

# CHILLER SELECTION REPORT

Daikin Refrigeration Malaysia Sdn. Bhd.

Project : aa  
Created By : author

## Customer Input

Selected Model / Type : UAM100C3F / Fixed Speed Scroll Chiller Version C  
Ambient Temperature : 25.0 °C Frequency : 50 Hz  
Chilled Water : EWT 0.00 °C Voltage : 380-415 V  
LWT 8.00 °C Country of Origin : Malaysia

## Generated Outputs

| Full Load Performance |            | Nominal Data (MS Standard) |       |  |  | Input Conditions |  |  |                   |
|-----------------------|------------|----------------------------|-------|--|--|------------------|--|--|-------------------|
| Cooling Capacity      |            |                            | 100.0 |  |  | 100.0            |  |  | TR                |
|                       |            |                            | 351.7 |  |  | 351.7            |  |  | kW                |
| Current               | Compressor |                            | 201   |  |  | 174              |  |  | A                 |
|                       | Fan        |                            | 24    |  |  | 24               |  |  | A                 |
|                       | Total      |                            | 225   |  |  | 198              |  |  | A                 |
| Power Input           | Compressor |                            | 116.4 |  |  | 94.52            |  |  | kW                |
|                       | Fan        |                            | 16.00 |  |  | 16.00            |  |  | kW                |
|                       | Total      |                            | 132.4 |  |  | 110.5            |  |  | kW                |
| COP                   |            |                            | 2.656 |  |  | 3.182            |  |  | kW/kW             |
| Flow Rate             |            |                            | 54.56 |  |  | 50.00            |  |  | m <sup>3</sup> /h |
| Pressure Drop         |            |                            | 53.6  |  |  | 46.8             |  |  | kPa               |

1. Nominal data is based on the MS2449 standard condition of EWT/LWT of 12.22/6.67°C, and ambient temperature of 35.0°C.

2. Input Condition data is based on customer's input condition of EWT/LWT, and ambient temperature.

3. Evaporator rating fouling factor = 0.018 m<sup>2</sup>·K/kW, and rating altitude at 0 m.

## Part Load Performance

|                        |  |       |       |       |       |       |       |       |       |   |    |                   |
|------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|---|----|-------------------|
| MPLV                   |  | 3.198 |       |       |       |       |       |       |       |   |    | kW/kW             |
| Point                  |  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9 | 10 |                   |
| Corresponding Capacity |  | 100.0 | 96.0  | 87.8  | 69.5  | 61.3  | 53.1  | 34.7  | 26.6  | - | -  | %                 |
| Total Cooling Capacity |  | 100.0 | 96.04 | 87.85 | 69.49 | 61.30 | 53.10 | 34.75 | 26.55 | - | -  | TR                |
| Total Cooling Capacity |  | 351.7 | 337.8 | 309.0 | 244.4 | 215.6 | 186.8 | 122.2 | 93.38 | - | -  | kW                |
| Total Power Input      |  | 110.5 | 85.45 | 80.33 | 60.38 | 55.26 | 50.14 | 30.19 | 25.07 | - | -  | kW                |
| Total Current          |  | 198   | 153   | 144   | 108   | 99    | 91    | 54    | 46    | - | -  | A                 |
| COP                    |  | 3.182 | 3.953 | 3.846 | 4.048 | 3.901 | 3.725 | 4.048 | 3.725 | - | -  | kW/kW             |
| Ambient Temperature    |  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | - | -  | °C                |
| EEWT                   |  | 14.06 | 13.82 | 13.32 | 12.21 | 11.71 | 11.22 | 10.10 | 9.61  | - | -  | °C                |
| ELWT                   |  | 8.00  | 8.00  | 8.00  | 8.00  | 8.00  | 8.00  | 8.00  | 8.00  | - | -  | °C                |
| Flow Rate              |  | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | - | -  | m <sup>3</sup> /h |
| Pressure Drop          |  | 46.8  | 46.8  | 46.8  | 46.8  | 46.8  | 46.8  | 46.8  | 46.8  | - | -  | 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         |  |  |  |  |  |  |  |  |  | -                    |
| Fin                 | Type | Aluminium      |  |  |  |  |  |  |  |  |  | -                    |
| Surface Area/ Coil  |      | 15.36          |  |  |  |  |  |  |  |  |  | m <sup>2</sup> /Coil |
| Fan                 |      |                |  |  |  |  |  |  |  |  |  | -                    |
| Type/ Drive         |      | Axial / Direct |  |  |  |  |  |  |  |  |  | -                    |
| Quantity per System |      | 4              |  |  |  |  |  |  |  |  |  | -                    |

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified Units may be found in the AHRI Directory at [www.ahridirectory.org](http://www.ahridirectory.org)



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

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