

# Mini VRF Heat Pump Outdoor Units

## SYSVRF AIR EVO HP

### Features

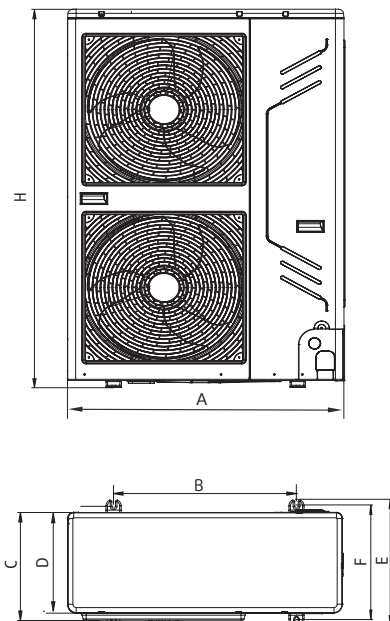
- Full DC Inverter Mini VRF with DC Inverter compressor and DC fan motor.
- Compact size and long piping system.
- High efficiency at partial load.
- Inverter Rotary compressor providing wide capacity output from 10% to 100% evenly.
- Centralized control, BMS connection and web access potential.
- Hydrophilic Blue Fin coil enhances durability and protection against corrosion.
- Piping connection in four different directions makes simple the installation of outdoor unit.
- Maximum 11 indoor units connection.
- Indoor unit combination total capacity index from 45% to 130%.



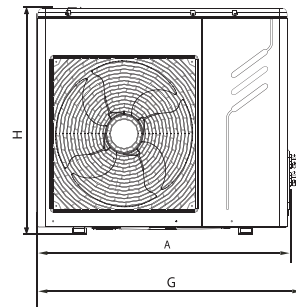
- With the branch SYSVRF BRANCH 04 MINI (Art. no. 314803) the installation is easy and safe, all connections from outdoor unit and indoor units are flanged, which greatly simplifies field installations.

### Dimensions

#### SYSVRF 120 to 180 and 224



#### SYSVRF 080



| Model | 080 | 120 to 180 | 224   |
|-------|-----|------------|-------|
| A     | 990 | 900        | 1.120 |
| B     | 624 | 600        | 874   |
| C     | 354 | 348        | 440   |
| D     | 336 | 320        | 400   |
| E     | 396 | 400        | 528   |
| F     | 366 | 360        | 494   |
| H     | 966 | 1.327      | 1.558 |

## Technical features

| Model Outdoor unit                   |                 | SYSVRF            | 080 AIR EVO HP Q                          | 120 AIR EVO HP Q | 140 AIR EVO HP R | 160 AIR EVO HP R   | 180 AIR EVO HP R | 224 AIR EVO HP R |             |
|--------------------------------------|-----------------|-------------------|---|------------------|------------------|--------------------|------------------|------------------|-------------|
| Art. no.                             |                 |                   | 314392                                    | 314089           | 314092           | 314094             | 314777           | 314778           |             |
| Power supply                         |                 | V/Ph/Hz           | 220-240/1/50                              |                  |                  | 380-415/3/50       |                  |                  |             |
| Cooling capacity                     |                 | kW                | 8,0                                       | 12,3             | 14,0             | 15,5               | 17,5             | 22,4             |             |
| Power input                          |                 | kW                | 2,05                                      | 3,25             | 3,95             | 4,52               | 5,30             | 6,80             |             |
| EER                                  |                 |                   | 3,90                                      | 3,78             | 3,54             | 3,43               | 3,30             | 3,29             |             |
| ESEER                                |                 |                   | 7,36                                      | 7,10             | 6,68             | 6,42               | 6,21             | 6,21             |             |
| Heating capacity                     |                 | kW                | 9,0                                       | 13,2             | 15,4             | 17,0               | 19,0             | 24,5             |             |
| Power input                          |                 | kW                | 2,24                                      | 3,47             | 4,16             | 4,77               | 5                | 5,90             |             |
| COP                                  |                 |                   | 4,02                                      | 3,80             | 3,70             | 3,56               | 3,80             | 4,15             |             |
| Max. current                         |                 | A                 | 18,5                                      | 24,4             | 11,0             | 12,0               | 12,5             | 17,2             |             |
| Compressor Inverter Rotary           | Quantity        | pcs               | 1/ Rotary                                 |                  |                  |                    |                  |                  |             |
|                                      | Power input     | kW                | 2.200                                     | 3.010            | 3.010            | 4.240              | 4.240            | 5.200            |             |
|                                      | Refrigerant oil | ml                | 670+200                                   | 870+630          | 870+630          | 1.400+250          | 1.400+250        | 1.700+1.500      |             |
| Outdoor fan type / motor             |                 |                   | 1 Axial / 1 DC motor                      |                  |                  | 2 Axial / DC motor |                  |                  |             |
| Air flow                             |                 | m <sup>3</sup> /h | 5.500                                     |                  |                  | 6.000              |                  | 6.800            | 10.500      |
| Sound pressure level                 |                 | dB(A)             | 56  | 57               | 57               | 57                 | 59               | 59               |             |
| Refrigerant                          | Type            |                   | R410A                                     |                  |                  |                    |                  |                  |             |
|                                      | Factory charge  | kg                | 2,8                                       | 3,3              | 3,9              | 3,9                | 4,5              | 6,2              |             |
| Dimension (LxWxH)                    |                 | mm                | 1.075x396x966                             |                  |                  | 900x400x1.327      |                  | 1.120x528x1.558  |             |
| Packing (LxWxH)                      |                 | mm                | 1.120x435x1100                            |                  |                  | 1.030x435x1.456    |                  | 1.270x565x1.720  |             |
| Net/gross weight                     |                 | kg                | 62/67                                     | 95/106           | 95/106           | 100/111            | 107/118          | 146,5/162,5      |             |
| Piping dimension                     | Liquid pipe     | mm (in)           | 9,5 (3/8")                                |                  |                  |                    |                  |                  | 9,5 (3/8")  |
|                                      | Gas pipe        | mm (in)           | 15,9 (5/8")                               |                  |                  |                    |                  |                  | 19,1 (3/4") |
| Max quantity indoor units connection |                 | pcs               | 4   | 6                | 6                | 7                  | 9                | 11               |             |
| Operating ambient temperature range  |                 | °C                | Cooling -15 ... +46 / Heating -15 ... +27 |                  |                  |                    |                  |                  |             |

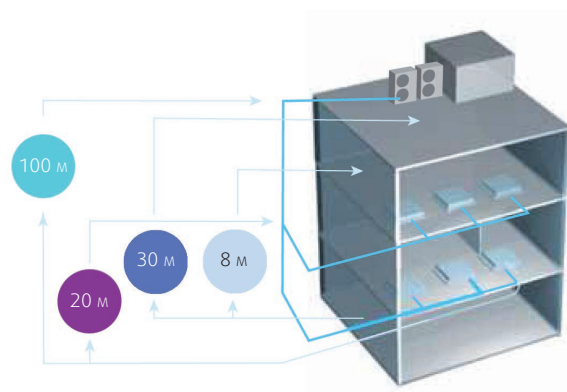
## Nominal conditions

|              | Indoor unit      | Outdoor unit     | Piping lenght | Level difference |
|--------------|------------------|------------------|---------------|------------------|
| Cooling mode | 27°C DB, 19°C WB | 35°C DB, 24°C WB | 5 m           | 0 m              |
| Heating mode | 20°C DB, 15°C WB | 7°C DB, 6°C WB   | 5 m           | 0 m              |

The sound pressure value may vary depending on ambient conditions.

## Piping Length

- Maximum piping equivalent length.
- Maximum piping (the farthest IDU from the first indoor unit branch) equivalent length.
- Maximum outdoor unit-indoor unit drop height.
- Maximum indoor unit to indoor unit drop height.



| Outdoor units SYSVRF AIR EVO HP |   |                   | Permitted value        |
|---------------------------------|---|-------------------|------------------------|
| Piping length                   | Total piping length (actual)  |                   | 100 m                  |
|                                 | Maximum piping  | Actual length     | 60 m (45 m SYSVRF 080) |
|                                 |   | Equivalent length | 70 m (50 m SYSVRF 080) |
|                                 | Piping (the farthest IDU from the first indoor unit branch) equivalent length |                   | 20 m                   |
| Drop height                     | Outdoor unit-indoor unit drop height  | Outdoor unit up   | 30 m                   |
|                                 |   | Outdoor unit down | 20 m                   |
|                                 | Indoor unit to indoor unit drop height  |                   | 8 m                    |