

 **YORK**[®]
INSTALL CONFIDENCE



YAH Series Air Handling Units

YAH Series Air Handling Units

Johnson Controls YORK® YAH ceiling mounted cabinet fan coil units are terminal points of central air-conditioning systems. They are designed for fresh air units or to cool, heat, humidify and de-humidify, filter and clean the air, etc. The conditioned air can be delivered to locations across various distances via specially designed ducts. The units are especially suitable for the air-conditioning of commercial buildings and industry applications.

YORK YAH series air handling units have 12 different models. The cooling capacity ranges from 8kW to 252kW, and air flow from 1500m³/h to 15000m³/h. Rated external total pressure ranges from 120 to 315 Pa. More external total pressure can be provided for flexible application.

Each unit is made from galvanized steel with 15mm thick polyester fiber insulation. It contains a built-in cooling coil and fan, and externally mounted nylon air filters.

Cooling and heating coil use copper tubes with hydrophilic aluminium fins. The fan, motor and belt pulley are all high-quality products producing stable and efficient performance. The fan is a forward curved centrifugal model that works on double air inlets. The motor features IP55 and a type F insulation with self-lubricating bearings. The externally mounted filter can be withdrawn from side or bottom.

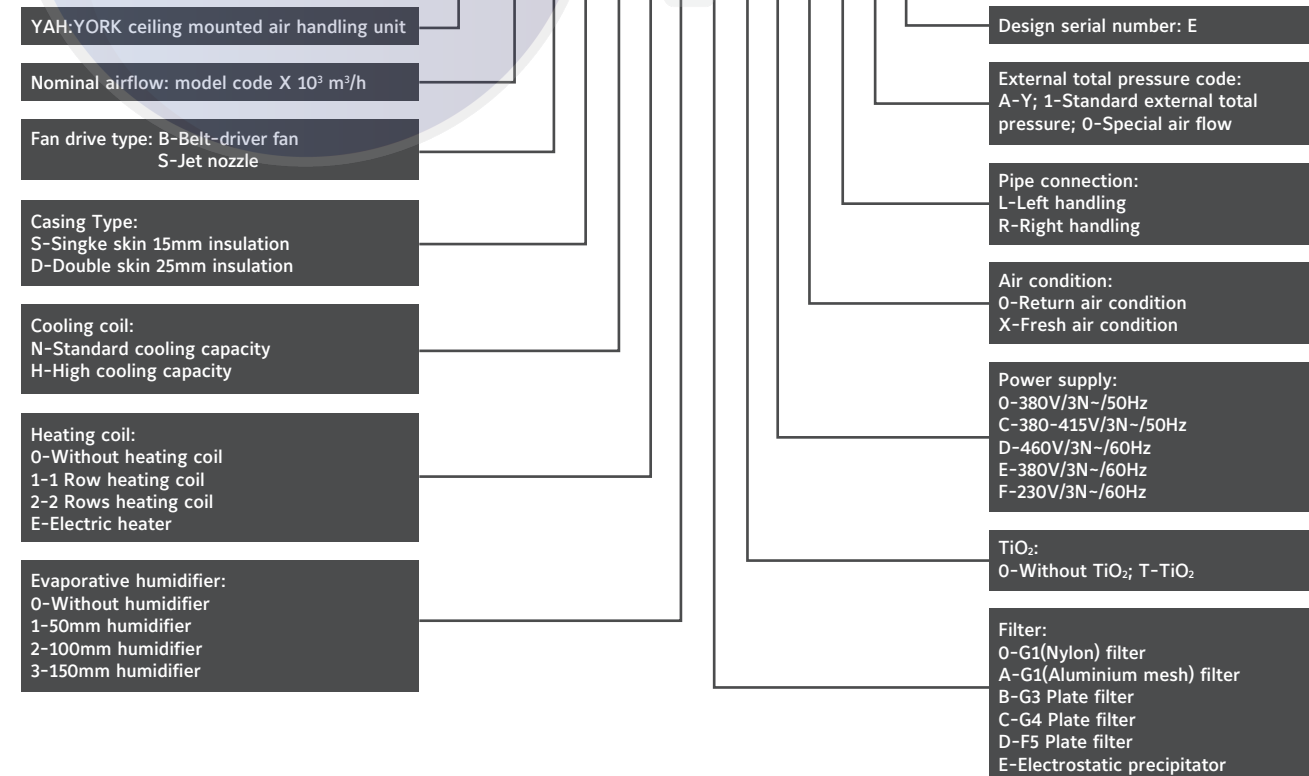
Features

- Easy installation
- Lower unit height for low head floor ceiling application
- Low noise
- Filter can be maintained from side or bottom

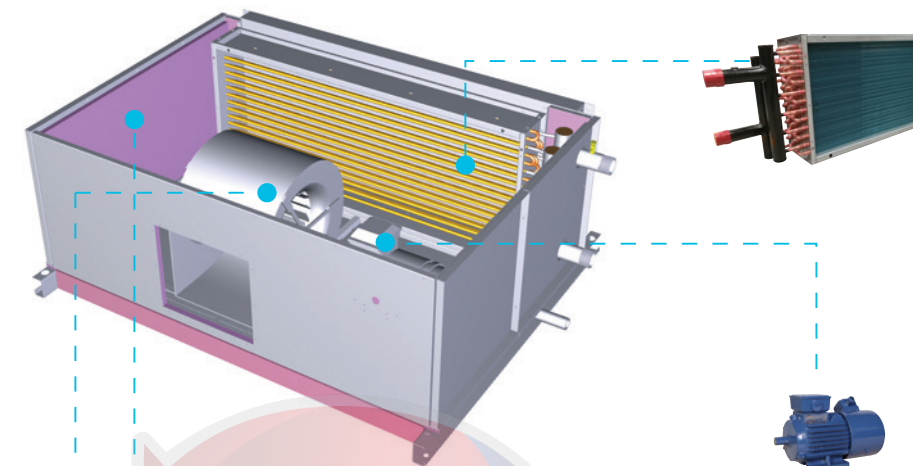


Nomenclature & Feature

YAH04BSN00000LAE



YAH Product Features



High Efficiency Heat Exchanger

- High quality copper tube and aluminium fin
- Better heat transfer efficiency

High Efficiency Motor

- Well-known brand motors
- IE3 motor efficiency
- Low operating cost
- VSD motor optional

Optimized Casing Structure

- Smooth surface, elegant profile
- Inner surface with aluminium foil surface, quality upgrade
- Ceiling-mounted design with firm and stable frame
- Steel bolts, nuts, screws with special treatment, enhanced corrosion resistance
- Galvanized steel with 15mm thick polyester fiber insulation
- Optional 25mm thick double skin construction with better heat insulation

High Performance Heat Insulation

- New polyester fiber insulation
- Good thermal insulation performance
- Non-combustible type, good fire resistance

Quiet Operation

- High quality material: fan and motor
- Double inlet, forward curved blade centrifugal fan
- Less vibration
- Low noise motor with belt drive
- Each fan has been dynamically and statically balanced

Specifications

Main Technical Data

| Model | Airflow m ³ /h | Nominal external total pressure (Pa) | | Max. external total pressure (Pa) | | Nominal cooling capacity (kW) | | | | Nominal heating capacity (kW) | | | | Fan type | Motor type | Motor power (kW) | Dimensions (mm) | | | Weight (kg) | |
|--------|---------------------------|--------------------------------------|--------------------|-----------------------------------|--------------------|-------------------------------|-------|---------------------|-------|-------------------------------|-------|---------------------|-------|--|--|------------------|-----------------|-------|--------|------------------------|--------------------|
| | | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | Return air condition | | Fresh air condition | | Return air condition | | Fresh air condition | | | | | Depth | Width | Height | Standard capacity rows | High capacity rows |
| YAH1FB | 1500 | 200 | 120 | 375 | 295 | 8.2 | 11.5 | 18.5 | 24.2 | 13.5 | 16.6 | 19.3 | 23.7 | High efficient, double air inlets forward curved | 3-Ø asynchronous motor, F class insulation, IP55 | 0.55 | 860 | 850 | 417 | 81 | 84 |
| YAH02B | 2000 | 200 | 120 | 450 | 370 | 11.3 | 15.1 | 24.4 | 31.7 | 18.9 | 21.8 | 25.9 | 31.3 | | | 0.55 | 860 | 935 | 417 | 86 | 92 |
| YAH2FB | 2500 | 230 | 150 | 455 | 375 | 13.3 | 17.4 | 28.2 | 36.9 | 22.3 | 26.8 | 32.2 | 38.5 | | | 0.75 | 860 | 1090 | 417 | 99 | 105 |
| YAH03B | 3000 | 230 | 150 | 455 | 375 | 17.2 | 22.6 | 36.2 | 47.6 | 27.6 | 33.3 | 41.0 | 46.8 | | | 0.75 | 860 | 1120 | 468 | 105 | 112 |
| YAH04B | 4000 | 280 | 200 | 530 | 450 | 22.5 | 30.7 | 50.5 | 65.0 | 37.4 | 46.0 | 51.5 | 61.8 | | | 1.1 | 860 | 1260 | 508 | 125 | 135 |
| YAH05B | 5000 | 285 | 205 | 535 | 455 | 28.3 | 38.6 | 63.1 | 80.1 | 46.9 | 56.6 | 65.7 | 77.4 | | | 1.5 | 940 | 1400 | 557 | 151 | 162 |
| YAH06B | 6000 | 270 | 190 | 470 | 390 | 33.7 | 44.1 | 72.6 | 99.6 | 58.1 | 64.6 | 79.3 | 92.7 | | | 1.5 | 940 | 1600 | 557 | 175 | 189 |
| YAH07B | 7000 | 270 | 190 | 495 | 415 | 38.1 | 49.3 | 79.2 | 103.7 | 63.2 | 75.1 | 89.9 | 108.0 | | | 2.2 | 940 | 1840 | 557 | 192 | 208 |
| YAH08B | 8000 | 300 | 220 | 600 | 520 | 47.1 | 60.2 | 96.7 | 134.0 | 75.5 | 90.0 | 106.4 | 130.1 | | | 2.2 | 940 | 2050 | 557 | 206 | 223 |
| YAH10B | 10000 | 295 | 215 | 620 | 540 | 63.2 | 78.2 | 133.8 | 170.0 | 104.1 | 118.7 | 150.4 | 168.6 | | | 3.0 | 1100 | 1850 | 736 | 248 | 274 |
| YAH12B | 12000 | 275 | 195 | 625 | 545 | 75.2 | 95.0 | 157.9 | 204.5 | 125.1 | 140.9 | 179.1 | 202.6 | | | 3.0 | 1100 | 2150 | 736 | 317 | 348 |
| YAH15B | 15000 | 315 | 235 | 615 | 535 | 94.8 | 118.5 | 197.1 | 252.9 | 157.8 | 177.2 | 223.4 | 251.1 | | | 4.0 | 1100 | 2625 | 736 | 358 | 396 |

- Notes:
- The weight listed in the table is the shipping weight. The operation weight of unit is about 20% more than the shipping weight.
 - Standard return air cooling conditions: air inlet at 27°C DB/19.5WB; chilled water inlet/outlet at 7°C/12°C.
 - Standard return air heating conditions: air inlet at 21°C DB; hot water inlet/outlet at 60°C/50°C.
 - Cooling conditions of fresh air unit: air inlet at 35°C DB/28°C WB; chilled water inlet/outlet at 7°C/12°C.
 - Heating conditions of fresh air unit: air inlet at 7°C DB; hot water inlet/outlet at 60°C/50°C.
 - External total pressure: the sum of velocity pressure and static pressure at the air discharge outlet (exclude the pressure drop across the unit)
 - For four-piped unit, heating coil is in the front of the cooling coil in the direction of air flow.
 - If the unit has TiO₂, evaporative humidifier or split coil (cooling+heating) option, the external total pressure should be deducted by the responding air drop pressure

The unit performance is based on 5m altitude, the variance of altitude will affect the unit performance

Altitude correction factors

| Altitude(m) | 300 | 900 | 1200 | 1500 | 1800 |
|---------------|------|------|------|------|------|
| Total heat | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 |
| Sensible heat | 0.96 | 0.90 | 0.96 | 0.83 | 0.80 |

Note: The above is only for reference. Please contact our local office for detailed data.

YAH-D Evaporative Humidifier Performance

| Model | Airflow m ³ /h | Air pressure drop (Pa) | | | Fresh air humidification (kg/h) | | | Mixed air humidification (kg/h) | | | Weight (kg) | | |
|--------|---------------------------|------------------------|-------------|--------------|---------------------------------|-------------|-------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| | | Depth 50mm | Depth 100mm | Depth 150 mm | Depth 50mm | Depth 100mm | Depth 150mm | Depth 50mm | Depth 100mm | Depth 150mm | Depth 50mm | Depth 100mm | Depth 150mm |
| YAH1FB | 1500 | 24 | 42 | 60 | 3 | 6 | 8 | 3 | 5 | 6 | 2 | 4 | 5 |
| YAH02B | 2000 | 23 | 40 | 57 | 4 | 8 | 10 | 4 | 7 | 8 | 3 | 5 | 7 |
| YAH2FB | 2500 | 24 | 42 | 60 | 5 | 10 | 13 | 5 | 9 | 10 | 4 | 7 | 10 |
| YAH03B | 3000 | 24 | 42 | 60 | 6 | 12 | 15 | 5 | 10 | 12 | 4 | 7 | 10 |
| YAH04B | 4000 | 24 | 41 | 59 | 8 | 16 | 20 | 7 | 13 | 16 | 5 | 9 | 14 |
| YAH05B | 5000 | 24 | 42 | 60 | 10 | 19 | 24 | 8 | 16 | 20 | 6 | 12 | 17 |
| YAH06B | 6000 | 24 | 42 | 60 | 12 | 23 | 29 | 10 | 19 | 24 | 7 | 14 | 20 |
| YAH07B | 7000 | 24 | 42 | 60 | 14 | 27 | 34 | 12 | 22 | 28 | 9 | 18 | 27 |
| YAH08B | 8000 | 24 | 42 | 60 | 16 | 30 | 38 | 13 | 25 | 31 | 9 | 18 | 27 |
| YAH10B | 10000 | 25 | 44 | 62 | 20 | 37 | 47 | 16 | 30 | 39 | 11 | 22 | 33 |
| YAH12B | 12000 | 26 | 44 | 63 | 23 | 44 | 56 | 19 | 36 | 46 | 13 | 26 | 39 |
| YAH15B | 15000 | 25 | 44 | 63 | 29 | 55 | 70 | 24 | 45 | 57 | 17 | 33 | 49 |

Notes:

- The evaporative humidification is an isenthalpic process, which is only suitable for comfort air-conditioning, and not suitable for the applications where high precision of humidity control is required.
- When the unit is equipped with an evaporative humidifier. The external static pressure of unit should be deducted by air pressure drop across the humidifier.
- Fresh air humidification conditions: 28°C DB; 10% RH. Face velocity less than 3.0m/s.
- Mixed air (fresh air ratio at 20-30%) humidification condition: 28°C DB; 25% RH. Face velocity less than 3.0m/s.
- The above net weight includes the weight of evaporative humidifier, stainless steel frame and water distribution box; the operation weight of the evaporative humidifier is about 150% more than the unit.
- The face velocity of direct feeding evaporative humidifier is the same as those of coils.

Electric Wiring Diagrams

Electric Connection:

- The direct start schematic diagram (Fig.1) is for motor up to 5.5kW. The Y-Δstart schematic (Fig.2) for motors more than 7.5kW.
- The dashed lines is provided by customer and it should be connected according to Fig.1 or Fig.2. Please ensure that all connections are tightened.
- All electric connections should comply with local electric installation codes.
- The ground terminal of the unit must be connected to the ground terminal in the control panel.
- Customer should connect the power and control devices and supply short-circuit and over heat protection.

Power Supply

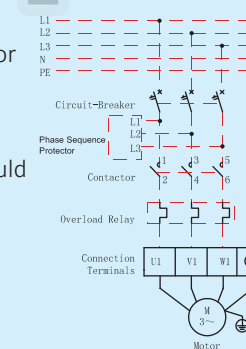


Figure 1

Power Supply

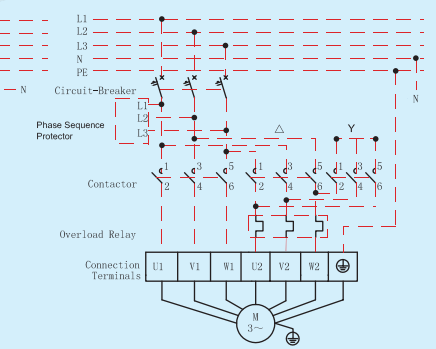


Figure 2

————— Factory Installed
 - - - - - Customer Supplied

Notes: for placing an order:

- The motor power is 380V/3N-50Hz, 380-415V/3N-/50Hz, 460V/3N-/60Hz, 380V/3N-/60Hz or 230V/3N-/60Hz, 4 wires.
- The unit is equipped with plate type pre-filters at the return air intake.
- When placing an order, the pipe direction (left connection or right) should be noticed (note: facing the return air intake, it is the right if the inlet/outlet water pipes are on the right side of unit and vice versa).
- The airflow rate and total pressure should be noticed when placing an order.
- If starter is required, it should be noticed when placing an order (an option).

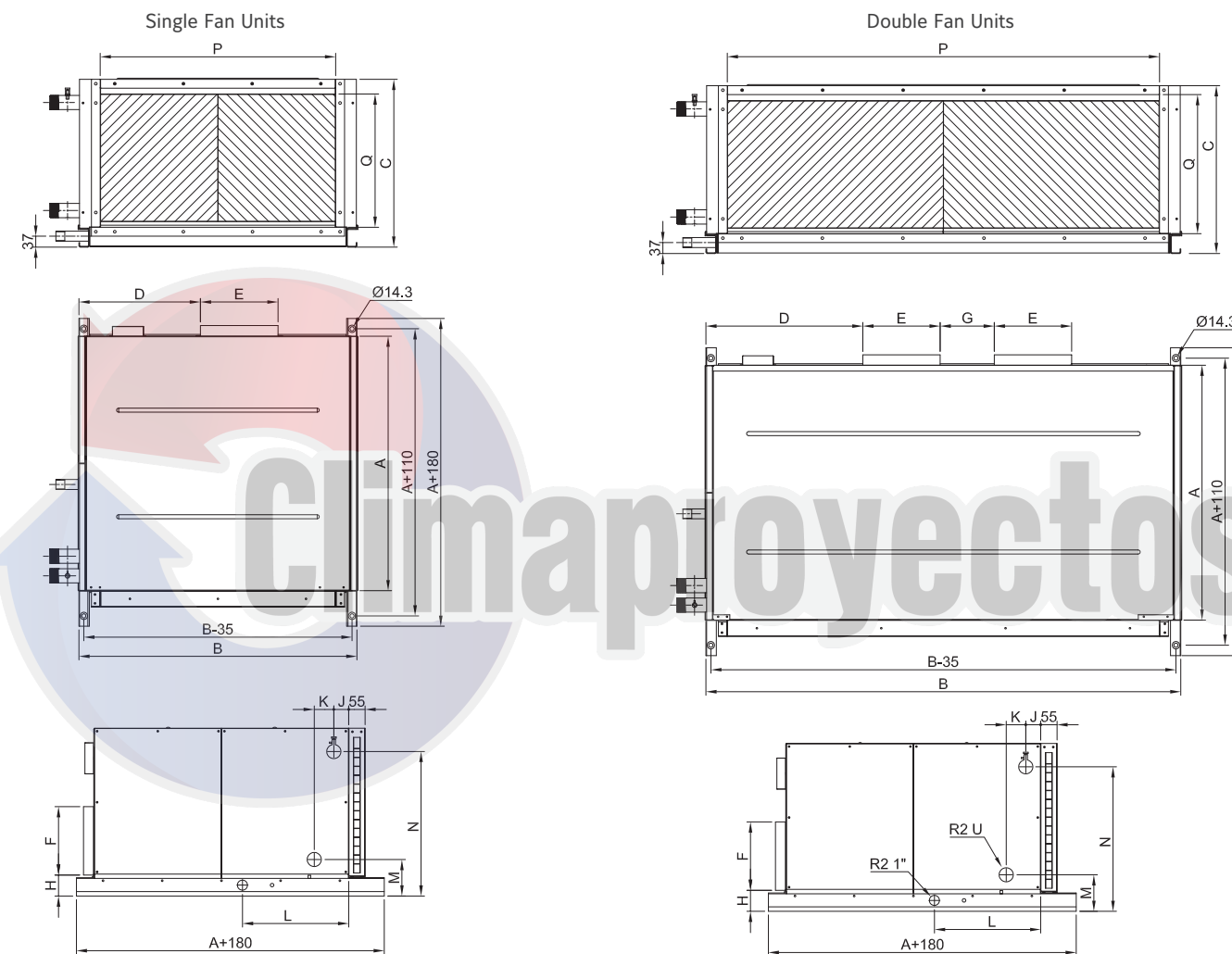
Specifications

Main Technical Data

| Model | Airflow m ³ /h | Depth A | Width B | Height C | Supply air flange size | | | | | Piping position | | | | | Return air flange size | | Coil piping (Connection diameter) | | | |
|--------|------------------------------|------------|------------|-------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|--------------------------------------|-----|-----|-----|
| | | | | | D | E | F | G | H | J | | K | | L | M | N | P | Q | R | |
| | | | | | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | | | | |
| YAH1FB | 1500 | 860 | 850 | 417 | 429 | 259 | 228 | - | 76 | 55.5 | 60.5 | 66 | 88 | 308 | 156.5 | 318.5 | 710 | 320 | Ø34 | Ø34 |
| YAH02B | 2000 | 860 | 935 | 417 | 429 | 259 | 228 | - | 76 | 55.5 | 60.5 | 66 | 88 | 308 | 156.5 | 318.5 | 795 | 320 | Ø34 | Ø34 |
| YAH2FB | 2500 | 860 | 1090 | 417 | 489 | 259 | 228 | - | 76 | 55.5 | 60.5 | 66 | 88 | 308 | 156.5 | 318.5 | 950 | 320 | Ø34 | Ø34 |
| YAH03B | 3000 | 860 | 1120 | 468 | 500 | 287 | 256 | - | 88 | 55.5 | 60.5 | 66 | 88 | 308 | 156.5 | 369.5 | 980 | 371 | Ø34 | Ø48 |
| YAH04B | 4000 | 860 | 1260 | 508 | 405 | 554 | 262 | - | 97 | 60.5 | 60.5 | 66 | 88 | 308 | 145.5 | 409.5 | 1120 | 411 | Ø48 | Ø48 |
| YAH05B | 5000 | 940 | 1400 | 557 | 418 | 620 | 289 | - | 99 | 60 | 60.5 | 67 | 88 | 368 | 143.5 | 458 | 1260 | 460 | Ø48 | Ø60 |
| YAH06B | 6000 | 940 | 1600 | 557 | 573.5 | 298 | 262 | 244 | 107 | 60 | 60.5 | 67 | 88 | 368 | 143.5 | 458 | 1460 | 460 | Ø48 | Ø60 |
| YAH07B | 7000 | 940 | 1840 | 557 | 573.5 | 298 | 262 | 244 | 107 | 60 | 60.5 | 67 | 88 | 368 | 143.5 | 458 | 1700 | 460 | Ø48 | Ø60 |
| YAH08B | 8000 | 940 | 2050 | 557 | 582.5 | 298 | 262 | 244 | 107 | 60 | 60.5 | 67 | 88 | 368 | 143.5 | 458 | 1910 | 460 | Ø48 | Ø60 |
| YAH10B | 10000 | 1100 | 1850 | 736 | 594.5 | 471 | 404 | - | 112 | 63.3 | 81.5 | 82.5 | 110 | 423 | 147 | 627 | 1710 | 639 | Ø60 | Ø76 |
| YAH12B | 12000 | 1100 | 2150 | 736 | 648.5 | 395 | 341 | 324 | 112 | 63.3 | 81.5 | 82.5 | 110 | 423 | 147 | 627 | 2010 | 639 | Ø60 | Ø76 |
| YAH15B | 15000 | 1100 | 2625 | 736 | 668.5 | 373 | 404 | 294 | 112 | 63.3 | 81.5 | 82.5 | 110 | 423 | 147 | 627 | 2485 | 639 | Ø60 | Ø76 |

- Notes:
- When G is "-", the unit has only one air supply duct connection.
 - The coil pipe connections use male threads (thread code R2), the corresponding imperial diameters are:
34mm--1" 42mm--1-1/4" 48mm--1-1/2"
60mm--2" 76mm--2-1/2" 89mm--3"
 - The condensate pipe connections use 34mm O.D. male threads (thread code R2).
 - All dimensions are SI unit (mm).

Unit Drawings



Notes: The above applies to left hand unit.

Options

Industry Leading Technology – Nano-TiO₂ Healthy Air Sterilizer (Optional)

Johnson Controls is committed to providing comfortable and healthy living and working environment for all our customers. Whilst caring and safeguarding the natural environment outside. With indoor air quality becoming a crucial global health concern, our unique nano-TiO₂ healthy air sterilization technology can help remove almost all airborne germs and pathogens, ensuring healthy and fresh indoor air supply.

- Nano-grade TiO₂ has been recognised in 125 countries and is patent-pending
- TiO₂ photo-catalysis not only filters bacteria but also kills them
- The ultraviolet light (UVA) in Nano-TiO₂ Healthy Air Sterilizer is designed to be durable, lasting up to 10,000 hours
- The technology has been tested by the following institutes and organisations:

·The Hong Kong Polytechnic University, Report No. P04-0521
 ·The Productivity Council of Hong Kong, Report No. 4101-40014285
 ·The Detection Centre of Microbiology, Guangzhou, PRC, Report No. 4101-40014286



By oxidising and decomposing the harmful substances in the air, YORK Nano-TiO₂ healthy sterilization technology kills airborne germs, eliminates odors, and removes microbes and other harmful particles safely and efficiently.

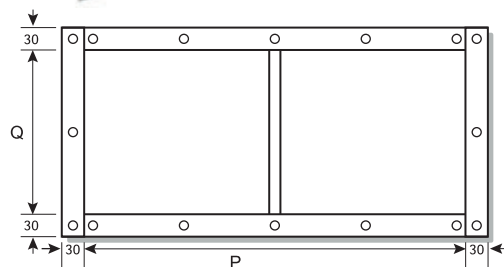
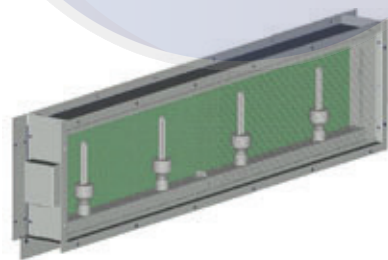
- Biological pollutant – e.g. bacteria and germs
- Organic pollutant – volatile organic compounds (VOCs) e.g. formaldehyde, benzene
- Molds, fungi
- Inorganic gaseous pollutant – e.g. NOx, Sox
- Smoke and offensive odours

Nano-TiO₂ healthy air sterilization technology contains the following features:

- YORK is the first brand in the industry to apply Nano-grade TiO₂ technology to fan coils, residential and commercial central air conditioners, and residential split units.

If the Nano-grade TiO₂ steriliser is ordered by customers, it will be installed on the YAH unit by the manufacturer prior to shipping.

TiO₂ Healthy Air Sterilizer 1



| Model | TiO ₂ Model | Connection frame No. | Connection flange dimension | | Lamp input power (W) |
|-------|------------------------|----------------------|-----------------------------|-----|----------------------|
| | | | P | Q | |
| YAH1F | TiO ₂ YAH1F | 1 | 710 | 320 | 3 x 18 |
| YAH02 | TiO ₂ YAH02 | 1 | 795 | 320 | 3 x 18 |
| YAH2F | TiO ₂ YAH2F | 1 | 950 | 320 | 3 x 18 |
| YAH03 | TiO ₂ YAH03 | 1 | 980 | 371 | 4 x 18 |
| YAH04 | TiO ₂ YAH04 | 1 | 1120 | 411 | 4 x 18 |
| YAH05 | TiO ₂ YAH05 | 1 | 1260 | 460 | 4 x 18 |
| YAH06 | TiO ₂ YAH06 | 1 | 1460 | 460 | 6 x 18 |
| YAH07 | TiO ₂ YAH07 | 1 | 1700 | 460 | 6 x 18 |
| YAH08 | TiO ₂ YAH08 | 1 | 1910 | 460 | 9 x 18 |
| YAH10 | TiO ₂ YAH10 | 1 | 1710 | 639 | 12 x 18 |
| YAH12 | TiO ₂ YAH12 | 1 | 2010 | 639 | 12 x 18 |
| YAH15 | TiO ₂ YAH15 | 1 | 2485 | 639 | 18 x 18 |

- Notes:
1. Power of ultraviolet lamp is 220V ~/50Hz or 220V ~/60Hz. Do not stare at the ultraviolet lamp for long time to prevent eye injury.
 2. The relevant wiring of interlock control between sterilizer and YAH unit should be supplied by customer, i.e. the sterilizer starts when the indoor fan is turned on; and the sterilizer stops when the indoor fan is turned off.

Electrostatic Precipitator Key Features

High purification efficiency

- PM2.5 remove efficiency up to 95%
- Capture up to 95% of airborne pollutants to create clean air

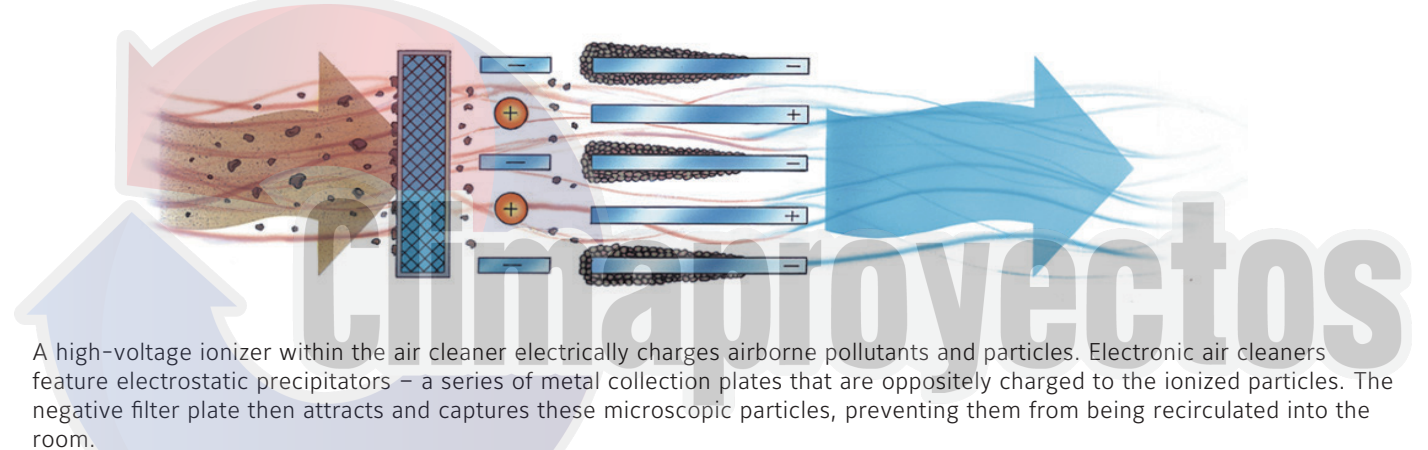
Energy saving

- Low resistance to airflow compare to mechanical media filter, reduce the energy consumption of air terminal fan section.

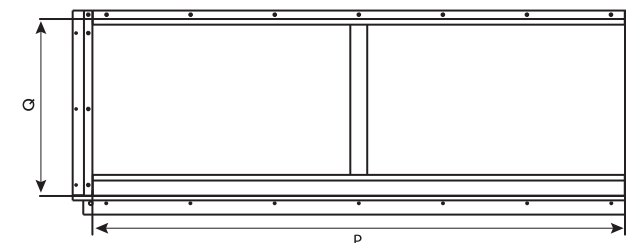
Low operating and maintenance costs

- Electrostatic precipitator attracts and captures charged dust and dirt particles on aluminum plates that are simply lifted out and rinsed off in the sink. Not only is this responsible to the environment but there are no expensive filters to replace

Electrostatic precipitator operating process



Electrostatic precipitator



| Model | Electrostatic precipitator size DepthxWidthxHeight (mm) | Filter Quantity | Electrostatic precipitator size | |
|-------|--|-----------------|---------------------------------|-----|
| | | | P | Q |
| YAH01 | 182x509x301 | 1 | 540 | 308 |
| YAH1F | 182x609x301 | 1 | 710 | 308 |
| YAH02 | 182x609x301 | 1 | 795 | 308 |
| YAH2F | 182x915x301 | 1 | 950 | 308 |
| YAH03 | 182x915x348 | 1 | 980 | 359 |
| YAH04 | 182x915x348 | 1 | 1120 | 399 |
| YAH05 | 182x609x348 | 2 | 1260 | 448 |
| YAH06 | 182x509x348 | 1 | 1460 | 448 |
| | 182x915x348 | 1 | | |
| YAH07 | 182x1114x348 | 1 | 1700 | 448 |
| | 182x509x348 | 1 | | |
| YAH08 | 182x915x348 | 2 | 1910 | 448 |
| YAH10 | 182x915x565 | 1 | 1710 | 628 |
| | 182x609x565 | 1 | | |
| YAH12 | 182x915x565 | 2 | 2010 | 628 |
| YAH15 | 182x1114x565 | 2 | 2485 | 628 |

Options

Electric Heater Key Features

- The electric heater employs stainless steel tube with helical stainless steel fins and temperature protection switch, etc.
- The electric heater element is installed on the slide frame and ease to pull out for repair or replacement.

Electric control box is supplied and installed by the user. And its control must be interlocked with the fan.

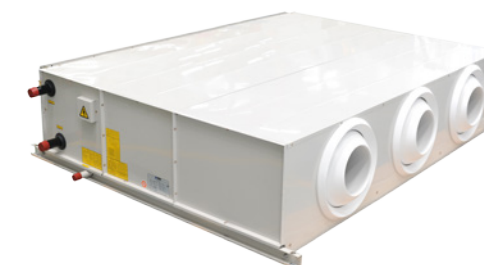


- Features**
 - 1-3 steps control, to satisfy various needs of heating power;
 - Overheating protection: Built-in temperature protection switch shall automatically shut off when the temperature is too high. Primary automatic reset thermal protection: 70 C / 50 C. Secondary thermal fuse protection:110 C
- Suitable for preheating winter fresh air to prevent the coil from frost crack.

| Model | Maximum electric heating power kW | Stage of electric heating power | | |
|-------|--------------------------------------|---------------------------------|--------------|--------------|
| | | 1 Stage (kW) | 2 Stage (kW) | 3 Stage (kW) |
| YAH01 | 6.3 | 6.3 | - | - |
| YAH1F | 7.8 | 7.8 | - | - |
| YAH02 | 10.6 | 10.6 | - | - |
| YAH2F | 13.2 | 13.2 | - | - |
| YAH03 | 13.7 | 13.7 | - | - |
| YAH04 | 16 | 8 | 8 | - |
| YAH05 | 27 | 9 | 18 | - |
| YAH06 | 32.4 | 10.8 | 21.6 | - |
| YAH07 | 25.4 | 12.7 | 12.7 | - |
| YAH08 | 28.8 | 14.4 | 14.4 | - |
| YAH10 | 38.4 | 12.8 | 12.8 | 12.8 |
| YAH12 | 45.9 | 15.3 | 15.3 | 15.3 |
| YAH15 | 57.9 | 19.3 | 19.3 | 19.3 |

Jet Units

York YAH jet unit is the ideal solution for large space place such as airport hall, station hall, supermarket, exhibition hall and other large space. The nozzle is a hollow double-layer structure, inner layer design is based on the principle of optimum aerodynamics, with a long range, low noise and low resistance. The nozzle can be adjusted $\pm 30^\circ$



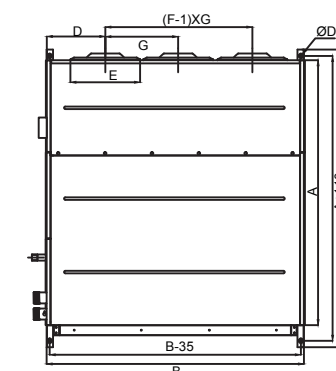
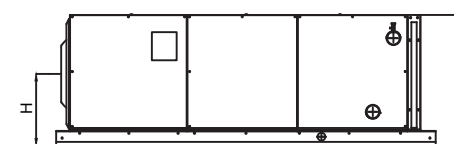
YAH jet unit can optional high-end Titus ND series nozzle diffuser. ND series spherical nozzle adopts the best aerodynamic nozzle structure design, beautiful appearance and achieve to control the noise ideally

jet Unit Main Technical Data

| Model | Airflow m ³ /h | Depth | | | Supply air flange size | | | | | Diameter of nozzle mm | Range of nozzle m | Unit net weight | |
|--------|------------------------------|-------|------|-----|------------------------|-----|-----|-------|-----------------|-----------------------------|-------------------------|----------------------------|------------------------|
| | | A | B | C | D | E | G | H | F Nozzle Number | | | Standard capacity Kg | High capacity Kg |
| YAH1FS | 1500 | 1310 | 850 | 417 | 422 | 384 | - | 226 | 1 | 315 | 19 | 95 | 99 |
| YAH02S | 2000 | 1310 | 935 | 417 | 274 | 302 | 380 | 226 | 2 | 250 | 17 | 103 | 108 |
| YAH2FS | 2500 | 1310 | 1090 | 417 | 317 | 384 | 450 | 226 | 2 | 315 | 17 | 117 | 123 |
| YAH03S | 3000 | 1310 | 1120 | 468 | 332 | 384 | 450 | 251.5 | 2 | 315 | 20 | 123 | 131 |
| YAH04S | 4000 | 1360 | 1260 | 508 | 352 | 467 | 550 | 271.5 | 2 | 400 | 21 | 149 | 158 |
| YAH05S | 5000 | 1440 | 1400 | 557 | 397 | 467 | 600 | 296 | 2 | 400 | 25 | 177 | 189 |
| YAH06S | 6000 | 1440 | 1600 | 557 | 417 | 467 | 760 | 296 | 2 | 400 | 28 | 204 | 217 |
| YAH07S | 7000 | 1440 | 1840 | 557 | 317 | 467 | 600 | 296 | 3 | 400 | 24 | 225 | 241 |
| YAH08S | 8000 | 1440 | 2050 | 557 | 352 | 467 | 670 | 296 | 3 | 400 | 26 | 239 | 257 |
| YAH10S | 10000 | 1700 | 1850 | 736 | 472 | 483 | 900 | 385.5 | 2 | 500 | 37 | 287 | 313 |
| YAH12S | 12000 | 1700 | 2150 | 736 | 372 | 483 | 700 | 385.5 | 3 | 500 | 31 | 362 | 393 |
| YAH15S | 15000 | 1700 | 2625 | 736 | 449 | 483 | 860 | 385.5 | 3 | 500 | 37 | 410 | 448 |

Notes:
1. When G is "-", the unit has only one air supply duct connection.
2. The left hand is shown in the figures.

Unit Drawings



Application Guide

Ceiling air handling unit with nozzle diffuser mainly used for long-distance directly air supply without air pipe. Cooling and heating capacity calculation are same with normal air handling units. The units with nozzle diffuser should be selected according to the air supply distance, the installation height of the air handling unit, supply air temperature, indoor temperature, air flow rate and meet the following basic requirements:

- Treated air delivered to the designated location
- Cold airflow will not fall midway, causing person discomfort

- The temperature difference of supply air meets the design requirements
Design selection should consider the influence and interaction on the air outlets of multiple units. The nozzle diffusion width is about 0.4 times of the range. Unit arrangement density is appropriate to slightly less than the width of diffusion. If the unit installed close to ceiling, the impact of attached airflow should be considered. The range of attached airflow is about 1.4 times that of the normal airflow.

Options

Double Skin Unit Key Features

High Intensity Casing

The cabinet adopts a double skin frameless structure, and the panel is a sandwich structure, wherein both the inner and outer plate have bending edges, and the middle of panel with high-density polyurethane foaming, which makes the panel difficult to deform under the condition of larger size. The panels are externally fastened with screws.

Low Air Leakage

A wavy dot is raised on the PVC profile, and a plurality of linear seals are formed on the entire contact surface with the weather resistant PE sealing strip. Avoid hard contact and eliminate every leak

Better Heat Insulation

PVC profiles are inserted between the inner and outer plates of the foaming panel, so as to eliminate the heat and cold transmission inside and outside the cabinet, better enhance the heat insulation performance

Nature Elegance

The outer surface of the cabinet has no PVC leakage, and the appearance is generous. The smooth inner surface without dead angle, and the integral foaming drain pan can make the condensed water drain smoothly, prevent the hidden danger of water leakage at the joint. Deter the bacteria growth, showing a pleasant appearance also ensures the safety in use.

Excellent Sound Reduction

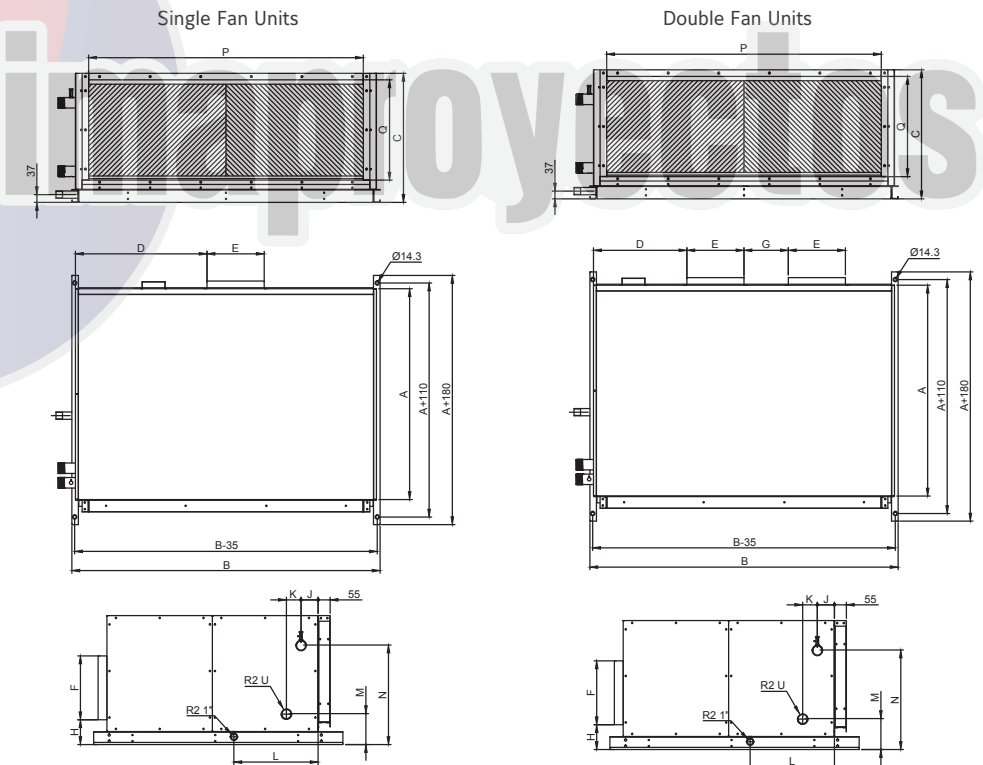
25mm thickness high strength foam panel can effectively improve the sound insulation of the cabinet, the fan and motor is installed with Integral shock-absorbing structure, and with high quality rubber cushion, filter the fan and motor most vibration to optimize the source noise



Double Skin Unit Main Technical Data

| Model | Airflow m³/h | Depth | | | Supply air flange size | | | | Piping position | | | | Return air flange size | | Coil piping | | Weight(kg) | | | | | |
|---------|--------------|-------|------|-----|------------------------|-----|-----|-----|-----------------|------------------------|--------------------|------------------------|------------------------|-------|-------------|-----|------------|------------------------|--------------------|-----|-----|-----|
| | | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | Standard capacity rows | High capacity rows | | | |
| | | | | | | | | | | Standard capacity rows | High capacity rows | Standard capacity rows | High capacity rows | | | | | Standard capacity rows | High capacity rows | | | |
| YAH01AD | 1000 | 889 | 694 | 483 | 180.5 | 300 | 230 | - | 99.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 540 | 320 | Φ34 | Φ34 | 71 | 73 |
| YAH1FAD | 1500 | 889 | 864 | 483 | 286.5 | 258 | 246 | - | 99.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 710 | 320 | Φ34 | Φ34 | 82 | 86 |
| YAH02AD | 2000 | 889 | 949 | 483 | 329 | 258 | 246 | - | 99.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 795 | 320 | Φ34 | Φ34 | 88 | 94 |
| YAH2FAD | 2500 | 889 | 1104 | 483 | 185 | 258 | 246 | 185 | 99.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 950 | 320 | Φ34 | Φ34 | 119 | 125 |
| YAH03AD | 3000 | 889 | 1134 | 528 | 162.5 | 258 | 246 | 260 | 99.5 | 72 | 77 | 66 | 88 | 306.5 | 162 | 375 | 980 | 371 | Φ34 | Φ48 | 124 | 130 |
| YAH04AD | 4000 | 889 | 1274 | 559 | 197.5 | 258 | 246 | 330 | 99.5 | 77 | 77 | 66 | 88 | 306.5 | 152 | 416 | 1120 | 411 | Φ48 | Φ48 | 134 | 143 |
| YAH05AD | 5000 | 969 | 1414 | 592 | 211.5 | 300 | 273 | 358 | 99.5 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1260 | 460 | Φ48 | Φ60 | 155 | 167 |
| YAH06AD | 6000 | 969 | 1614 | 592 | 261.5 | 300 | 272 | 458 | 99.5 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1460 | 460 | Φ48 | Φ60 | 174 | 188 |
| YAH1FBD | 1500 | 889 | 864 | 483 | 423 | 259 | 228 | - | 116.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 710 | 320 | Φ34 | Φ34 | 90 | 94 |
| YAH02BD | 2000 | 889 | 949 | 483 | 423 | 259 | 228 | - | 116.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 795 | 320 | Φ34 | Φ34 | 97 | 103 |
| YAH2FBD | 2500 | 889 | 1104 | 483 | 483 | 259 | 228 | - | 116.5 | 72 | 77 | 66 | 88 | 306.5 | 165 | 327 | 950 | 320 | Φ34 | Φ34 | 112 | 118 |
| YAH03BD | 3000 | 889 | 1134 | 528 | 494 | 287 | 256 | - | 128.5 | 72 | 77 | 66 | 88 | 306.5 | 162 | 375 | 980 | 371 | Φ34 | Φ48 | 118 | 125 |
| YAH04BD | 4000 | 889 | 1274 | 559 | 527 | 554 | 262 | - | 135.5 | 77 | 77 | 66 | 88 | 306.5 | 152 | 416 | 1120 | 411 | Φ48 | Φ48 | 140 | 149 |
| YAH05BD | 5000 | 969 | 1414 | 592 | 557 | 620 | 289 | - | 112.5 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1260 | 460 | Φ48 | Φ60 | 168 | 180 |
| YAH06BD | 6000 | 969 | 1614 | 592 | 727.5 | 298 | 262 | 244 | 114.5 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1460 | 460 | Φ48 | Φ60 | 195 | 209 |
| YAH07BD | 7000 | 969 | 1854 | 592 | 967.5 | 298 | 262 | 244 | 106 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1700 | 460 | Φ48 | Φ60 | 215 | 232 |
| YAH08BD | 8000 | 969 | 2064 | 592 | 576.5 | 298 | 262 | 244 | 106 | 77 | 77 | 67 | 88 | 386.5 | 143 | 458 | 1910 | 460 | Φ48 | Φ60 | 232 | 249 |
| YAH10BD | 10000 | 1115 | 1864 | 754 | 588.5 | 471 | 404 | - | 111 | 80 | 98 | 82.5 | 110 | 441.5 | 146 | 626 | 1710 | 639 | Φ60 | Φ76 | 285 | 310 |
| YAH12BD | 12000 | 1115 | 2164 | 754 | 642.5 | 395 | 341 | 324 | 111 | 80 | 98 | 82.5 | 110 | 441.5 | 146 | 626 | 2010 | 639 | Φ60 | Φ76 | 360 | 391 |
| YAH15BD | 15000 | 1115 | 2639 | 754 | 662.5 | 373 | 404 | 294 | 111 | 80 | 98 | 82.5 | 110 | 441.5 | 146 | 626 | 2485 | 639 | Φ60 | Φ76 | 410 | 448 |

Unit Drawings



Notes: The above applies to left hand unit.

Notes:

1. When G is "-", the unit has only one air supply duct connection.
2. The coil pipe connections use male threads(thread code R2), the corresponding imperial diameters are:
34mm---1" 42mm---1-1/4" 48mm---1-1/2"
60mm---2" 76mm---2-1/2" 89mm---3"
3. The condensate pipe connections use 34mm O.D. male threads(thread code R2).
4. All dimensions are SI unit(mm).

Cooling/Heating Capacity Table

| Model | Airflow m ³ /h | Rows | Cooling Capacity | | | | | | | | Heating Capacity | | | | | |
|-------|---------------------------|-------------------|-----------------------------|--------------------------------|-----------------------|---------------------------|-----------------------------|--------------------------------|-----------------------|---------------------------|-----------------------------|-----------------------|---------------------------|-----------------------------|-----------------------|---------------------------|
| | | | Return air condition | | | | Fresh air condition | | | | Return air condition | | | Fresh air condition | | |
| | | | Total cooling capacity (kW) | Sensible cooling capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) | Total cooling capacity (kW) | Sensible cooling capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) | Total heating capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) | Total heating capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) |
| YAH1F | 1500 | Standard capacity | 8.2 | 5.9 | 0.388 | 58.2 | 18.5 | 8.0 | 0.872 | 102.6 | 13.5 | 0.329 | 35.4 | 19.3 | 0.466 | 30.1 |
| | | High capacity | 11.5 | 7.9 | 0.548 | 70.9 | 24.2 | 10.5 | 1.159 | 89.7 | 16.6 | 0.407 | 36.9 | 23.7 | 0.582 | 22.6 |
| YAH02 | 2000 | Standard capacity | 11.3 | 8.1 | 0.539 | 59.8 | 24.4 | 10.6 | 1.169 | 72.2 | 18.9 | 0.458 | 34.7 | 25.9 | 0.630 | 21.2 |
| | | High capacity | 15.1 | 10.4 | 0.721 | 79.9 | 31.7 | 13.8 | 1.504 | 88.2 | 21.8 | 0.533 | 25.9 | 31.3 | 0.759 | 22.1 |
| YAH2F | 2500 | Standard capacity | 13.3 | 9.6 | 0.630 | 54.6 | 28.2 | 12.3 | 1.349 | 82.4 | 22.3 | 0.537 | 32.5 | 32.2 | 0.783 | 24.2 |
| | | High capacity | 17.4 | 12.0 | 0.829 | 57.9 | 36.9 | 16.1 | 1.763 | 82.7 | 26.8 | 0.657 | 29.5 | 38.5 | 0.935 | 20.8 |
| YAH03 | 3000 | Standard capacity | 17.2 | 12.4 | 0.814 | 80.0 | 36.2 | 15.8 | 1.729 | 96.8 | 27.6 | 0.673 | 32.7 | 41.0 | 1.000 | 28.1 |
| | | High capacity | 22.6 | 15.5 | 1.069 | 66.8 | 47.6 | 20.7 | 2.281 | 82.8 | 33.3 | 0.810 | 34.1 | 46.8 | 1.143 | 20.9 |
| YAH04 | 4000 | Standard capacity | 22.5 | 16.3 | 1.066 | 81.0 | 50.5 | 21.9 | 2.383 | 102.2 | 37.4 | 0.913 | 46.6 | 51.5 | 1.250 | 24.9 |
| | | High capacity | 30.7 | 21.0 | 1.462 | 81.5 | 65.0 | 28.4 | 3.111 | 97.4 | 46.0 | 1.116 | 39.8 | 61.8 | 1.506 | 24.3 |
| YAH05 | 5000 | Standard capacity | 28.3 | 20.3 | 1.344 | 77.8 | 63.1 | 27.3 | 3.019 | 83.0 | 46.9 | 1.135 | 44.4 | 65.7 | 1.601 | 24.3 |
| | | High capacity | 38.6 | 26.5 | 1.847 | 72.7 | 80.1 | 34.9 | 3.831 | 96.3 | 56.6 | 1.374 | 36.2 | 77.4 | 1.883 | 23.9 |
| YAH06 | 6000 | Standard capacity | 33.7 | 24.7 | 1.617 | 79.9 | 72.6 | 31.3 | 3.453 | 90.5 | 58.1 | 1.405 | 39.5 | 79.3 | 1.935 | 26.3 |
| | | High capacity | 44.1 | 30.1 | 2.097 | 78.4 | 99.6 | 43.4 | 4.706 | 100.1 | 64.6 | 1.562 | 38.8 | 92.7 | 2.262 | 25.2 |
| YAH07 | 7000 | Standard capacity | 38.1 | 27.6 | 1.813 | 83.5 | 79.2 | 34.7 | 3.802 | 85.2 | 63.2 | 1.530 | 47.9 | 89.9 | 2.183 | 24.8 |
| | | High capacity | 49.3 | 34.1 | 2.362 | 71.8 | 103.7 | 45.1 | 4.915 | 96.4 | 75.1 | 1.833 | 35.4 | 108.0 | 2.628 | 24.1 |
| YAH08 | 8000 | Standard capacity | 47.1 | 34.0 | 2.235 | 77.8 | 96.7 | 42.2 | 4.620 | 91.3 | 75.5 | 1.843 | 44.1 | 106.4 | 2.583 | 26.6 |
| | | High capacity | 60.2 | 41.4 | 2.862 | 76.6 | 134.0 | 58.7 | 6.399 | 99.7 | 90.0 | 2.188 | 37.5 | 130.1 | 3.155 | 55.6 |
| YAH10 | 10000 | Standard capacity | 63.2 | 45.4 | 3.021 | 67.8 | 133.8 | 57.5 | 6.335 | 98.3 | 104.1 | 2.523 | 39.2 | 150.4 | 3.654 | 31.6 |
| | | High capacity | 78.2 | 54.2 | 3.729 | 59.6 | 170.0 | 73.9 | 8.091 | 98.8 | 118.7 | 2.887 | 28.7 | 168.6 | 4.102 | 25.4 |
| YAH12 | 12000 | Standard capacity | 75.2 | 53.5 | 3.588 | 67.5 | 157.9 | 67.6 | 7.542 | 92.6 | 125.1 | 3.037 | 39.5 | 179.1 | 4.369 | 30.1 |
| | | High capacity | 95.0 | 65.4 | 4.544 | 69.5 | 204.5 | 88.6 | 9.797 | 98.5 | 140.9 | 3.441 | 33.4 | 202.6 | 4.957 | 25.3 |
| YAH15 | 15000 | Standard capacity | 94.8 | 68.2 | 4.558 | 69.9 | 197.1 | 85.6 | 9.362 | 96.2 | 157.8 | 3.840 | 40.5 | 223.4 | 5.434 | 31.5 |
| | | High capacity | 118.5 | 81.9 | 5.653 | 63.6 | 252.9 | 110.5 | 12.130 | 88.7 | 177.2 | 4.325 | 30.7 | 251.1 | 6.130 | 22.9 |

- Notes:
1. Standard return air cooling conditions: air inlet at 27°C DB/19.5WB; chilled water inlet/outlet at 7°C/12°C.
 2. Standard return air heating conditions: air inlet at 21°CDB; hot water inlet/outlet at 60°C/50°C.
 3. Cooling conditions of fresh air unit: air inlet at 35°C DB/28°C WB; chilled water inlet/outlet at 7°C/12°C.
 4. Heating conditions of fresh air unit: air inlet at 7°C DB; hot water inlet/outlet at 60°C/50°C.

Standard 1 Row, 2 Rows Coil Heating Capacity Table

| Model | Airflow m ³ /h | Rows | Return air condition | | | Fresh air condition | | |
|-------|---------------------------|------|-----------------------------|-----------------------|---------------------------|-----------------------------|-----------------------|---------------------------|
| | | | Total heating capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) | Total heating capacity (kW) | Water Flow Rate (L/s) | Water Pressure Drop (kPa) |
| YAH1F | 1500 | 1 | 4.3 | 0.11 | 3.0 | 6.5 | 0.15 | 6.0 |
| | | 2 | 8.3 | 0.20 | 14.0 | 12.1 | 0.30 | 28.0 |
| YAH02 | 2000 | 1 | 6 | 0.14 | 5.0 | 8.9 | 0.22 | 11.2 |
| | | 2 | 11.3 | 0.28 | 28.0 | 16.4 | 0.40 | 54.0 |
| YAH2F | 2500 | 1 | 7.9 | 0.19 | 20.9 | 11.6 | 0.28 | 40.8 |
| | | 2 | 13.8 | 0.33 | 16.3 | 20.2 | 0.49 | 32.0 |
| YAH03 | 3000 | 1 | 9.5 | 0.23 | 10.8 | 13.9 | 0.33 | 21.6 |
| | | 2 | 17.3 | 0.42 | 14.5 | 24.3 | 0.59 | 28.6 |
| YAH04 | 4000 | 1 | 13.0 | 0.32 | 10.6 | 17.8 | 0.43 | 21.1 |
| | | 2 | 22.8 | 0.56 | 19.1 | 32.9 | 0.80 | 37.6 |
| YAH05 | 5000 | 1 | 16.2 | 0.40 | 10.8 | 23.6 | 0.57 | 21.7 |
| | | 2 | 28.5 | 0.69 | 16.3 | 41.1 | 1.00 | 32.1 |
| YAH06 | 6000 | 1 | 19.8 | 0.48 | 17.5 | 27.1 | 0.66 | 34.5 |
| | | 2 | 34.6 | 0.84 | 18.8 | 47.5 | 1.16 | 36.6 |
| YAH07 | 7000 | 1 | 21.8 | 0.53 | 15.8 | 32.3 | 0.79 | 31.6 |
| | | 2 | 38.9 | 0.95 | 21.5 | 57.2 | 1.39 | 41.9 |
| YAH08 | 8000 | 1 | 25.2 | 0.61 | 22.8 | 36.8 | 0.89 | 45.1 |
| | | 2 | 44.4 | 1.08 | 23.2 | 64.4 | 1.57 | 45.5 |
| YAH10 | 10000 | 1 | 28.7 | 0.70 | 13.0 | 40.9 | 1.00 | 26.0 |
| | | 2 | 52.4 | 1.28 | 13.0 | 75.7 | 1.85 | 27.0 |
| YAH12 | 12000 | 1 | 34.8 | 0.85 | 22.0 | 49.5 | 1.21 | 43.0 |
| | | 2 | 63.6 | 1.55 | 22.0 | 91.5 | 2.23 | 44.0 |
| YAH15 | 15000 | 1 | 44 | 1.07 | 40.0 | 60 | 1.46 | 14.0 |
| | | 2 | 80.4 | 1.96 | 40.0 | 112.5 | 2.74 | 11.0 |

- Notes:
1. Standard return air heating conditions: air inlet at 21°CDB; hot water inlet/outlet at 60°C/50°C.
 2. Heating conditions of fresh air unit: air inlet at 7°C DB; hot water inlet/outlet at 60°C/50°C.
 3. For four-piped unit, heating coil is in the front of the cooling coil in the direction of air flow.

Office Locations

Australia (Sydney)

Tel: +61 (2) 9805 8300
Fax: +61 (2) 9241 7128

China (Shanghai)

Tel: +86 (21) 2285 7000
Fax: +86 (21) 2285 7599

Hong Kong

Tel: +852 2590 0012
Fax: +852 2516 5648

India (Mumbai)

Tel: +91 (22) 6683 7000
Fax: +91 (22) 6683 7002

Indonesia (Jakarta)

Tel: +62 (21) 5366 8500
Fax: +61 (21) 5366 8300

Japan (Tokyo)

Tel: +81 (3) 5738 6100
Fax: +81 (3) 5738 6298

Korea (Seoul)

Tel: +822 554 5935
Fax: +822 554 5739

Macau

Tel: +853 2875 1820
Fax: +853 2875 1825

Malaysia (Kuala Lumpur)

Tel: +60 (3) 7628 4300
Fax: +60 (3) 7874 1180

New Zealand (Auckland)

Tel: +64 (9) 444 6434
Fax: +64 (9) 444 2092

Singapore

Tel: +65 6748 0202
Fax: +65 6743 4420

Thailand (Bangkok)

Tel: +66 (2) 794 0101
Fax: +66 (2) 717 1325-8

Manufacturing/assembly: Guangzhou, China; Selangor, Malaysia

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