



# CHILLER SELECTION REPORT

Daikin Refrigeration Malaysia Sdn. Bhd.

Project : Project Ryoka Bangi  
Created By : Nur Athirah Binti Abdullah

## Customer Input

Selected Model / Type : UAM80CFM / Fixed Speed Scroll Chiller Version C  
Ambient Temperature : 35.0 °C Frequency : 50 Hz  
Chilled Water : EWT 20.00 °C Voltage : 380-415 V  
LWT 15.00 °C Country of Origin : Malaysia

## Generated Outputs

| Full Load Performance |                                                                                                                                                                                                                                                                                                                                          | Nominal Data (AHRI Standard) |  | Input Conditions |                   |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--|------------------|-------------------|
| Cooling Capacity      |                                                                                                                                                                                                                                                                                                                                          | 80.99                        |  | 104.0            | TR                |
|                       |                                                                                                                                                                                                                                                                                                                                          | 284.8                        |  | 365.8            | kW                |
| Current               | Compressor                                                                                                                                                                                                                                                                                                                               | 161                          |  | 163              | A                 |
|                       | Fan                                                                                                                                                                                                                                                                                                                                      | 18                           |  | 18               | A                 |
|                       | Total                                                                                                                                                                                                                                                                                                                                    | 179                          |  | 181              | A                 |
| Power Input           | Compressor                                                                                                                                                                                                                                                                                                                               | 92.19                        |  | 93.16            | kW                |
|                       | Fan                                                                                                                                                                                                                                                                                                                                      | 12.00                        |  | 12.00            | kW                |
|                       | Total                                                                                                                                                                                                                                                                                                                                    | 104.2                        |  | 105.2            | kW                |
| COP                   |                                                                                                                                                                                                                                                                                                                                          | 2.734                        |  | 3.478            | kW/kW             |
| Flow Rate             |                                                                                                                                                                                                                                                                                                                                          | 49.05                        |  | 53.87            | m <sup>3</sup> /h |
| Pressure Drop         |                                                                                                                                                                                                                                                                                                                                          | 38.1                         |  | 43.8             | kPa               |
| Note                  | 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.<br>2. Input Condition data is based on customer's input condition of EWT/LWT, and ambient temperature.<br>3. Evaporator rating fouling factor = 0.018 m <sup>2</sup> .K/kW, and rating altitude at 0 m. |                              |  |                  |                   |

## Part Load Performance

|                        |  |       |       |       |       |       |       |       |       |   |    |                   |
|------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|---|----|-------------------|
| IPLV                   |  | -     |       |       |       |       |       |       |       |   |    | kW/kW             |
| Point                  |  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9 | 10 |                   |
| Corresponding Capacity |  | 100.0 | 80.0  | 74.5  | 57.0  | 51.5  | 46.0  | 28.5  | 23.0  | - | -  | %                 |
| Total Cooling Capacity |  | 104.0 | 83.16 | 77.45 | 59.25 | 53.54 | 47.83 | 29.62 | 23.92 | - | -  | TR                |
| Total Cooling Capacity |  | 365.8 | 292.5 | 272.4 | 208.4 | 188.3 | 168.2 | 104.2 | 84.11 | - | -  | kW                |
| Total Power Input      |  | 105.2 | 82.50 | 77.24 | 59.84 | 52.58 | 49.32 | 29.92 | 24.66 | - | -  | kW                |
| Total Current          |  | 181   | 142   | 132   | 103   | 91    | 84    | 52    | 42    | - | -  | A                 |
| COP                    |  | 3.478 | 3.545 | 3.527 | 3.482 | 3.581 | 3.411 | 3.482 | 3.411 | - | -  | kW/kW             |
| Ambient Temperature    |  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | - | -  | °C                |
| EEWT                   |  | 20.85 | 19.68 | 19.35 | 18.33 | 18.01 | 17.69 | 16.67 | 16.34 | - | -  | °C                |
| ELWT                   |  | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | - | -  | °C                |
| Flow Rate              |  | 53.87 | 53.87 | 53.87 | 53.87 | 53.87 | 53.87 | 53.87 | 53.87 | - | -  | m <sup>3</sup> /h |
| Pressure Drop          |  | 43.8  | 43.8  | 43.8  | 43.8  | 43.8  | 43.8  | 43.8  | 43.8  | - | -  | kPa               |

## Others

|                            |            |                    |           |
|----------------------------|------------|--------------------|-----------|
| MCA                        |            | 223                | A         |
| No. of Refrigerant Circuit |            | 2                  | -         |
| Refrigerant Type           |            | R410A              | -         |
| Refrigerant Charge         | System 1/2 | 25.0 / 25.0        | kg/System |
| Chiller Dimension          | W / D / H  | 2237 / 3263 / 2156 | mm        |
| Weight                     | Shipping   | 2917               | kg        |
|                            | Operating  | 3039               | kg        |

## Evaporator

|                       |           |                    |                   |
|-----------------------|-----------|--------------------|-------------------|
| Type                  |           | S&T                | -                 |
| Inlet/Outlet Diameter |           | 5" Victaulic Joint | -                 |
| Flow Rate             | Min / Max | 15.00 / 56.70      | m <sup>3</sup> /h |
| Pressure Drop         | Min / Max | 5.00 / 47.0        | 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  |      | 11.52          | m <sup>2</sup> /Coil |
| Fan                 |      |                |                      |
| Type/ Drive         |      | Axial / Direct | -                    |
| Quantity per System |      | 3              | -                    |