



# YORK® YVAG Air-Cooled DC Inverter Reversible Heat Pumps



The power behind **your mission**





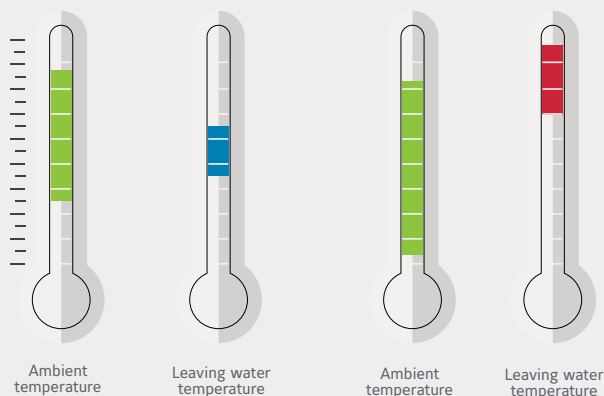


# Cooling capacities from 11.2 kW to 40 kW

## Heating capacities from 12.6 kW to 42 kW



Note: YVAG012-033 can be combined



Please note:

1. YVAG012-018 cooling operation range from 5°C to 48°C, heating operation range from -20°C to 25°C.
2. YVAG020/022R cooling operation range from -5°C to 48°C, heating operation range from -20°C to 43°C.
3. YVAG020-040 cooling operation range from -5°C to 48°C, heating operation range from -27°C to 43°C.

### High efficiency

#### Providing the lowest possible operating costs

Our new YORK YVAG is designed for real-world efficiency. Part-load performances meet the highest efficiency values and deliver performance beyond typical heat pump efficiency levels in cooling and heating.

YORK YVAG uses a high-efficiency DC inverter compressor together with advanced variable frequency drive technology. This ensures stable operation across the entire operating range. Compressor frequency range goes from 15-120 percent to quickly and efficiently meet the needs of residential load changes. YORK YVAG units not only use a high-efficiency DC inverter compressor but also dual fans equipped with a high-efficiency, low-noise DC inverter motor which adjusts the airflow to exactly match the capacity in a more accurate and efficient way.

### Easy installation and operation

#### Modular concept

The small packaged YORK YVAG heat pump comes as standard with a hydronic loop circulating pump, expansion tank, water flow switch, safety valve, fill valve, and wye strainer, saving space in the room and making installations fast and easy. The pump's external head can provide pressure up to 22m.

The units are designed for modular installations (up to four module combinations among all the models) to meet the needs of different residential and light commercial buildings. This permits installed capacities from 11.2-160kW.

### Perfect comfort in a wide operating range

#### Broad operating envelope with lower sound levels

With its wide operating range, the YORK YVAG is perfect for all climates. It does not matter if the ambient temperature in summer is 48°C or if in winter it is -27°C, as the unit will maintain efficient, stable operation, to provide users with the most comfortable air conditioning experience. With heating outlet water temperatures up to 58°C, the unit is perfect for radiant panels.

#### Optimized for low sound

Thanks to the YORK YVAG component design, the unit's sound emissions are as low as 51 dB(A) sound pressure at full load, reducing to as low as 40 dB(A) at part-load operation. YORK YVAG also has Silent Mode, which reduces the sound level emissions by 5 dB(A) below full-load levels.



# Take SMART control of your spaces

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Get SMART control of your environment with the YORK YVAG system. Our fully customizable intelligent controls automatically adjust the temperature and humidity of your home, optimizing comfort, efficiency, and performance.

## Sensitive

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The highly sensitive T8610 intelligent thermostat closely monitors the actual and target temperatures of every room, instantly communicating requirements and load changes to the system and gathering data on usage requirements over time.



## Manageable

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Our YORK YVAG system makes everything easy for you to manage. Fan coil cooling and heating as well as underfloor heating can be controlled directly through the thermostat, while a single switch allows instant activation of the air conditioning system. In addition, indoor and outdoor units can be controlled as one using our Building Automation System (BAS), giving you convenient management of your smart home.



## Adaptable

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The YORK YVAG system adaptively adjusts the water temperature, compressor, and water pump running state in accordance with indoor and outdoor load changes. The results? More comfortable temperatures and humidity levels as well as annual operating costs that can be reduced by up to 18 percent.



## Reliable

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Enjoy peace of mind with our proven reliability. The YORK YVAG system offers an automatic exhaust system as well as a debugging mode, which uses operational data to detect, diagnose, and manage faults. This minimizes downtime and increases the stability of your system's operation.



## Transformative

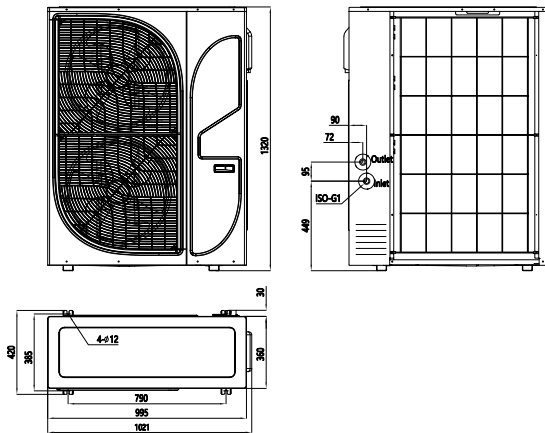
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The design of the YORK YVAG intelligent platform accommodates future enhancements. The system can be expanded with other components and features, including variable frequency water pumps and remote app control. This leaves the power to transform your environment firmly in your hands.

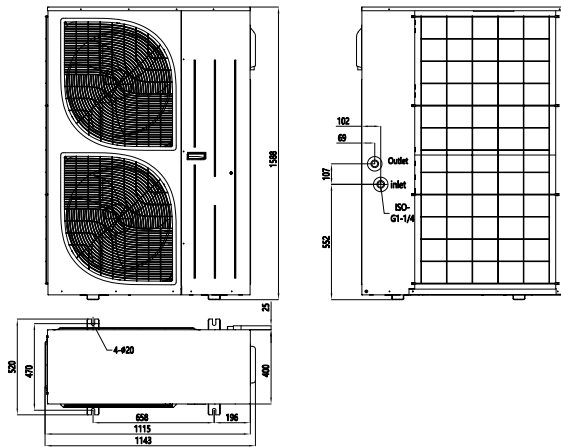


## Dimensions

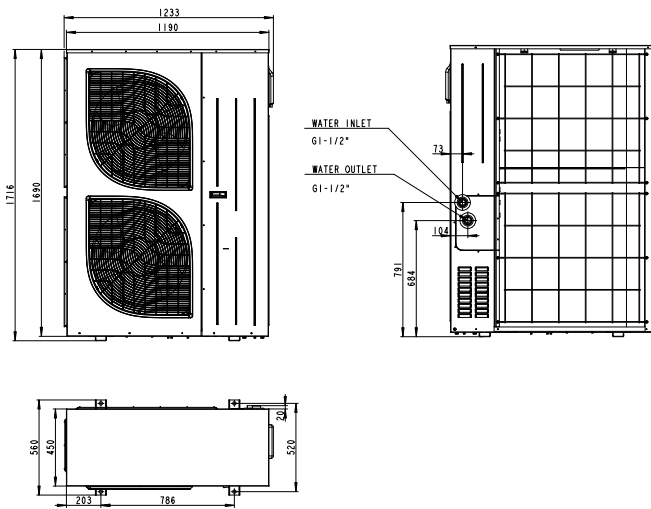
YVAG012-022(RNE)



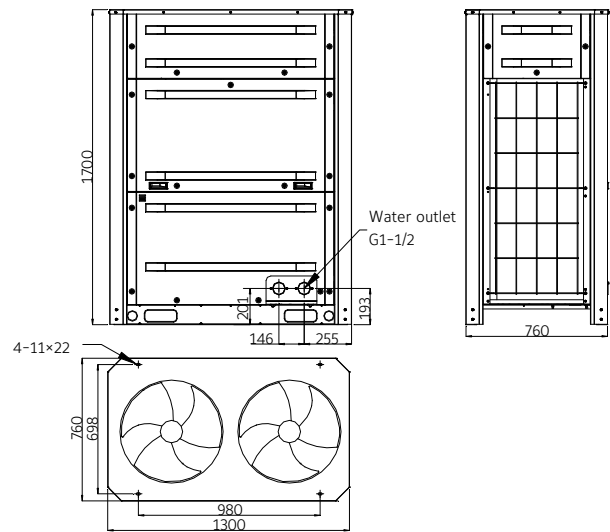
YVAG020-033



YVAG040RNE



YVAG040RSE



## Nomenclature

YVAG 012 R S E 20

Y: YORK V: Inverter Compressor  
A: Air Source Heat Pump G: G Series

012: Nominal Cooling Capacity (kw)

R: Heat Pump

Power Supply: 20=220V-1Ph-50Hz  
50=380V/400V-3Ph-50Hz

E: Refrigerant: - R410A

S: Up to 4 modular units  
N: Narrow platform





## Technical features

| Model                     |                                   |                   | YVAG<br>012<br>RSE              | YVAG<br>014<br>RSE | YVAG<br>016<br>RSE | YVAG<br>018<br>RSE | YVAG<br>020<br>RNE | YVAG<br>022<br>RNE | YVAG<br>020<br>RSE | YVAG<br>022<br>RSE | YVAG<br>025<br>RSE | YVAG<br>028<br>RSE | YVAG<br>033<br>RSE | YVAG<br>040<br>RNE | YVAG<br>040<br>RSE |      |
|---------------------------|-----------------------------------|-------------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------|
| Performance               | Nominal Cooling Capacity          | kW                | 11.2                            | 14                 | 15.5               | 18                 | 20                 | 22                 | 20                 | 22                 | 25                 | 28                 | 32                 | 40                 | 40                 |      |
|                           | Capacity Cooling Power Input      | kW                | 3.8                             | 4.7                | 5.2                | 6.5                | 6.4                | 7.5                | 5.5                | 6.4                | 7.8                | 8.4                | 10.6               | 13.3               | 13.3               |      |
|                           | EER                               |                   | 2.95                            | 2.98               | 2.98               | 2.77               | 2.77               | 3.12               | 3.63               | 3.43               | 3.2                | 3.33               | 3.01               | 3.00               | 3.00               |      |
|                           | IPLV C                            |                   | 4.3                             | 4.3                | 4.3                | 4.21               | 4.68               | 4.6                | 5                  | 4.93               | 4.62               | 4.94               | 4.6                | 4.70               | 4.60               |      |
|                           | Nominal Heating Capacity          | kW                | 12.6                            | 16.1               | 18                 | 19.5               | 19.5               | 22                 | 22                 | 24                 | 27                 | 30                 | 34                 | 42                 | 42                 |      |
|                           | Capacity Heating Power Input      | kW                | 3.8                             | 4.9                | 5.4                | 6.5                | 6.5                | 7.2                | 5.9                | 6.5                | 7.6                | 8.5                | 10.3               | 12.7               | 12.7               |      |
|                           | COP                               |                   | 3.32                            | 3.29               | 3.33               | 3.00               | 3.00               | 3.05               | 3.73               | 3.69               | 3.55               | 3.53               | 3.30               | 3.30               | 3.3                |      |
| Compressor                | Sound Pressure Level              | dB(A)             | 54                              | 55                 | 55                 | 57                 | 57                 | 57.5               | 56                 | 56.5               | 57                 | 57                 | 59                 | 61                 | 62                 |      |
|                           | Type                              |                   | Rotary DC Inverter              |                    |                    |                    |                    | EVI DC Inverter    |                    |                    |                    |                    |                    |                    |                    |      |
| Air side Heat Exchanger   | Quantity                          |                   | 1                               | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  |      |
|                           | Fan Motor Type                    |                   | Brushless DC Fan Motor          |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |      |
| Water Side Heat Exchanger | Fans Quantity                     |                   | 2                               | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |      |
|                           | Airflow                           | m <sup>3</sup> /h | 2500-6600                       | 2500-6600          | 2500-6600          | 2500-6600          | 2500-7500          | 2500-7500          | 2500-10500         | 2500-10500         | 2500-10500         | 2500-10500         | 2500-10500         | 2500-12000         | 2500-15000         |      |
| Dimensions & Weight       | Type                              |                   | Brazed Plate Heat Exchanger     |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |      |
|                           | Pump Type                         |                   | Multiple-stage centrifugal pump |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |      |
|                           | Nominal water flow                | m <sup>3</sup> /h | 1.93                            | 2.41               | 2.67               | 3.10               | 3.44               | 3.78               | 3.44               | 3.78               | 4.30               | 4.82               | 5.50               | 6.88               | 6.88               |      |
|                           | Unit External Head                | m                 | 15                              | 13                 | 12                 | 11                 | 14                 | 13                 | 22                 | 21                 | 19                 | 18                 | 14                 | 14                 | 14                 |      |
| Electrical                | Expansion tank volume             | L                 | 2                               | 2                  | 2                  | 2                  | 2                  | 2                  | 5                  | 5                  | 5                  | 5                  | 5                  | 5                  | 8                  |      |
|                           | Height                            | mm                | 1320                            |                    |                    |                    |                    |                    | 1588               |                    |                    |                    |                    |                    | 1716               | 1700 |
|                           | Width                             | mm                | 995                             |                    |                    |                    |                    |                    | 1100               |                    |                    |                    |                    |                    | 1190               | 1300 |
|                           | Depth                             | mm                | 360                             |                    |                    |                    |                    |                    | 400                |                    |                    |                    |                    |                    | 450                | 760  |
| Electrical                | Operating Weight                  | kg                | 126                             | 128                | 141                | 141                | 151                | 151                | 210                | 210                | 210                | 215                | 215                | 280                | 350                |      |
|                           | Nominal current (Cooling/Heating) | A                 | 18/19.5                         | 21/24              | 24/27              | 30/30              | 12/13.5            | 14/14.5            | 11.7/12.3          | 13.2/13.3          | 15.3/15            | 16.2/16.8          | 20.4/21.0          | 25/24.5            | 25/24.5            |      |
| Electrical                | Power Supply                      | V/ph/Hz           | 220V-1Ph-50Hz                   |                    |                    |                    |                    |                    | 380V/400V-3Ph-50Hz |                    |                    |                    |                    |                    |                    |      |

Nominal conditions: Cooling capacities in kW given for 12/7°C water leaving temperature and 35°C ambient temperature  
 Heating capacities in kW given for 40/45°C water leaving temperature and 7°C ambient temperature  
 IPLV C follow China GB IPLV C test condition

### About Johnson Controls

At Johnson Controls, we transform the environments where people live, work, learn and play. From optimizing building performance to improving safety and enhancing comfort, we drive the outcomes that matter most. We deliver our promise in industries such as healthcare, education, data centers and manufacturing. With a global team of 100,000 experts in more than 150 countries and over 135 years of innovation, we are the power behind our customers' mission. Our leading portfolio of building technology and solutions includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Titus®, Frick®, Penn®, Sabroe®, Simplex®, Ansul® and Grinnell®.

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