80 kg</b>          | <b>Length: 235 mm</b>                                    | <b>Pressure Drop: 117 Pa</b> |
| <b>Brand:</b>              | Rox                 | <b>Type:</b>                  | XRCAF 0800 T014 04 F30<br>E004 2*5/8 2*7/8 (R2)<br>(8mm) |                              |
| <b>Pipes:</b>              | Copper 1/2" 0,35 mm | <b>Weight Heat Exchanger:</b> | kg   | 34,00                        |
| <b>Fin:</b>                | Aluminium           | <b>Connections:</b>           | Access Side  |                              |
| <b>Collector:</b>          | Copper              | <b>Connection Inlet:</b>      | 2*16mm   |                              |
| <b>Frame:</b>              | Aluminium           | <b>Connection Outlet:</b>     | 2*22mm   |                              |
| <b>Separation (A x B):</b> | mm 37,5 x 32,48 mm  | <b>Finned height:</b>         | mm   | 525                          |
| <b>Quantity Pipe Rows:</b> | 4                   | <b>Finned width:</b>          | mm   | 800                          |
| <b>Fin Distance:</b>       | mm 3                |                               |  |                              |

#### Haupt-Betriebspunkt

##### Air

**Air Volume:** m³/h 4800  
**Pressure Drop:** Pa 117  
**Temp. In:** °C 29,4  
**Rel. Humidity In:** % 48  
**Temp. Out:** °C 18  
**Rel. Humidity out:** % 88  
**Capacity:** kW 22,96  
**Surface Reserve:** % 15  
**Air velocity:** m/s 3,17

##### Medium

**Heat Transfer Medium:** R32  
**Mass Flow:** kg/h 333,0  
**Pressure Drop:** kPa 15,13  
**Evaporation temperature:** °C 8,5  
**Condensation temperature:** °C 45  
**Charge:** l 5,6  
**Medium Velocity:** m/s 2,72 / 5,52

#### Zusatz-Betriebspunkt

##### Air

**Air Volume:** m³/h 4800  
**Pressure Drop:** Pa 90  
**Temp. In:** °C 10  
**Rel. Humidity In:** % 24  
**Temp. Out:** °C 24  
**Rel. Humidity out:** % 10  
**Capacity:** kW 22,72  
**Surface Reserve:** % 29  
**Air velocity:** m/s 3,22

##### Medium

**Heat Transfer Medium:** R32  
**Mass Flow:** kg/h 273,0  
**Pressure Drop:** kPa 2,69  
**Evaporation temperature:** °C 8,5  
**Condensation temperature:** °C 45  
**Charge:** l 5,6  
**Medium Velocity:** m/s 2,26 / 0,15

**Design:** Fixed Panel

**Condensate Trough:** RAL/V2A (AISI304)

#### Accessories

| Item Number          | Description  | Weight |
|----------------------|--|--------|
| <b>Heat Pump:</b>    | 2x Samsung AM 040DXMDNG<br>The heat pumps are mounted on a separate base frame                     |        |
| <b>EEV-Kit:</b>      | 2x Samsung MXD K050AN<br>The EEV-Kits are mounted on a console on the operating side of the system |        |
| <b>Gas-Detector:</b> | Gas Detector, MGS450 IP66 R32 1KPPM  |        |

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 5 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|                                 |                 |                           |                       |                             |
|---------------------------------|-----------------|---------------------------|-----------------------|-----------------------------|
| <b>(SUP) Droplet Eliminator</b> | <b>GS/GS/GS</b> | <b>Weight: 55 kg</b>      | <b>Length: 380 mm</b> | <b>Pressure Drop: 22 Pa</b> |
| <b>Brand:</b>                   | Rox             |                           |                       |                             |
| <b>Material:</b>                | PPTV            | <b>Guiding Rail:</b>      | V2A (AISI304)         |                             |
| <b>Design:</b>                  | Access Panel    | <b>Condensate Trough:</b> | RAL/V2A (AISI304)     |                             |
| <b>Lockers:</b>                 | Lockers         | <b>Condensate Drain:</b>  | Yes                   |                             |

**Accessories**

| Item Number | Description | Weight |
|-------------|-------------|--------|
|             | Siphon SN   |        |

|  |  |                                    |                       |                            |
|--|--|------------------------------------|-----------------------|----------------------------|
| <b>(SUP) Fan</b>                               | <b>GS/GS/GS</b>  | <b>Weight: 118 kg</b>              | <b>Length: 765 mm</b> | <b>Pressure Drop: 0 Pa</b> |
| <b>Brand:</b>                                  | Rox  | <b>Construction:</b>               | Free Running          |                            |
| <b>Fan Type:</b>                               | 1 x GKHM 355-CII.118.6FF<br>IE Gen3                      | <b>Drivetrain:</b>                 | Motor in Airstream    |                            |
| <b>SFP-Data with FC:</b>                       | m³/s 1313  | <b>SFP-Class with FC:</b>          | SFP3                  |                            |
| <b>Air Volume:</b>                             | m³/h 4800  | <b>Motor type:</b>                 | EC                    |                            |
| <b>ΔP ext.:</b>                                | Pa 300   | <b>Voltage / Frequency:</b>        | V/Hz                  | 3~200-240 / 50/60          |
| <b>Dyn. Pressure Drop:</b>                     | Pa 47  | <b>Nominal Power:</b>              | kW                    | 2,77                       |
| <b>Installation loss:</b>                      | Pa 28  | <b>Nominal Current:</b>            | A                     | 7,25                       |
| <b>Static Pressure Drop:</b>                   | Pa 798   | <b>Nominal Rotation Speed:</b>     | 1/min                 | 3115                       |
| <b>Total Pressure Drop:</b>                    | Pa 845   | <b>Frequency Converter:</b>        | Integrated            |                            |
| <b>electrical Power Input:</b>                 | kW 1,75 / P1   | <b>Nozzle Pressure Difference:</b> | Pa                    | 1045,29                    |
| <b>Reference Power Input:</b>                  | kW 2,28  | <b>k-Factor:</b>                   | m²s/h                 | 115                        |
| <b>Nominal Rotation Speed:</b>                 | 1/min 2644   |                                    |                       |                            |
| <b>Maximum Rotation Speed:</b>                 | 1/min 3115   |                                    |                       |                            |
| <b>Rotation Speed Spare:</b>                   | % 15,04  |                                    |                       |                            |
| <b>Total Efficiency:</b>                       | % 64,40  |                                    |                       |                            |
| <b>Static System Efficiency:</b>               | % 60,80  |                                    |                       |                            |
| <b>Total Efficiency in Efficiency Optimum:</b> | % 69   |                                    |                       |                            |
| <b>Air Volume Measuring Point:</b>             | Air Volume Measuring Point with Pressure Sensor DPA 2500 |                                    |                       |                            |
| <b>Total Sound Power level:</b>                | dB(A) 80,4   |                                    |                       |                            |

| f           | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz        |
|-------------|-----|-----|-----|------|------|------|------|-----------|
| <b>Lw o</b> | 53  | 77  | 77  | 78   | 76   | 75   | 72   | <b>dB</b> |
| <b>Lw i</b> | 47  | 73  | 74  | 73   | 72   | 71   | 68   | <b>dB</b> |

**Design:** Access Door  
**Lockers:** Lockers  
**Hinges:** 3D-Hinges  
**Hints:** The Installation losses of the fan are considered in the Fan Performances  
 Designed for wet conditions  
 Motor wired to Repair Switch



**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 6 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|                                 |                               |                      |                     |                             |
|---------------------------------|-------------------------------|----------------------|---------------------|-----------------------------|
| <b>(SUP) Air Outlet Section</b> | <b>GS/GS/GS</b>               | <b>Weight: 32 kg</b> | <b>Length: 1 mm</b> | <b>Pressure Drop: 19 Pa</b> |
| <b>Connection:</b>              |                               |                      |                     |                             |
| <b>Layer</b>                    | Front Side                    |                      |                     |                             |
| <b>Material:</b>                | galvanized                    |                      |                     |                             |
| <b>Design:</b>                  | Damping Connection<br>VDI6022 |                      |                     |                             |
| <b>Potential Equalisation:</b>  | Yes                           |                      |                     |                             |
| <b>Dimensions (W x H)</b>       | 956 x 360                     |                      |                     |                             |
| <b>Grating:</b>                 | Without                       |                      |                     |                             |
| <b>Design:</b>                  | Fixed Panel                   |                      |                     |                             |

**Supply Air Acoustic Data**

**Supply Air Connector**

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 52  | 76  | 76  | 77 | 75 | 74 | 71 | 83  |
| Residue Sound Power in dB(A) | 36  | 68  | 73  | 77 | 77 | 75 | 70 | 82  |

**Outside Air Connector**

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 32  | 53  | 54  | 49 | 39 | 40 | 36 | 57  |
| Residue Sound Power in dB(A) | 16  | 44  | 50  | 49 | 40 | 41 | 35 | 54  |

**Surrounding Acoustic Emission (Casing Emission)**

Wall Thickness: 53 mm

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 37  | 69  | 65  | 57 | 49 | 37 | 31 | 71  |
| Residue Sound Power in dB(A) | 21  | 60  | 62  | 57 | 50 | 38 | 30 | 65  |

The Acoustic Data refer only on the inside fan  
Possibly the Supply Air and Extract Air Data have to be added together

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 7 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

**Technical Data Extract Air**

|                                  |       |                         |                                 |                                  |
|----------------------------------|-------|-------------------------|---------------------------------|----------------------------------|
| <b>Outside Metal Sheet:</b>      | mm    | 1,0 galvanized, RAL --- | <b>Unit Size:</b>               | Special                          |
| <b>Inside Metal Sheet:</b>       | mm    | 1,0 galvanized, RAL --- | <b>Position of Access Side:</b> | Right                            |
| <b>Inside Floor Metal Sheet:</b> | mm    | 53,0 galvanized         | <b>Position of Piping Side:</b> | Right                            |
| <b>Wall Thickness:</b>           | mm    | 53,0 galvanized         | <b>Insulation Roof/Floor:</b>   | Mineral Wool 99kg/m <sup>3</sup> |
| <b>Dimensions (L x W x H):</b>   | mm    | 2300x1121x825           | <b>Insulation Walls:</b>        | Mineral Wool 99kg/m <sup>3</sup> |
| <b>Air velocity:</b>             | m/sec | 1,66                    | <b>Class of Velocity:</b>       | V2                               |
| <b>Weight:</b>                   | kg    | 347                     | <b>Design:</b>                  | Standard                         |

(EXT) Air Inlet Section      GS/GS/GS      Weight: 32 kg      Length: 1 mm      Pressure Drop: 1 Pa

**Connection:**

**Layer:** Front Side  
**Material:** galvanized  
**Design:** Damping Connection VDI6022  
**Potential Equalisation:** Yes  
**Dimensions (W x H)** 956 x 759  
  
**Grating:** Without

**Design:** Fixed Panel

(EXT) Filter      GS/GS/GS      Weight: 68 kg      Length: 650 mm      Pressure Drop: 138 Pa

|                                 |                      |                                 |                      |
|---------------------------------|----------------------|---------------------------------|----------------------|
| <b>Brand:</b>                   | Rox                  | <b>Filter Maintenance:</b>      | Clamp Rail           |
| <b>Spare Filter:</b>            | No                   | <b>Frame:</b>                   | galvanized           |
|                                 |                      | <b>Manometer:</b>               | DPA2500 with display |
| <b>1st Filter step</b>          |                      |                                 |                      |
| <b>Filter Type:</b>             | Bag Filter short     | <b>Energy Efficiency Class:</b> | C                    |
| <b>Filter Class EN779:2012:</b> | F7                   | <b>Filter Surface:</b>          | m <sup>2</sup> 6,5   |
| <b>Filter Class ISO16890:</b>   | ePM1 60%             | <b>Medium:</b>                  | Glass Fibre          |
| <b>ΔP Initial:</b>              | Pa 76                |                                 |                      |
| <b>ΔP End:</b>                  | Pa 200               |                                 |                      |
| <b>Max. Pressure Drop:</b>      | Pa 250               |                                 |                      |
| <b>ΔP Dim:</b>                  | Pa 138               |                                 |                      |
| <b>Type/Size/Quantity</b>       | Hi-Flo XLT 7/370 50+ | 592*592*370 mm                  | 1 Piece              |
|                                 | Hi-Flo XLT 7/370 50+ | 287*592*370 mm                  | 1 Piece              |
| <b>Design:</b>                  | Access Door          |                                 |                      |
| <b>Lockers:</b>                 | Lockers              |                                 |                      |
| <b>Hinges:</b>                  | 3D-Hinges            |                                 |                      |



**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 8 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|  |  |                                    |                       |                            |
|--|--|------------------------------------|-----------------------|----------------------------|
| <b>(EXT) Fan</b>                               | <b>GS/GS/GS</b>  | <b>Weight: 120 kg</b>              | <b>Length: 730 mm</b> | <b>Pressure Drop: 0 Pa</b> |
| <b>Brand:</b>                                  | Rox  | <b>Construction:</b>               | Free Running          |                            |
| <b>Fan Type:</b>                               | 1 x GKHM 355-CII.118.6FF<br>IE Gen3                      | <b>Drivetrain:</b>                 | Motor in Airstream    |                            |
| <b>SFP-Data with FC:</b>                       | m <sup>3</sup> /s 1038                                   | <b>SFP-Class with FC:</b>          | SFP2                  |                            |
| <b>Air Volume:</b>                             | m <sup>3</sup> /h 4300                                   | <b>Motor type:</b>                 | EC                    |                            |
| <b>ΔP ext.:</b>                                | Pa 300   | <b>Voltage / Frequency:</b>        | V/Hz                  | 3~200-240 / 50/60          |
| <b>Dyn. Pressure Drop:</b>                     | Pa 38  | <b>Nominal Power:</b>              | kW                    | 2,77                       |
| <b>Installation loss:</b>                      | Pa 23  | <b>Nominal Current:</b>            | A                     | 7,25                       |
| <b>Static Pressure Drop:</b>                   | Pa 619   | <b>Nominal Rotation Speed:</b>     | 1/min                 | 3115                       |
| <b>Total Pressure Drop:</b>                    | Pa 657   | <b>Frequency Converter:</b>        | Integrated            |                            |
| <b>electrical Power Input:</b>                 | kW 1,24 / P1   | <b>Nozzle Pressure Difference:</b> | Pa                    | 838,87                     |
| <b>Reference Power Input:</b>                  | kW 1,63  | <b>k-Factor:</b>                   | m <sup>2</sup> /h     | 115                        |
| <b>Nominal Rotation Speed:</b>                 | 1/min 2344   |                                    |                       |                            |
| <b>Maximum Rotation Speed:</b>                 | 1/min 3115   |                                    |                       |                            |
| <b>Rotation Speed Spare:</b>                   | % 24,68  |                                    |                       |                            |
| <b>Total Efficiency:</b>                       | % 63,30  |                                    |                       |                            |
| <b>Static System Efficiency:</b>               | % 59,60  |                                    |                       |                            |
| <b>Total Efficiency in Efficiency Optimum:</b> | % 69   |                                    |                       |                            |
| <b>Air Volume Measuring Point:</b>             | Air Volume Measuring Point with Pressure Sensor DPA 2500 |                                    |                       |                            |
| <b>Total Sound Power level:</b>                | dB(A) 77,4   |                                    |                       |                            |

| f    | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|------|-----|-----|-----|------|------|------|------|----|
| Lw o | 50  | 74  | 74  | 75   | 73   | 72   | 69   | dB |
| Lw i | 44  | 70  | 71  | 70   | 69   | 68   | 65   | dB |

**Design:** Access Door  
**Lockers:** Lockers  
**Hinges:** 3D-Hinges  
**Hints:** The Installation losses of the fan are considered in the Fan Performances  
 Designed for wet conditions  
 Motor wired to Repair Switch

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 9 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|                                 |                               |                                |                       |                             |
|---------------------------------|-------------------------------|--------------------------------|-----------------------|-----------------------------|
| <b>(EXT) Air Outlet Section</b> | <b>GS/GS/GS</b>               | <b>Weight: 127 kg</b>          | <b>Length: 534 mm</b> | <b>Pressure Drop: 33 Pa</b> |
| <b>Connection:</b>              |                               | <b>Damper Size:</b>            |                       |                             |
| <b>Layer</b>                    | Roof                          | <b>Assembly:</b>               | Inside                |                             |
| <b>Material:</b>                | galvanized                    | <b>Material:</b>               | Aluminium             |                             |
| <b>Design:</b>                  | Damping Connection<br>VDI6022 | <b>Design:</b>                 | Gear                  |                             |
| <b>Potential Equalisation:</b>  | Yes                           | <b>Tightness:</b>              | Class 2               |                             |
|                                 |                               | <b>Shaft Position:</b>         | Inside                |                             |
|                                 |                               | <b>Actuator:</b>               | Open / Close 24V      |                             |
| <b>Dimensions (W x H)</b>       | 762 x 314                     | <b>Dimensions (W x H x D):</b> | 762 x 314 x 115       |                             |
| <b>Grating:</b>                 | Without                       |                                |                       |                             |
| <b>Design:</b>                  | Access Door                   | <b>Condensate Trough:</b>      | RAL/V2A (AISI304)     |                             |
| <b>Lockers:</b>                 | Lockers                       | <b>Condensate Drain:</b>       | Yes                   |                             |
| <b>Hinges:</b>                  | 3D-Hinges                     |                                |                       |                             |
| <b>Accessories</b>              |                               |                                |                       |                             |
| <b>Item Number</b>              | <b>Description</b>            | <b>Weight</b>                  |                       |                             |
|                                 | Wurfdüse                      | 20                             |                       |                             |
|                                 | Siphon DS                     |                                |                       |                             |

#### Extract Air Acoustic Data

##### Exhaust Air Connection

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 44  | 66  | 70  | 72 | 70 | 69 | 66 | 78  |
| Residue Sound Power in dB(A) | 28  | 58  | 67  | 72 | 72 | 70 | 65 | 77  |

##### Extract Air Connection

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 38  | 62  | 61  | 55 | 48 | 46 | 41 | 65  |
| Residue Sound Power in dB(A) | 22  | 53  | 57  | 55 | 49 | 47 | 40 | 61  |

##### Surrounding Acoustic Emission (Casing Emission)

Wall Thickness: 53 mm

| Frequency f in Hz            | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Sum |
|------------------------------|-----|-----|-----|----|----|----|----|-----|
| Residue Sound Power in dB    | 34  | 66  | 62  | 54 | 46 | 34 | 28 | 68  |
| Residue Sound Power in dB(A) | 18  | 57  | 59  | 54 | 47 | 35 | 27 | 62  |

The Acoustic Data refer only on the inside fan

Possibly the Supply Air and Extract Air Data have to be added together

Software ALAG

[27.03.2025]

Version 1.24/4.2



Management System  
ISO 9001:2015

www.tuv.com  
ID 0910083041

**Datasheet:** 02037475      **Position:** 747502  
**Project:** McDonalds DK - Ringe      **Side:** 10 by 10  
**Location:**      **Date:** 15.05.2025  
**Unit:** AHU 02      **Tender Position:**



REV1: Electronic expansion valve kits mounted on the operating side. Changing the chamber length.

|                                  |      |                                |     |
|----------------------------------|------|--------------------------------|-----|
| <b>Unit Type</b>                 | NRVU | <b>Construction of Unit</b>    | BVU |
| Non residential ventilation unit |      | Bidirectional ventilation unit |     |

|   |                      |
|---|----------------------|
| <b>Total unit characteristics:</b>                    |                      |
| <b>Type of HR:</b>                                    | Plate Heat Exchanger |
| <b>Temperature ratio dry:</b>                         | 73,50 %              |
| <b>Highest External Leakage rate (+400Pa/-400Pa):</b> | 0,27 %               |
| <b>Highest Internal Leakage rate (250Pa):</b>         | 0,03 %               |

|                          |                    |
|--------------------------|--------------------|
| <b>SFPint:</b>           | 808,07 [W/(m³/s)]  |
| <b>SFPint max. 2016:</b> | 1205,42 [W/(m³/s)] |
| <b>SFPint max. 2018:</b> | 925,42 [W/(m³/s)]  |



| Supply air features                     |                    | Extract air features                    |                   |
|---|--------------------|---|-------------------|
| <b>Air Volume:</b>                      | 1,33 m³/s          | <b>Air Volume:</b>                      | 1,19 m³/s         |
| <b>ΔP ext:</b>                          | 300 Pa             | <b>ΔP ext:</b>                          | 300 Pa            |
| <b>ΔP s, add:</b>                       | 233 Pa             | <b>ΔP s, add:</b>                       | 64 Pa             |
| <b>ΔP s, int:</b>                       | 284 Pa             | <b>ΔP s, int:</b>                       | 270 Pa            |
| <b>Filter:</b>                          | ePM1 60% (F7)      | <b>Filter:</b>                          | ePM1 60% (F7)     |
| <b>Filter pressure drop beginning:</b>  | 85 Pa              | <b>Filter pressure drop beginning:</b>  | 76 Pa             |
| <b>Heat recovery pressure drop dry:</b> | 152 Pa             | <b>Heat recovery pressure drop dry:</b> | 156 Pa            |
| <b>Fan pressure drop total:</b>         | 817 Pa             | <b>Fan pressure drop total:</b>         | 634 Pa            |
| <b>Fan pressure drop dynamic:</b>       | 47 Pa              | <b>Fan pressure drop dynamic:</b>       | 38 Pa             |
| <b>Fan electric power input:</b>        | 1,75 kW            | <b>Fan electric power input:</b>        | 1,24 kW           |
| <b>Fan efficiency static:</b>           | 60,80 %            | <b>Fan efficiency static:</b>           | 59,60 %           |
| <b>SFPv:</b>                            | 1172,70 [W/(m³/s)] | <b>SFPv:</b>                            | 895,97 [W/(m³/s)] |

|                               |  |
|-------------------------------|--|
| <b>Hints</b>                  |  |
| <b>Filter warn indication</b> | The Filter warn indication is realized by a differential pressure manometer. According to the guideline 1253/2014/EU the filter monitoring has to be mounted onsite if it is not contained in the equipment. |
| <b>Thermal Bypass</b>         | The required thermal bypass of the HRS according to the guideline 1253/2014/EU is realized by a bypass of the HR-System.   |
| <b>Drivetrain</b>             | If the unit is ordered and delivered without DDC, a governor or a cascade drive is provided to fulfill the requirements of the guideline 1253/2014/EU.   |
| <b>Disposal note</b>          | Further information under <a href="http://www.rox-online.de">www.rox-online.de</a>   |

