

# TECHNICAL DATA SHEET

# SIGMA 104

## COOLING DUTY

- Chilled water temperature
- Duty (32°C ambient)
- Ambient temperature range for the standard design
- Chilled water temperature available in the standard design

Note: water chilled below +5°C will require antifreeze added.

|    |          |    |       |
|----|----------|----|-------|
| °C | 10       | 15 | 20    |
| kW | 77.8     | 91 | 103.6 |
| °C | 10 to 42 |    |       |
| °C | 10 to 25 |    |       |

## REFRIGERATION SYSTEM

- Compressor
 

|                          |                 |
|--------------------------|-----------------|
| Type                     | Hermetic scroll |
| Nominal power (each)     | 16.6 kW         |
| Number off               | Two             |
| Full load current (each) | 28.2 amps       |
| Refrigerant type         | R410A           |
- Condenser unit
 

|                      |         |               |
|----------------------|---------|---------------|
| Air cooled condenser | No. off | Four          |
| Material             |         | All aluminium |
| Fan arrangement      | No. off | Two           |
| air flow             | m3/hr   | 21600         |
| motor power          | kW      | 1.63 each     |
| Full load current    | amps    | 2.86 each     |
- or
 

|                        |             |           |
|------------------------|-------------|-----------|
| Water cooled condenser | No. off     | Two       |
| Water flow             | litres/hour | 4500 each |
| Pressure drop          | bar         | 0.31      |
- Evaporator
- Refrigeration controls: control thermostat, compressor over-temperature protection, refrigerant drier, expansion valve, high pressure switch, fan pressure switch.

## WATER SYSTEM

- Water system instruments
 

|   |
|---|
| Digital electronic temperature display and control +/-1°C |
| Tank water level indicator                                |
| Water pressure gauge                                      |
| Permanent bypass  |
| Water level switch (pump security)                        |
- Bulk holding tank
 

|               |        |         |
|---------------|--------|---------|
| Capacity      | litres | 400     |
| Material*     |        | Plastic |
| Water filling |        | Mains   |
- Water pump
 

|                   |                       |     |
|-------------------|-----------------------|-----|
| Type              | Horizontal multistage |     |
| Flow              | m3/hr                 | 14  |
| Pressure          | bar                   | 3.2 |
| Motor power       | kW                    | 4   |
| Full load current | amp                   | 8.2 |
- Connections
 

|                      |              |     |
|----------------------|--------------|-----|
| Warm water INLET     | Flanged DN65 | 2 ½ |
| Chilled water OUTLET | Flanged DN65 | 2 ½ |
| Mains water          | BSP female   | 3/8 |
| Drain                | BSP male     | ½   |

\*If heaters are fitted into tank it is manufactured of stainless steel

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## ELECTRICAL SYSTEM

- Mains supply for the standard design
- Control
- Total nominal power
- Maximum starting load (per phase)
- Safety fuse
- Electrical controls: direct on line. Incorporates safety overload.
- Protection rating IP54
- Collective fault/remote signal
- Remote control via volt free signal
- Fan speed control

|                  |              |
|------------------|--------------|
| Volt phase cycle | 400 / 3 / 50 |
| Voltage          | 24           |
| kW               | 40.7         |
| amp              | 70.6         |
| amp              | 80           |

## NOISE LEVEL

@ 1m free field

dB'A' **72**

## HEAT RECOVERY

From air or water cooled condenser

kW **108**

## WEIGHT

Dry kg **810**  
 Working kg **1210**

## DIMENSIONS (mm)

- Stainless steel enclosure

Width **2000**  
 Depth **1000**  
 Height **2055**

## FINISH

Paint RAL9005

## OPTIONS

- |  |                             |
|--|-----------------------------|
| Reinjection for high return water temperatures                                   | Twin inlets/outlets         |
| Low ambient kit  | Insulation                  |
| Frost protection   | Freeze stat                 |
| Close temperature control $\pm 0.5^{\circ}\text{C}$ or $\pm 0.1^{\circ}\text{C}$ | Pressure gauge              |
| Control temperature parallel with ambient  | Stainless steel tank        |
| High ambient conditions  | Remote control              |
| Stainless steel evaporator coil  | Special electrical circuits |
| Systems suitable for deionised water   | 24V DC control circuit      |
| Additional water level switch  | Power supply various        |
| Flow switch  | Cable marking               |
| Pump isolation valves  | Harting connectors          |
| High pressure pumps  | Lifting handles             |
| Pressure relief valve  | GRP cover for external use  |
| Autofill by solenoid valve   | Commissioning               |