

# PACKAGED ROOFTOP HEAT PUMPS



## Air treatment 50UH

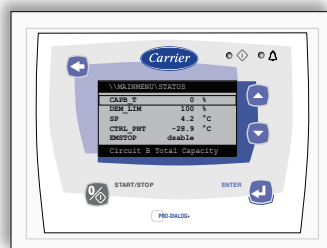
### Options/accessories

- Electric heaters, various capacities\*
- Hot-water coils, various capacities\*
- Various coil protection options\*
- Fresh-air sliding panel\*
- Manual outdoor air damper\*
- Economizer, thermostatic or enthalpy control, with or without CO<sub>2</sub> sensor control\*
- Supply fan with various high static pressure options with or without soft starter\*
- Standard supply fan with or without soft starter\*
- Various filter options\*
- Stainless steel drain pan\*
- Energy recovery module\*
- Various return/exhaust air options\*
- Various temperature sensor options\*
- CCN/JBus, Lon or BACnet gateways\*
- Dirty filter detection\*
- Supply air flow detection\*
- Smoke detector\*
- Fire thermostat\*
- Duct connection fixing frame\*
- Various packaging options\*
- Vertical supply roof curb\*\*
- Vertical supply roof curb with longitudinal adjustment\*\*
- Vertical supply roof curb with transversal adjustment\*\*
- Horizontal supply roof curb\*\*
- Transition roof curb (French ERP)\*\*
- Remote user interface (Pro-Dialog+)\*\*

\* Option \*\* Accessory

### Features

- Seven sizes with nominal cooling capacities from 44 to 109 kW and nominal heating capacities from 44 to 112 kW.
- 50UH units are packaged reversible rooftop heat pumps, available with additional heating options (hot-water coil or electric heaters).
- Versatile and efficient heat pumps, designed for outdoor installation.
- Self-contained, can be installed in commercial and industrial applications.
- Units use the ozone-friendly refrigerant R-410A that does not affect the ozone layer.
- Components are specifically designed for R-410A refrigerant.
- Reduced size and weight make these units ideal for today's lightweight building structures.
- Cabinet made of powder-painted sheet metal.
- Compressors are hermetic scroll compressors and mounted on vibration isolators.
- Crankcase heaters are standard for all units.
- Low-noise shrouded axial Flying Bird fans, made of composite plastic material.
- Heat exchangers made of high-quality staggered copper tubing, mechanically bonded into pre-coated corrugated aluminium fins.
- Leak-tight refrigerant circuits with brazed connections and reduced vibration levels. Access to pressure transducers and temperature sensors without losing charge.
- Units are fully wired in accordance with EN standards.
- Simplified electrical connections.
- Reduced defrost cycle duration due to the new coil design and an auto-adaptive control algorithm.



Pro-Dialog+ operator interface

## Physical data

| 50UH   |       | 045   | 055        | 065         | 075         | 085         | 100         | 120         |
|--|-------|---|------------|-------------|-------------|-------------|-------------|-------------|
| <b>Nominal cooling capacity*</b>               | kW    | 43.5  | 50.1       | 59.1        | 69.1        | 84.5        | 96.7        | 108.8       |
| Nominal power input, cooling                   | kW    | 14.4  | 17.7       | 20.7        | 26.5        | 27.5        | 33.8        | 38.7        |
| EER  | kW/kW | 3.03  | 2.83       | 2.86        | 2.61        | 3.07        | 2.86        | 2.81        |
| <b>Nominal heating capacity**</b>              | kW    | 43.5  | 54.4       | 62.0        | 74.5        | 85.1        | 98.7        | 120.7       |
| Nominal power input, heating                   | kW    | 13.2  | 16.0       | 20.1        | 24.8        | 24.4        | 30.7        | 37.5        |
| COP  | kW/kW | 3.30  | 3.41       | 3.09        | 3.01        | 3.49        | 3.21        | 3.22        |
| <b>Operating weight</b>                        | kg    | 820   | 965        | 1043        | 1053        | 1565        | 1655        | 1775        |
| <b>Refrigerant charge</b>                      |       | R-410A  |            |             |             |             |             |             |
| <b>Control</b>                                 |       | Pro-Dialog+   |            |             |             |             |             |             |
| <b>Compressor</b>                              |       | Hermetic scroll   |            |             |             |             |             |             |
| No. of circuits/No. of compressors             |       | 1/1   | 1/2        | 2/2         | 2/2         | 2/2         | 2/3         | 2/4         |
| <b>Indoor/outdoor coil</b>                     |       | Copper tubes, aluminium fins                                    |            |             |             |             |             |             |
| <b>Indoor fan and motor</b>                    |       | One, centrifugal  |            |             |             |             |             |             |
| Air flow                                       | l/s   | 2528  | 3444       | 3472        | 3944        | 5550        | 5550        | 5550        |
| <b>Outdoor fan and motor</b>                   |       | Axial Flying Bird fans with rotating shroud, direct-drive motor |            |             |             |             |             |             |
| Quantity ... air flow                          | l/s   | 1 ... 5400  | 2 ... 6700 | 2 ... 10100 | 2 ... 10100 | 2 ... 10300 | 2 ... 10600 | 2 ... 10600 |
| <b>Sound power level 10<sup>-12</sup> W***</b> | dB(A) | 86.5  | 84.4       | 90.6        | 90.6        | 90.7        | 91.0        | 91.3        |
| <b>Electric heaters</b>                        |       |   |            |             |             |             |             |             |
| Type   |       | Option 84   | Option 85  | Option 85   | Option 85   | Option 86   | Option 86   | Option 86   |
| Heating capacity                               | kW    | 27  | 36         | 36          | 36          | 54          | 54          | 54          |
| Capacity steps                                 |       | 18 - 9  | 18 - 18    | 18 - 18     | 18 - 18     | 27 - 54     | 27 - 54     | 27 - 54     |
| Rated current                                  | A     | 39  | 52         | 52          | 52          | 78          | 78          | 78          |
| <b>Dimensions</b>                              |       |   |            |             |             |             |             |             |
| Length   | mm    | 2125  | 2125       | 2125        | 2125        | 3581        | 3581        | 3581        |
| Width  | mm    | 2193  | 2193       | 2193        | 2193        | 2196        | 2196        | 2196        |
| Height   | mm    | 1413  | 1442       | 1796        | 1796        | 1825        | 1825        | 1825        |

\* Nominal Eurovent conditions: outdoor air dry bulb temperature of 35°C, indoor air wet bulb temperature of 19°C.

\*\* Nominal Eurovent conditions: outdoor air wet bulb temperature of 6°C, indoor air dry bulb temperature of 20°C.

\*\*\* In accordance with ISO 961461 and certified by Eurovent. The values have been rounded and are for information only.

## Electrical data

| 50UH**                          |         | 045            | 055   | 065   | 075   | 085   | 100   | 120   |
|---------------------------------|---------|----------------|-------|-------|-------|-------|-------|-------|
| <b>Nominal voltage</b>          | V-ph-Hz | 400-3-50 ± 10% |       |       |       |       |       |       |
| <b>Maximum power input*</b>     | kW      | 21.68          | 27.41 | 33.52 | 40.50 | 44.58 | 52.98 | 59.38 |
| <b>Nominal current drawn*</b>   | A       | 25.27          | 31.55 | 36.82 | 45.67 | 47.30 | 58.80 | 77.11 |
| <b>Maximum start-up current</b> | A       | 206            | 173   | 183   | 204   | 246   | 261   | 226   |

\* Based on an outdoor air dry bulb temperature of 35°C and an indoor air wet bulb temperature of 19°C.

\*\* Standard unit without any options and accessories.

## Energy recovery module (option)

The energy recovery module (ERM) is an individual dual-flow unit, equipped with a high-efficiency Eurovent-certified air-to-air heat recovery wheel with 63% to 88% efficiency, an integrated variable-air-volume plug fan and a control system for plug-and-play installation. Specially designed for economical indoor air extraction and to take in fresh air to meet current and future requirements for high-energy-efficiency buildings.

- Unit cabinet is made of galvanised and powder-painted sheet metal.
- Fitted with G4 filters on the fresh-air side as standard to protect the heat recovery wheel against dust.
- Insulated duct, power and control wiring between ERM and rooftop unit - supplied by the factory with the duct kit.
- Heat exchanger reclaims up to 90% of the heat from the extract air and transfers it to the supply air.
- High-efficiency plug fans for exhaust air are more energy-efficient and require less maintenance.

