# Hitachi Air Conditioning

## Engineered for tomorrow.

#### SYSTEM FREE +15

Utopia Split Systems

## **Utopia IVX Comfort**

Hitachi's Utopia IVX Comfort range are high specification single and multi-split systems with all the benefits of VRF, including individual control of each indoor unit with an increased number of twin, triple and quad combinations in addition to delivering excellent part-load efficiency.

With cooling capacities and heating capacities from 3.2kW to 37.5kW, a maximum of 4 indoor units are connectable to a single outdoor unit, with individual control and efficiencies achieved as high as A++/A+ (depending on model/combinations).

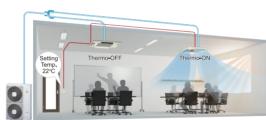
#### Comfort and ease of installation

Improved connectivity (up to 4 indoors per outdoor unit, minimising pipework required) and zone-by-zone individual control makes IVX Comfort the perfect solution where VRF flexibility is needed but at a lower cost.

The individual Thermo-on and Thermo-off is possible even when the remote control is connected to multiple internal units.

The system is able to handle changes in air conditioning needs for each individual space, e.g., internal zone or perimeter area, and thereby optimise energy efficiencies.

This produces a highly comfortable environment and great electricity savings.



#### **Features and Benefits**

- Cooling capacities from 3.2kW to 33.5kW
- Heating capacities from 3.5kW to 37.5kW
- Compact design single fan (up to 6HP)
- R410A refrigerant
- Improved connectivity up to 4 indoors per outdoor unit minimising pipework required
- Zone-by-zone individual control
- Fully ErP compliant with A++ seasonal efficiency
- Available in single phase and three phase.

## Easily adaptable and reconfigurable

Each indoor unit can be operated completely independently within the same mode. Controlled from a dedicated remote controller, each room's occupants can monitor and

adjust operating temperatures according to their specific requirements. This facilitates maximum energy savings and total future flexibility, as units have individual control regardless of possible future reorganisation of the interior spaces.



## Compatibility with R22 pipework

New Utopia IVX Comfort (and IVX Premium) are compatible<sup>\*</sup> with existing R22 gas installations. Both models – which use R410A refrigerant gas - can be installed without having to change the existing installed piping as the system adjusts the pressure so as not to damage the existing piping.



## www.hitachiaircon.com | www.hitachiheating.com



IVX Comfort is fully ErP compliant and has excellent A++ seasonal efficiency





RAS 3HVNC



RAS-HNC(E)





PRELIMINARY DATA

## **Utopia IVX Comfort**

| Outdoor Unit  |        | RAS 3HVNC1                     | RAS 4HVNC1E       | RAS 4HNC1E        | RAS 5HVNC1E       | RAS 5HNC1E        |  |
|---|--------|--------------------------------|-------------------|-------------------|-------------------|-------------------|--|
| Power supply (1Ø/3Ø)                                      |        | 230V / 1Ph / 50Hz              |                   | 400V / 3Ph / 50Hz | 230V / 1Ph / 50Hz | 400V / 3Ph / 50Hz |  |
| Nominal Cooling Capacity (min - max)                      | kW     | 7.1 (3.2 - 8.0)                | 10 (4.5 - 11.2)   | 10 (4.5 - 11.2)   | 12.5 (5.7 - 14.0) | 12.5 (5.7 - 14.0) |  |
| Nominal Heating Capacity (min - max)                      | kW     | 8.0 (3.5 - 10.6)               | 11.2 (5.0 - 14.0) | 11.2 (5.0 - 14.0) | 14.0 (5.0 - 16.0) | 14.0 (5.0 - 16.0) |  |
| UK Cooling Capacity (sensible) <sup>(4)</sup>             | kW     | 7.7 (6.2)                      | 10.6 (8.2)        | 10.6 (8.2)        | 13.2 (9.5)        | 13.2 (9.5)        |  |
| Minimum - Maximum Indoor Units*                           |        | 1 - 2                          | 1 - 4             | 1 - 4             | 1 - 4             | 1 - 4             |  |
| Minimum - Maximum connected capacity*                     |        | 90%-110%                       | 90% - 115%        | 90% - 115%        | 90% - 115%        | 90% - 115%        |  |
| Seasonal Efficiency SEER <sup>(2)</sup>                   |        | 5.31                           | 5.16              | 5.07              | n/a               | n/a               |  |
| Energy Efficiency Class                                   |        | А                              | А                 | В                 | LAA               |                   |  |
| Annual Energy Consumption                                 | kWh/yr | 469                            | 673               | 700               | n/a               | n/a               |  |
| Seasonal Efficiency SCOP <sup>(2)</sup> (Average Climate) |        | 4.07                           | 3.92              | 3.92              | n/a               | n/a               |  |
| Energy Efficiency Class                                   |        | A+                             | A                 | A                 | -                 | -                 |  |
| Annual Energy Consumption                                 | kWh/yr | 1912                           | 2872              | 2872              | n/a               | n/a               |  |
| Nominal Load Efficiency EER / COP <sup>(3)</sup>          |        | 3.14 / 4.00                    | 3.80 / 4.29       | 3.80 / 4.29       | 3.16 / 3.88       | 3.16 / 3.88       |  |
| Energy Class (Cool/Heat)                                  |        | B/A                            | A/A               | A/A               | B / A             | B / A             |  |
| Dimensions (H x W x D)                                    | mm     | 600 x 792 x 300                | 1140 x 950 x 370  | 1140 x 950 x 370  | 1140 x 950 x 370  | 800 x 950 x 370   |  |
| Weight  | Kg     | 44                             | 67                | 67                | 79                | 79                |  |
| Piping diameter (Liquid / Gas)                            | Inch   | 3/8 / 5/8                      | 3/8 / 5/8         | 3/8 / 5/8         | 3/8 / 5/8         | 3/8 / 5/8         |  |
|   | mm     | 9.53 / 15.88                   | 9.53 / 15.88      | 9.53 / 15.88      | 9.53 / 15.88      | 9.53 / 15.88      |  |
| Minimum Piping Length                                     | m      | 5                              | 5                 | 5                 | 5                 | 5                 |  |
| Maximum Piping Length / Height Difference                 | m      | 50 / 30                        | 70 / 30           | 70 / 30           | 75 / 30           | 75 / 30           |  |
| Working Range (cooling / heating)                         | °C     | -5°C~46(db)°C / -20°C~15(wb)°C |                   |                   |                   |                   |  |

| Outdoor Unit  |        | RAS 6HVNC1E                    | RAS 6HNC1E        | RAS 8HNCE         | RAS 10HNCE        | RAS 12HNC         |  |
|---|--------|--------------------------------|-------------------|-------------------|-------------------|-------------------|--|
| Power supply (1Ø/3Ø)                                      |        | 230V / 1Ph / 50Hz              | 400V / 3Ph / 50Hz |                   |                   |                   |  |
| Nominal Cooling Capacity (min - max)                      | kW     | 14.0 (6.0 - 16.0)              | 14.0 (6.0 - 16.0) | 20.0 (8.0 - 22.4) | 25.0 (10.0 -28.0) | 30.0 (11.2 -33.5) |  |
| Nominal Heating Capacity (min - max)                      | kW     | 16.0 (5.0 - 18.0)              | 16.0 (5.0 - 18.0) | 22.4 (6.3 - 28.0) | 28.0 (8.0 - 35.0) | 33.5 (9.0 - 37.5) |  |
| UK Cooling Capacity (sensible) <sup>(4)</sup>             | kW     | 15.6 (10.8)                    | 15.6 (10.8)       | 21.1 (16.2)       | 26.1 (18.8)       | 31.2 (21.5)       |  |
| Minimum - Maximum Indoor Units*                           |        | 1 - 4                          | 1 - 4             | 1 - 4             | 1 - 4             | 1 - 4             |  |
| Minimum - Maximum connected capacity*                     |        | 90% - 115%                     | 90% - 115%        | 90% - 115%        | 90% - 115%        | 90% - 115%        |  |
| Seasonal Efficiency SEER <sup>(2)</sup>                   |        | n/a                            | n/a               | n/a               | n/a               | n/a               |  |
| Energy Efficiency Class                                   |        | -                              | -                 | -                 |                   | - A               |  |
| Annual Energy Consumption                                 | kWh/yr | n/a                            | n/a               | n/a               | n/a               | n/a               |  |
| Seasonal Efficiency SCOP <sup>(2)</sup> (Average Climate) |        | n/a                            | n/a               | n/a               | n/a               | n/a               |  |
| Energy Efficiency Class                                   |        | -                              | 1                 | INAL              | -                 | -                 |  |
| Annual Energy Consumption                                 | kWh/yr | n/a                            | n/a               | n/a               | n/a               | n/a               |  |
| Nominal Load Efficiency EER / COP <sup>(3)</sup>          |        | 2.77 / 3.59                    | 2.77 / 3.59       | 3.36 / 3.81       | 3.02 / 3.63       | 2.57 / 3.54       |  |
| Energy Class (Cool/Heat)                                  |        | D / B                          | D / B             | A/A               | B / A             | E/B               |  |
| Dimensions (H x W x D)                                    | mm     | 800 x 950 x 370                | 800 x 950 x 370   | 1380 x 950 x 370  | 1380 x 950 x 370  | 1650 x 1100 x 390 |  |
| Weight  | Kg     | 79                             | 79                | 136               | 138               | 168               |  |
| Piping diameter (Liquid / Gas)                            | Inch   | 3/8 / 5/8                      | 3/8 / 5/8         | 3/8 / 11/8        | 1/2 / 11/8        | 1/2 / 11/8        |  |
|   | mm     | 9.53 / 15.88                   | 9.53 / 15.88      | 9.53 / 28.61      | 12.07 / 28.61     | 12.07 / 28.61     |  |
| Minimum Piping Length                                     | m      | 5                              | 5                 | 5                 | 5                 | 5                 |  |
| Maximum Piping Length / Height Difference                 | m      | 75 / 30                        | 75 / 30           | 100 / 30          | 100 / 30          | 100 / 30          |  |
| Working Range (cooling / heating)                         | °C     | -5°C~46(db)°C / -20°C~15(wb)°C |                   |                   |                   |                   |  |

Restrictions apply please refer to Technical Catalogue

(1) Sound power level is the A-weighted sound power level [dB(A)] measured at standard rated conditions for the "cooling" mode operation in accordance to EN12102

(2) Data calculated in accordance to prEN14825 and the Commission Communication 2012/C 172/01

(3) Nominal load efficiency (Cooling 35°C/27°C, Heating 7°C/20°C)

(2, 3 & 4) Data specified includes connection to RCI-FSN3 indoor unit

