



# CHILLER SELECTION REPORT

Daikin Refrigeration Malaysia Sdn. Bhd.

Project : SITI NOR AQILAH AHMAD  
Created By : Siti Nor Aqilah binti Ahmad

## Customer Input

Selected Model / Type : UAM100CFM / Fixed Speed Scroll Chiller Version C  
Ambient Temperature : 33.3 °C Frequency : 50 Hz  
Chilled Water : EWT 12.22 °C Voltage : 380-415 V  
LWT 6.67 °C Country of Origin : Malaysia

## Generated Outputs

| Full Load Performance |                                                                                                                                                                                                                                                                                                                                                       | Nominal Data (AHRI Standard) |  | Input Conditions |                   |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--|------------------|-------------------|
| Cooling Capacity      |                                                                                                                                                                                                                                                                                                                                                       | 103.0                        |  | 104.5            | TR                |
|                       |                                                                                                                                                                                                                                                                                                                                                       | 362.4                        |  | 367.5            | kW                |
| Current               | Compressor                                                                                                                                                                                                                                                                                                                                            | 202                          |  | 197              | A                 |
|                       | Fan                                                                                                                                                                                                                                                                                                                                                   | 24                           |  | 24               | A                 |
|                       | Total                                                                                                                                                                                                                                                                                                                                                 | 226                          |  | 221              | A                 |
| Power Input           | Compressor                                                                                                                                                                                                                                                                                                                                            | 115.8                        |  | 111.8            | kW                |
|                       | Fan                                                                                                                                                                                                                                                                                                                                                   | 16.00                        |  | 16.00            | kW                |
|                       | Total                                                                                                                                                                                                                                                                                                                                                 | 131.8                        |  | 127.8            | kW                |
| COP                   |                                                                                                                                                                                                                                                                                                                                                       | 2.750                        |  | 2.875            | kW/kW             |
| Flow Rate             |                                                                                                                                                                                                                                                                                                                                                       | 62.41                        |  | 57.02            | m <sup>3</sup> /h |
| Pressure Drop         |                                                                                                                                                                                                                                                                                                                                                       | 65.9                         |  | 57.3             | kPa               |
| Note                  | <p>1. Nominal data is based on the AHRI (551/591) standard condition of EWT/LWT of 12.00/7.00°C, and ambient temperature of 35.0°C.</p> <p>2. Input Condition data is based on customer's input condition of EWT/LWT, and ambient temperature.</p> <p>3. Evaporator rating fouling factor = 0.018 m<sup>2</sup>.K/kW, and rating altitude at 0 m.</p> |                              |  |                  |                   |

## Part Load Performance

|                        |   |       |       |       |       |       |       |       |       |   |    |       |
|------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|---|----|-------|
| IPLV                   | : | 4.035 |       |       |       |       |       |       |       |   |    | kW/kW |
| Point                  | : | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9 | 10 |       |
| Corresponding Capacity | : | 100.0 | 78.3  | 71.7  | 56.6  | 50.0  | 43.4  | 28.3  | 21.7  | - | -  | %     |
| Total Cooling Capacity | : | 104.5 | 81.82 | 74.92 | 59.15 | 52.25 | 45.34 | 29.58 | 22.67 | - | -  | TR    |
| Total Cooling Capacity | : | 367.5 | 287.8 | 263.5 | 208.0 | 183.8 | 159.5 | 104.0 | 79.74 | - | -  | kW    |
| Total Power Input      | : | 127.8 | 99.04 | 92.69 | 70.26 | 63.91 | 57.56 | 35.13 | 28.78 | - | -  | kW    |
| Total Current          | : | 221   | 171   | 160   | 121   | 111   | 100   | 61    | 50    | - | -  | A     |
| COP                    | : | 2.875 | 2.906 | 2.843 | 2.961 | 2.875 | 2.771 | 2.961 | 2.771 | - | -  | kW/kW |
| Ambient Temperature    | : | 33.3  | 33.3  | 33.3  | 33.3  | 33.3  | 33.3  | 33.3  | 33.3  | - | -  | °C    |
| EEWT                   | : | 12.22 | 11.02 | 10.65 | 9.81  | 9.45  | 9.08  | 8.24  | 7.87  | - | -  | °C    |
| ELWT                   | : | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | - | -  | °C    |
| Flow Rate              | : | 57.02 | 57.02 | 57.02 | 57.02 | 57.02 | 57.02 | 57.02 | 57.02 | - | -  | m³/h  |
| Pressure Drop          | : | 57.3  | 57.3  | 57.3  | 57.3  | 57.3  | 57.3  | 57.3  | 57.3  | - | -  | kPa   |

## Others

|                            |            |                    |           |
|----------------------------|------------|--------------------|-----------|
| MCA                        |            | 282                | A         |
| No. of Refrigerant Circuit |            | 2                  | -         |
| Refrigerant Type           |            | R410A              | -         |
| Refrigerant Charge         | System 1/2 | 35.0 / 35.0        | kg/System |
| Chiller Dimension          | W / D / H  | 2237 / 4163 / 2156 | mm        |
| Weight                     | Shipping   | 3048               | kg        |
|                            | Operating  | 3239               | kg        |

## Evaporator

|                       |           |                    |                   |
|-----------------------|-----------|--------------------|-------------------|
| Type                  |           | S&T                | -                 |
| Inlet/Outlet Diameter |           | 5" Victaulic Joint | -                 |
| Flow Rate             | Min / Max | 16.40 / 70.40      | m <sup>3</sup> /h |
| Pressure Drop         | Min / Max | 7.00 / 79.0        | kPa               |

## Compressor

|            |            |                          |          |
|------------|------------|--------------------------|----------|
| Quantity   | System 1/2 | 2 / 2                    | -        |
| Type       |            | Hermetic-sealed (Scroll) | -        |
| Oil Charge | System 1/2 | 13.4 / 13.4              | L/System |

## Condenser

|                     |      |                |                      |
|---------------------|------|----------------|----------------------|
| Coil                |      |                |                      |
| Tube                | Type | Copper Tube    | -                    |
| Fin                 | Type | Aluminium Fin  | -                    |
| Surface Area/ Coil  |      | 15.36          | m <sup>2</sup> /Coil |
| Fan                 |      |                |                      |
| Type/ Drive         |      | Axial / Direct | -                    |
| Quantity per System |      | 4              | -                    |

Note : For any enquiry, please contact your authorized sales agent.

CSQS.C01.S01

30-Aug, 2023 09:45

Page : 1/2