




**APPROVALS**




 **ENGINEERING CODE**  
843DA02


 **APPROVED REFRIGERANT**  
R-290

 **POWER SUPPLY**  
220-240 V 50 Hz

 **STANDARD CONDITIONS**  
ASHRAE

 **APPLICATION**  
MBP

 **COOLING CAPACITY**  
2109 W (MBP)

 **EFFICIENCY**  
1.87 W/W (MBP)

 **MOTOR TYPE**  
CSCR

 **STARTING TORQUE**  
HST

**DATA**

**General Data**

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Type                              | Hermetic reciprocating            |
| Technology Type                   | On-Off                            |
| Displacement                      | 27.8 cm <sup>3</sup>              |
| Compressor Cooling                | Fan/NotControlled/220             |
| Fan Air Flow                      | 520 m <sup>3</sup> /h             |
| Expansion Device                  | Capillary Tube or Expansion Valve |
| Horse Power                       | 1 1/4 hp                          |
| Max Condensing Pressure Operating | 18.07 bar                         |
| Max Condensing Pressure Peak      | 20.17 bar                         |
| Power Supply                      | 220-240 V 50 Hz                   |
| Evaporating Temperature Range     | -20 °C to 10 °C                   |

**Electrical Data**

|                          |                |
|--------------------------|----------------|
| Motor type               | CSCR           |
| Starting Torque          | HST            |
| Start Winding Resistance | 8.4 Ω at 25° C |
| Run Winding Resistance   | 1.7 Ω at 25° C |

## Mechanical Data

|  |                        |
|--|------------------------|
| Maximum Recommended Refrigerant Charge | 150 g                  |
| Oil Charge                             | 450 ml                 |
| Oil Type Configuration                 | ESTER                  |
| Oil Type Viscosity                     | ISO22                  |
| Pressurization                         | Without dry air charge |
| Weight                                 | 17.4 Kg                |
| Free Internal Volume                   | 3.3 L                  |

## Electrical Components

|                  | Description      |
|------------------|------------------|
| Run Capacitor    | 20               |
| CSR / CSIR Box   | YES              |
| Starting Device  | RVA403C-123      |
| Motor Protection | MST22AGN-3074    |
| Start Capacitor  | 130-156 Uf/330 V |

## External Characteristics

| Base Plate  | Universal         |                 |
|-------------|-------------------|-----------------|
| Tray Holder | No                |                 |
| Height      | 234 mm            |                 |
| Connector   | Internal Diameter | Shape           |
| Suction     | 9.6 mm            | Vertical/Copper |
| Discharge   | 6.42 mm           | Vertical/Copper |
| Process     | 6.42 mm           | Vertical/Copper |

## PERFORMANCE

## Rated Points

| Condensing Temperature | Evaporating Temperature | Cooling Capacity | Power Consumption | Gas Flow Rate | Efficiency |
|------------------------|-------------------------|------------------|-------------------|---------------|------------|
| 54.40°C                | -6.70°C                 | 2109 W           | 1130 W            | 24.16 kg/h    | 1.87 W/W   |

Test Condition: ASHRAEMBP46, Fan/NotControlled/220, Return Gas 35°C, Evaporation -6.70°C, Condensing 54.40°C, Ambient 35°C, Liquid 46.1°C, Subcooling 8.3K. Data are an indication of performance based simulation.

## Performance Curve Data

### Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Power W | Gas Flow Rate kg/h | Efficiency W/W |
|----------------------------|--------------------|---------|--------------------|----------------|
| -20                        | 1588               | 798     | 15.30              | 1.99           |
| -15                        | 1984               | 842     | 19.18              | 2.36           |
| -10                        | 2492               | 899     | 24.18              | 2.77           |
| -5                         | 3106               | 971     | 30.29              | 3.2            |
| 0                          | 3822               | 1058    | 37.49              | 3.61           |
| 5                          | 4633               | 1161    | 45.74              | 3.99           |
| 10                         | 5535               | 1280    | 55.04              | 4.32           |

Test Condition: ASHRAEMBP46, Fan/NotControlled/220, Return Gas 35°C, Ambient 35°C , Subcooling 8.3K. Data are an indication of performance based simulation.

### Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Power W | Gas Flow Rate kg/h | Efficiency W/W |
|----------------------------|--------------------|---------|--------------------|----------------|
| -20                        | 1438               | 829     | 14.96              | 1.73           |
| -15                        | 1753               | 898     | 18.32              | 1.95           |
| -10                        | 2170               | 975     | 22.78              | 2.23           |
| -5                         | 2684               | 1059    | 28.31              | 2.53           |
| 0                          | 3287               | 1153    | 34.88              | 2.85           |
| 5                          | 3975               | 1256    | 42.48              | 3.17           |
| 10                         | 4743               | 1368    | 51.09              | 3.47           |

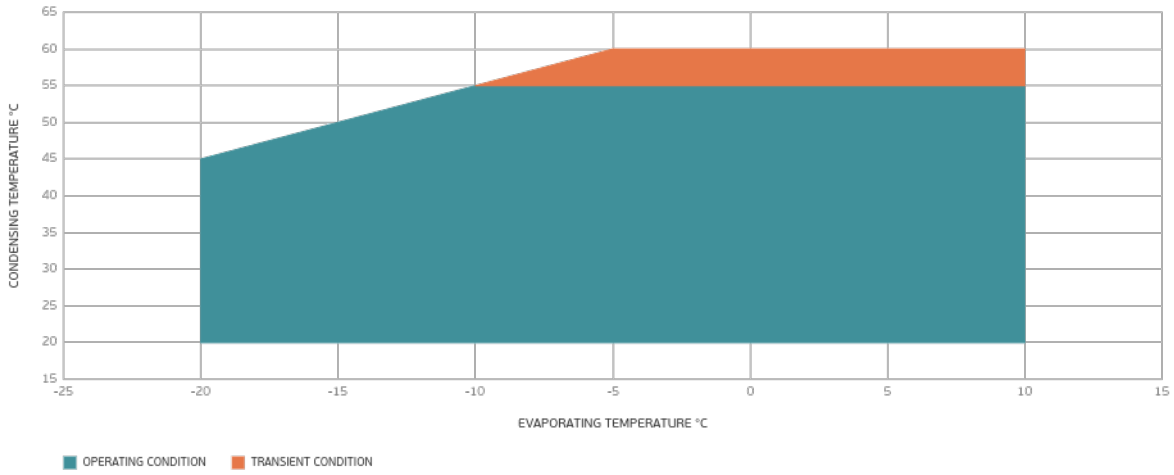
Test Condition: ASHRAEMBP46, Fan/NotControlled/220, Return Gas 35°C, Ambient 35°C , Subcooling 8.3K. Data are an indication of performance based simulation.

### Condensing Temperature 55°C

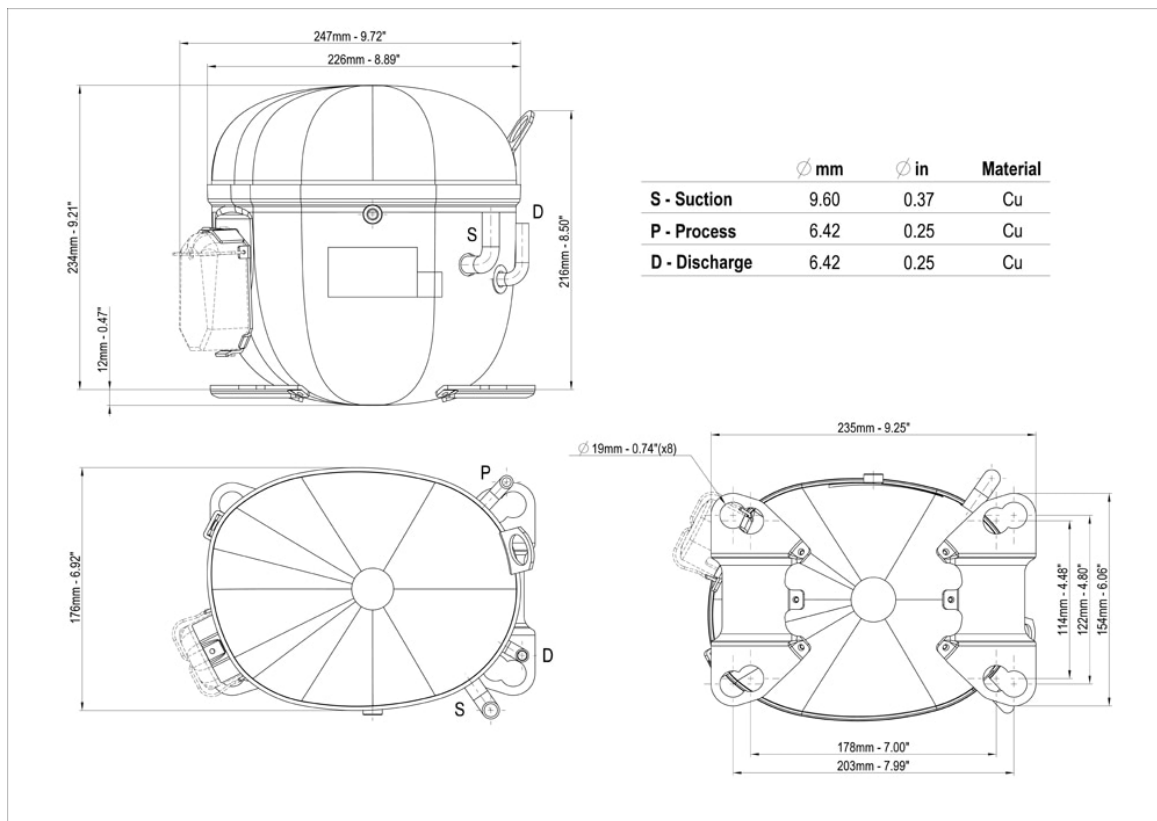
| Evaporating Temperature °C | Cooling Capacity W | Power W | Gas Flow Rate kg/h | Efficiency W/W |
|----------------------------|--------------------|---------|--------------------|----------------|
| -20                        | 1265               | 907     | 14.37              | 1.4            |
| -15                        | 1501               | 992     | 17.13              | 1.51           |
| -10                        | 1828               | 1079    | 20.96              | 1.69           |
| -5                         | 2240               | 1167    | 25.81              | 1.92           |
| 0                          | 2731               | 1257    | 31.68              | 2.17           |
| 5                          | 3297               | 1350    | 38.54              | 2.44           |
| 10                         | 3931               | 1447    | 46.37              | 2.72           |

Test Condition: ASHRAEMBP46, Fan/NotControlled/220, Return Gas 35°C, Ambient 35°C , Subcooling 8.3K. Data are an indication of performance based simulation.

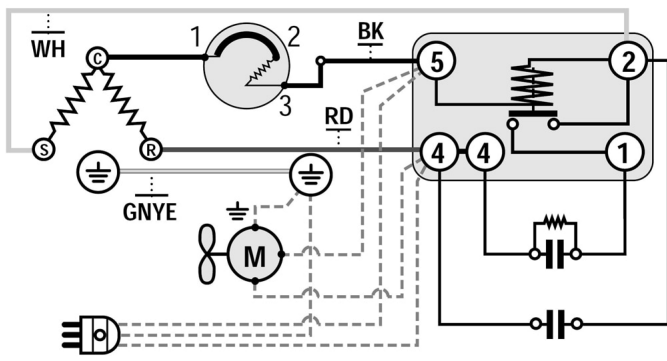
## Operating Envelope



## External Dimensions



## Wiring Diagram



## Assembly Instructions

