





YORK® AIRSIDE PRODUCTS Air Handling Units & Fan Coil Units



Operational Quality Excellence

Quality Management Systems Health & Safety Management Systems Environmental Management Systems







Performance







Electrical & Safety





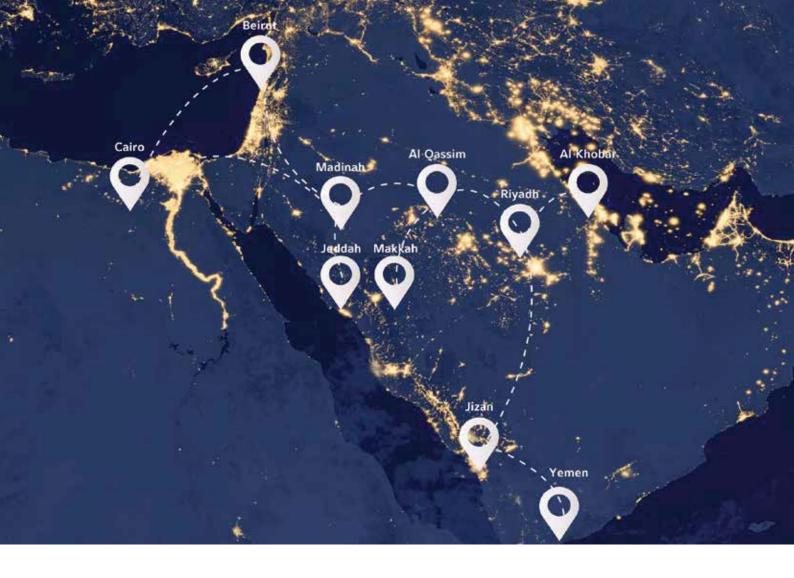


Arabia is one of the leading multi-industrial companies in Saudi Arabia, Egypt, Yemen and Lebanon, to offer Building Efficiency services; through an array of smart, sustainable, customizable, integrated products, services and solutions, optimum for the residential, commercial and industrial sectors.

Johnson Controls Arabia has become a leading "one-stop-shop" for all integrated requirements; including HVAC&R Systems, Controls Systems, Building Management Systems, Security, Safety and Fire Systems. In addition, to a full array of specialized Aftermarket Services, including but not limited to diverse customizable service & maintenance contracts, rental solutions, BMS Services, Energy Audits, Chiller Replacement and others.

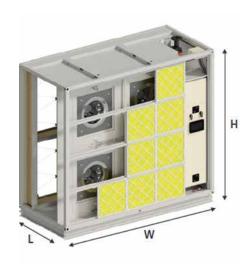
Johnson Controls Arabia worked on a number of high profile projects, both locally and export business, some of which needed special customization and innovative solutions to adapt to unique circumstances or requirements of the project; such as the Two Holy Mosques in Makkah & Madinah; the Clock Tower in Makkah; the New King Abdul Aziz International Airport in Jeddah; Cleveland clinics in Abu Dhabi.

Manufactured in our state-of-the-art



Johnson Controls Arabia Manufacturing in King Abdullah Economic City (KAEC), Jeddah, Saudi Arabia,YMA - Cold Wall™ units feature the latest advancements in air handling innovation.

With unrivaled experience in the critical facilities market, our team of experts ensure Cold WallTM units undergo rigorous testing and quality control procedures at the manufacturing facility.



Cold Wall™ is a Thermal Wall designed to rise the technology threshold of Chilled Water Air Handling Unis for slab floor applications installed in the gallery side. Cold Wall™ unit is optimized for performance, cooling density, footprint and reliability from day one. Furthermore, all the main components are factory installed, minimizing the installation costs on site. Cold Wall™ units meet the needs of mission-critical cooling for designers, contractors, building owners and maintenance staff. Thanks to its design, Cold Wall™ minimizes the running costs for the entire cooling system. All components and control strategies are driven to provide an extremely efficient solution for infrastructures facing the challenges of modern IT applications.

1. Product Features

Thermal Bridge

1.2.

Patented structure of thermal bridge free design is applied in YMA series. Aluminum, reinforced plastic triaxial angle lug and specially designed door make heat insulation more

efficient and appearance more aesthetic, and thermal bridge factor can meet EN1886 class TB2.



High Quality Casing

Standard of 60 mm double skinned with pre-plasticized coated steel & galvanized panels with various options internal and external skins, density pressure of 40kg/m3 injected polymerized polyurethane foam (B2) insulation will supply rigidity to the AHU's casing. Optional panels can be manufactured from pre-painted Stainless steel 304/316.

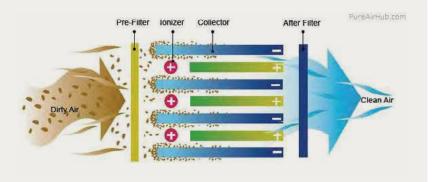


IAQ Solutions

humidification & ultraviolet air 1.5. purifiers, airborne contaminants are reduced to help in achieving an optimum room temperature, humidity and work toward

providing a cleaner and healthier Indoor Air Quality (IAQ).

Providing a complete range of advanced filtration, proper

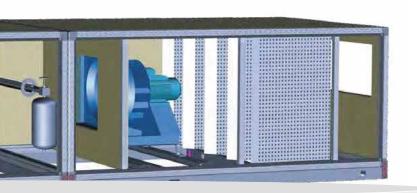


1.1.

Full Customized Solution

- **Dimensional Flexibility**: Space constraints are a reality on most construction projects. Customized YMA design is based on variable aspect ratios, so the unit can be specified to fit the application and space.
- **1.3. Material Flexibility:** Different environments require different materials so we offer a number of construction materials, including galvanized steel, pre-coated steel, stainless steel, and aluminum.
 - Component Flexibility: Our units offer every available air-handling component. And as applicable technology creates new capabilities, Al Salem Johnson Controls will apply this to our product range.





1.6.

Efficient Fans and Motors

- High-Quality motor with high efficiency from well-known brand that use less energy and run cooler. Motor is IP55 protection class, with classes F & H insulation options. It can run reliably and efficiently.
- VSD inverter can regulate the running speed of the fan, reducing energy consumption of the system.





High Efficient Heat Exchangers

Cooling and heating coil are made of mechanically expanded copper tubes with aluminum fins as standard, providing reliable performance certified by AHRI 410.



Air-Cooling and Air-Heating Coils AHRI Standard 410

1.4.



Over the past 50 years, we have supplied air handling units for:











Commercial space: office buildings, cinemas, concert halls

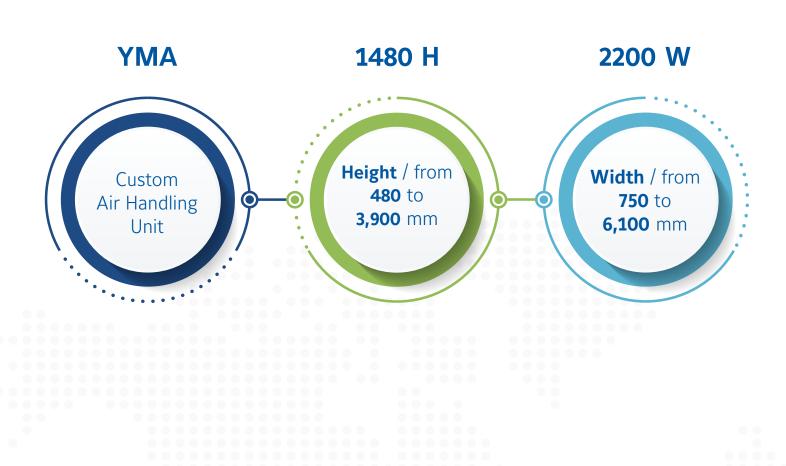
Institutional space: schools, universities, mosques

Industrial
manufacturing:
automotive,
aerospace,
chemical,
petrochemical

Process
manufacturing:
pharmaceutical,
electronics,
maritime

Health Sector: Hospitals, Clinics

2. Model Description (Nomenclature)

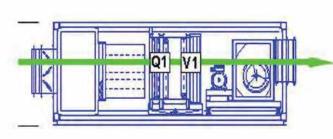


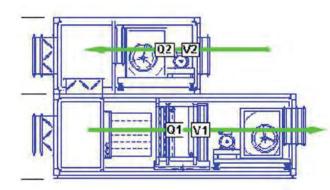


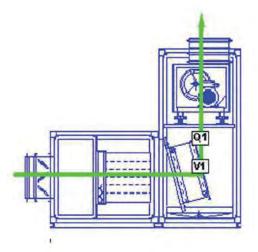


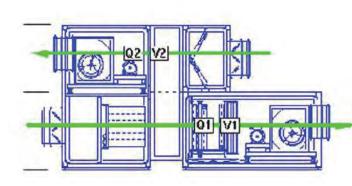
3. Unit Configuration

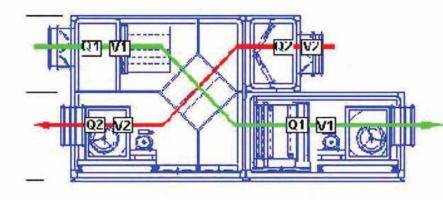
The flexible computerized program (NEXUS), provides the optimum equipment selection, to satisfy the specified conditions and provides full technical information along with drawings. NEXUS provides five different configuration that suit user's application.













YORK® Hygienic Air Handling Units - Saudi Origin

YORK® Hygienic Air Handling Units (YMA-H)

Offering unique solutions to the application of Central Station Air Conditioning in a sterile environment. There are many factors affecting air quality, comfort conditions and the efficient operation of Air Handling Units. These include:

- Mechanical performance
- · Thermal transmission through the Air Handling Unit casing
- Air leakage
- Noise transmission
- · Bacteria protection
- · Air cleanliness and filter efficiency
- Fan and motor efficiency
- Dehumidification
- Humidification



These factors are valid for the air conditioning of commercial buildings and hotels etc., as well as hygiene sensitive environments such as hospitals, laboratories, clean rooms, food processing and a variety of other process systems.

* The tested Hygienic Air Handling Unit is According to DIN 1946-4:2018 ("Ventilation and air conditioning - Part 4: Ventilation in buildings and rooms of health care") and VDI 6022-1:2018 ("Ventilation and indoor-air quality - Hygiene requirements for ventilation and air-conditioning systems and units") confirmed by "TÜV NORD Systems GmbH & Co. KG, Hamburg, Germany"







TUV NORD

CERTIFICATE

Permission to use the test mark

VOLUNTARY PRODUCT TEST BASED ON DIN 1946-4:2018 AND VDI 6022-1:2018

- Tested Hygiene Characteristics -

TÜV NORD Systems GmbH & Co. KG, Hamburg (Germany),

hereby confirms that the Air Handling Unit Range

"YMA(K)" in Hygienic Version

conforms to the requirements set by DIN 1946-4 and VDI 6022-1.

Al Salem York Manufacturing Co. Ltd., Jeddah (Saudi-Arabia),

is therefore granted the right to use the test mark shown below in connection with the above-mentioned product.

TÜV NORD Systems GmbH & Co. KG

Test Laboratory for Ventilation, Air Conditioning, Refrigeration

TUV NORD

Aigitall Light by Gräff Vera
Date: 2020.02.27 10:22:51 +01'00'

Dipl.-Ing. Vera Gräff

The certification is based upon a type examination of an Air Handling Unit and not of a complete system installed in a building. The validity of the certificate is three years.

All regulations concerning test mark use are laid down in the corresponding agreement.











YORK® Multi Fans Air Handling Units - Saudi Origin

YORK® Multi Fans Air Handling Units (YMA-M)

Advanced Direct Drive Plenum Fan

With the YORK® Multi fan solution, fan retrofits can be performed at a fraction of the cost. No longer are cranes and major construction costs required to perform a fan upgrade. Existing fans can be disassembled and removed, while new lightweight small stack fans are brought in through existing elevators and or door ways. Most fan arrays will meet "n+1" configuration allowing for zero system performance loss if one fan goes down. Snapped belts and loss of system air flow are problems of the past with multi fan technology.



Key system Features

- Multi fan system has a shorter plenums, in Fact an average of 15% reduction in length is visible.
- Multi fan system increase unit reliability & redundancy
- Smaller and lighter weight components
- Multiple fan system provide a more homogenous flow pattern through the coils.
- Motor replacement is simpler and quicker, there are no belts to install or couplings to align.
- Multiple fan system lowering the noise level & Vibration compared to single centrifugal fan.



Electronically Commutated Motor (ECM)

ECM technology consists of a brushless motor combined to a dedicated electronic device (inverter), a magnet rotor. The controller uses a modulating signal with 0-1Vdc tension in order to regulate the fan speed

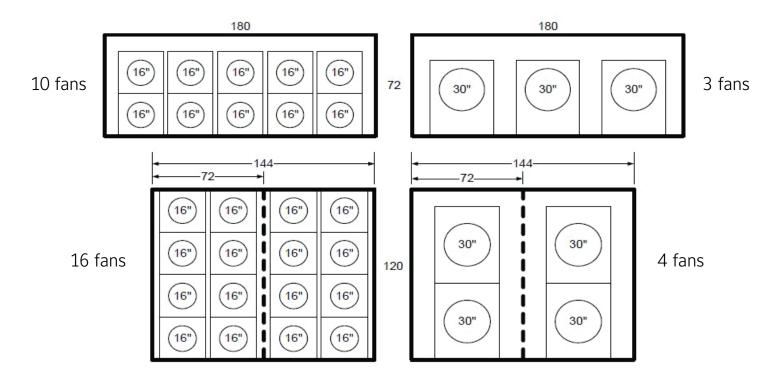




Integrated drive & Interface

EC Motor

Multi-Fan System Arrangement





Applications

- Retrofit Applications
- Air Handlers
- General supply and return exhaust
- · Telecom data centers
- Clean rooms
- Commercial Facilities
- · Hospitals & Healthcare facilities
- Universities & Schools



Cleveland Clinic, Abu Dhabi, UAE. 155 Multi Fans AHUs nstalled (AC motors)



Princess Noura University, Riyadh, KSA. 700 Multi Fans AHUs





Product Features

High Quality Casing

1.1.

Standard of 60 mm double skinned with pre-painted sheets & galvanized panels with various options of internal and external skins, density pressure of 40kg/m3 injected polymerized polyurethane foam (B2) insulation will supply rigidity to the AHU's casing. Optional panels can be manufactured from pre-painted Stainless steel 304/316.

Product Features - "Multi-Fans"

1.2.

All models come with the latest electronically commutated (EC) motor and high-efficiency plenum fans as standard. Optimum air distribution and serviceability are ensured thanks to fan access on the gallery side. Multiple temperature sensor locations ensure accurate data retrieval. Our ECM Section is UL and UAC certified



Thermal Bridge

Patented structure of thermal bridge free design is applied in "YMA − Cold Wall™". Aluminum, reinforced plastic triaxial angle lug and specially designed door make heat insulation more efficient and appearance more aesthetic, and thermal bridge factor can meet EN1886 class TB2.









Cold Wall™ Units Overview

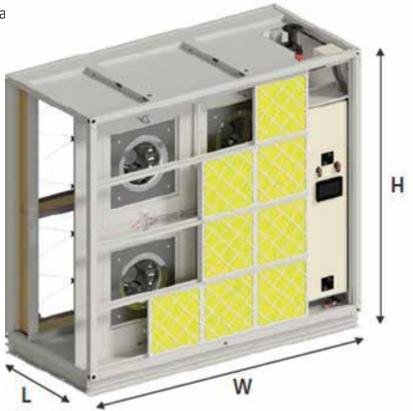
Cold WallTM units from Johnson Controls Arabia are designed to meet the specific needs of data centers. Our experienced team understands data center cooling and provides innovative solutions, including customizable offerings to meet mission-critical applications. YMA – Cold WallTM units are available in five engineered sizes and flow configurations. Available in 10kCFM, 15kCFM, 30kCFM, 45kCFM, 60kCFM airflows for maximum building design flexibility, Cold WallTM units offer reliable, cost-effective cooling. The unit design minimizes the aerodynamic impact of all the internal parts, ensuring a reduction in the internal air pressure drop, which translates in reduced unit power consumption.

Products engineered for hyperscale and colocation growth:

Cold WallTM are the newest addition to a series of products designed and optimized to face current and future data center cooling challenges. For applications that require size and flow configurations outside of these engineered options, our product design team can help develop a product that meets your specific needs. With unrivalled experience in the critical facilities market, Johnson Controls Arabia provides cost-effective, efficient air handlers to scale any size data center. Working with our experienced engineering group, we can design our product to meet your requirements.

Cold Wall™ Main Options:

- Touch Screen Display
- Pressure Independent Control Valves
- Dual power supply (ATS)
- Uninterruptible power supply (UPS) Optiona
- · Average Temperature Sensors
- Leak Detector DDC Controller



Design and Manufacturing highlights:

Feature	Benefit
Compact length	Allows for gallery access and optimized gallery space
Compact 160 cm height on most of the sizes	Fits in most standard doorways without adjustments
10kCFM, 15kCFM, 30kCFM, 45kCFM, 60kCFM airflows	Supports phased data center expansion strategies
Strategically located manufacturing facility	Rapid delivery and lower shipping cost to Middle East countries
PICV or two-way value	Supports varying valve control needs
Multiple electrical switching options	Flexibility to meet your specific electrical requirements
Filters, fans, electric, coil drain and vent gallery side access	Ease of Maintanance
380V-460V/3PH+N+PE/50 or 60Hz	Flexibility in voltage and frequency to meet your site electrical power supply
Automatic Transfer Switch (ATS)	Ensures continuous delivery of electrical por from one of two power sources
Uninterruptable Power Supply (UPS)	Ensures Emergency power to the controls circuit when the input power fails
Latest Generation of EC fans	Powerful fans Increase the cooling capacity

Gain flexibility with new cabinet sizes:

Featuring a compact, 160 cm length, optimizing building design.

Unit Tag	Cooling Capacity (kW)	Air Flow (CFM)	Energy Efficiency Ratio (EER)	Size (H x W xL) (cm)
ColdWall-10	71	10k	17.4	181 x 235 x 160
ColdWall-15	107	15k	21.4	250 x 235 x 160
ColdWall-30	214	30k	21.5	250 x 370 x 160
ColdWall-45	321	45k	22.6	352 x 395 x 160
ColdWall-60	428	60k	21.9	352 x 490 x 160

at the same unit footprint





YGFC Fan Coil Unit

2 & 4 pipe system

A complete range from 1.4 kW to 14.1 kW





2 & 4 pipe system

A complete range from 1.4 kW to 14.1 kW

Commercial Fan Coil Unit range, the YGFC Series is designed specially to meet the varied requirements of zone cooling or heating using chilled water or hot water. However in order to meet the growing demand in city centers where loads are high and space at a premium, YGFC units have acoil option suitable for use in <distrect cooling> systems, thus helping reduce pumping power while increasing the overall system efficiency.

Features

- 10 unit sizes, suitable for horizontal or vertical mounting
- Models with or without casing
- 3 speed 'whisper quiet' fans
- District cooling coil option allows reduction in pump power and increase in system efficiency
- Single coil 3, or 4 rows
- Double coil 3 or 4 rows (cooling) & 1 row (heating)
- Electric heating option
- Blue Hydrophilic coated coil protection as an option for higher life.
- Units are suitable for external static pressures of up to 60 Pa

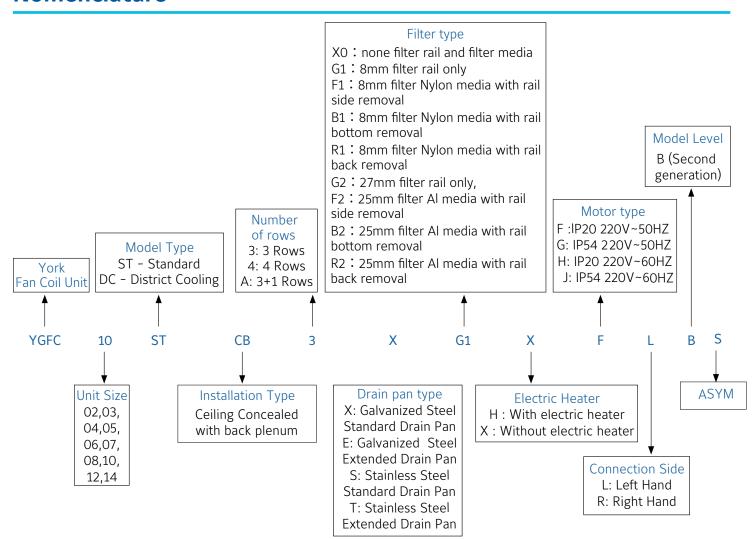




Features & Benefits

Low noise level	Units have 3 fan speeds and operate very silently. Sound Data of the units at all three speeds is available.	Whisper-quiet comfort condition results in satisfied occupants.
Wide range of air flows	Ten different sizes with 3 and 4 row coils to closely match load requirement and provide dehumidification.	Better control over comfort conditions results in satisfied occupants.
Compact size & low height	Height of ceiling unit is restricted to 233 mm for concealed unit.	Higher Ceiling heights result in optimum comfort to occupants.
Superior air distribution	Four different configurations allow designers to provide cooling in all areas with minimum ductwork.	Higher Ceiling heights result in optimum comfort to occupants.
Easy of installation	Threaded Brass connector is provided for easy piping connection. Drain and purge valves are provided on all units to assist in commissioning.	Reduces installation and commissioning time and cost.
Easy maintenance	Filters on the Concealed Units can be removed from any direction. The Motor-Blower assembly can be easily removed for servicing at different locations. Cooling coil is accessible.	Filters can be cleaned frequently resulting in healthier comfort conditions. Lowers maintenance cost.
Safety	Motors are internally protected with UL recognized components. CE marked unit available as an option.	May qualify for lower insurance premium Valid for sale in EU Countries with this option.

Nomenclature



Guide Specifications

GENERAL

Furnish and install fan coil units as indicated and scheduled in the plans. Units shall be factory assembled with coils that are pressure tested individually to 400 psi (2.8 MPa). The fans must be factory run and the manufacturer must have a facility to test the capacity of cooling coils at specified entering air conditions and specified chilled water temperature, to assure correct capacity. In addition the test facility shall be suitable to test air capacity at specified external pressure drop at indicated speed setting.

BASIC UNIT

The basic unit shall be fabricated out of 1mm galvanized steel to JIS G 3302 to Z18 or above. The fan motor shall be easily removable for serviceability. A terminal box with a terminal strip shall be provided for terminating the wiring. On ceiling concealed units with plenum, the filter shall be easily removable from either side or the back. Standard filter shall be 6 mm nylon media and an optional filter with 23mm aluminium media shall also be available. Units with powder coating finish shall be available as an option.

COILS

Coils for CB type shall be made out of 7 mm OD copper tubes. Aluminium fins shall be 0.110 mm thick and the coil shall have maximum spacing of 1.8 mm between the fins. The coil shall be pressure tested to 2.8 MPa (for a working pressure of 1.6MPa) and dehydrated before assembly. A manual air vent shall be provided on top of the coil. The coil assembly shall be protected on the side on which piping is to be fitted with a cover made of GI sheet. The metal sheet below the coil shall be powder coated to avoid corrosion. Aluminium blue fins with hydrophilic coating as standard. Golden epoxy coated fins shall be provided as an option.

MOTORS

Motors shall be 3 speed, permanent split capacitor type with Thermal overload protection. Motors shall have permanently lubricated ball bearings. The motors shall have a class B insulation. Standard motor shall be IP20 is totally available on request. Total enclosed motors shall be available on request (option). Motors shall be protected by an internal overload that is UL certified component.

FANS

Fans shall be centrifugal direct-drive, forward curved type. Fan wheel shall be statically and dynamically balanced.

TERMINAL BOX

All units shall be provided with factory installed terminal box with the fan motor wired to the box. A special terminal box equipped with 'Relays' and 'Fuse' can be provided. This allows the power for the 'Electrical Haters' to be supplied separately.

DRAIN PAN

Drain pan shall be die formed steel, sloped to the piping connection, which will be threaded for easy connection. Internal surface shall be painted with anti-corrosive paint. The drain pan shall be insulated from below the closed cell formed insulation that complies with BS476 part 6 to class 1 requirements.

TESTING

Manufacturer shall have a test facility to verify the air flow rate at specified external static pressure on all three speeds.lt shall also be possible to verify the cooling capacity with water flow rates and temperature shown in the product guide. Verification of Airflow and Capacities shall be an option available at a declared cost. The manufacturing process should have a certified ISO 9000 quality plan.

FILTER (OPTIONAL ON CB)

Filter Split - Number of filters based upon size: from 02 to 06 is 1 filter cell, from 07 to 14 is 2 filter cells.





YDFC Fan Coil Unit

2 & 4 pipe system

A complete range from 2.8 kW to 21 kW



Commercial Fan Coil Unit range, the YDFC Series is designed specially to meet the varied requirements of zone cooling or heating using chilled water or hot water. However in order to meet the growing demand in city centers where loads are high and space at a premium, YDFC units have a coil option suitable for use in <distrect cooling> systems, thus helping reduce pumping power while increasing the overall system efficiency.

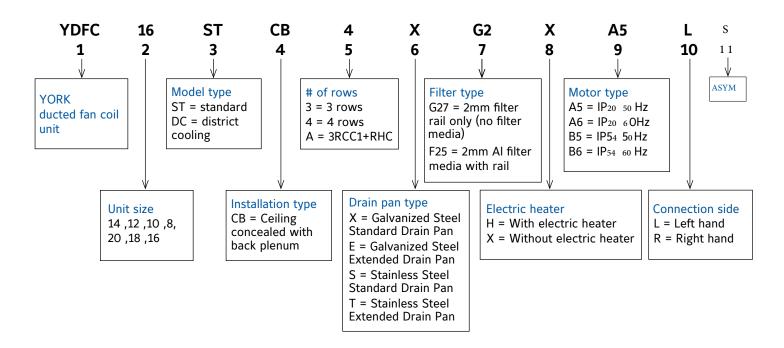
Features

- 7 unit sizes, suitable for horizontal installation
- Models with or without casing
- 3 speed 'whisper quiet' fans
- District cooling coil option allows reduction in pump power and increase in system efficiency
- Single coil 3, or 4 rows
- Double coil 3 or 4 rows (cooling) & 1 row (heating)
- Electric heating option
- Blue Hydrophilic coated coil protection as an option for higher life.
- Units are suitable for external static pressures of up to 140 Pa





Nomenclature & Features



Low noise level	Units have 3 fan speeds and operate very silently. Sound data of the units at all three speeds are available.	Whisper quiet comfort condition results in satisfied occupants.
Large range of sizes	7 different sizes with 3 and 4 rows coils both in standard and district cooling applications to closely match load requirement and provide dehumidification.	Better control over comfort conditions results in satisfied occupants.
Compact size and low height	Hegiht is restriectd to 390 mm.	Higher ceiling heights result in optimum comfort to occupants.
High static fans	Units can work upto 160 Pa ESP.	Covering high ESPs makes unit compatible for longer duct works.
Easy installation	Threaded brass / steel connector is provided for easy piping connection. Drain and purge valves are provided on all units to assist in commissioning.	Reduce installation and commissioning cost.
Easy maintenance	Filters from units can be removed from any direction. The motor blower assembly can be easily removed for servicing at different locations.	Filters can be cleaned easily and frequently causing healthier comfort conditions.
	Cooling coil is easily accessible.	Lower maintenance costs.
Safety	Motors are internally protected with UL recognized components.	May qualify for lower inssurance premium.
	CE mark units are available as option.	Valid for sales in EU countries with this option.

Guide Specifications

GENERAL

Furnish and install Fan Coil Units as indicated and scheduled in the plans. Units shall be factory assembled with coils that are pressure tested individually to 400 psi (2.8 MPa). The fans must be factory run and manufacturer must have a facility to test the capacity of cooling coils at specified entering air conditions and specified chilled water temperature, to assure correct capacity. In addition the test facility shall be suitable to test air capacity at specified external pressure drop at indicated speed setting.

BASIC UNIT

The basic unit shall be fabricated out of 1mm galvanized steel to JIS G 3302 to Z18 or above. The coil top panel and return plenum shall be insulated with PE foam. The fan motor shall be easily removable for serviceability. A terminal box with terminal strip shall be provided for terminating the wiring. The filter shall be easily removable from either side or the back. Units with powder coating finish shall be available as an option.

COILS

Coils shall be made out of 3/8 inch or 9.52mm OD copper tubes. Aluminum fins shall be 0.110mm thick and the coil shall have maximum spacing of 2.3mm between the fins. The coil shall be pressure tested under water to 2.8 Pa (For a working pressure of 1600 kpa) and dehydrated before assembly. Coil shall be provided with a drain plug in the bottom and a manual air vent on the top. The coil assembly shall be protected on the side on which piping is to be fitted with a cover made of Gl sheet. The metal sheet below the coil shall be powder coated to avoid corrosion. Gold Epoxy and Blue Hydrophilic coated fins shall be available as options. There shall also be the availability of copper fins for higher hazardous and/or humid environments.

MOTORS

Motors shall be 3 speed, permanent split capacitor type with Thermal overload protection. Motors shall have permanently lubricated ball bearings. The motors shall have a class F insulation. Standard motor shall be IP20, IP54shall be available on as an option. Total enclosed motors shall be available on request (option). Motors shall be protected by an internal overload that is UL Certified component.

FANS

Fans shall be centrifugal direct-drive, double inlet double width, forward curved type. Fan wheels shall be statically and dynamically balanced.

TERMINAL BOX

All units shall be provided with factory installed terminal box with the fan motor wired to the box. Terminal box is alway opposite side of coil connection.

DRAIN PAN

Drain Pan shall be die–formed steel, sloped to the piping connection, which will be threaded for easy connection. Internal surface shall be painted with anti–corrosive paint. The drain pan shall be insulated from below the closed cell formed insulation that complies with B5476 part 6 to class 1 requirements.

TESTING

Manufacturer shall have a test facility to verify the air flow rate at specified external static pressure on all three speeds. It shall also be possible to verify the cooling capacity with water flow rates and temperature shown in the product guide. Verification of Airflow and Capacities shall be an option available at a declared cost. The manufacturing process should have a certified ISO 9000 quality plan.

FILTER (OPTIONAL ON CB)

As an option, 25mm aluminum media filters shall be available.





Arabia is one of the leading multi-industrial companies in Saudi Arabia, Egypt, Yemen and Lebanon, to offer Building Efficiency services; through an array of smart, sustainable, customizable, integrated products, services and solutions, optimum for the residential, commercial and industrial sectors.

Johnson Controls Arabia has become a leading "one-stop-shop" for all integrated requirements; including HVAC&R Systems, Controls Systems, Building Management Systems, Security, Safety and Fire Systems. In addition, to a full array of specialized Aftermarket Services, including but not limited to diverse customizable service & maintenance contracts, rental solutions, BMS Services, Energy Audits, Chiller Replacement and others.

Johnson Controls Arabia worked on a number of high profile projects, both locally and export business, some of which needed special customization and innovative solutions to adapt to unique circumstances or requirements of the project; such as the Two Holy Mosques in Makkah & Madinah; the Clock Tower in Makkah; the New King Abdul Aziz International Airport in Jeddah; Cleveland clinics in Abu Dhabi.

Manufactured in our state-of-the-art



About Johnson Controls Arabia

75 Years
of
Innovation
Experience

Customer
Management

1st | SO
Certified
in KSA

First
ESCO
to classify
as Energy
Service Co

First
Net Zero
Center
in the Middle
East & North
Africa

Capabilities & Capacities



200,000 sqm Factory Size



11 Production Lines







We will export

186 Local Suppliers 199 Foreign Suppliers



1.5+ Million Ton
HVAC installed base
The largest in the MENA region



80% of our sales are products manufactured in OUR FACTORY

300 Saudi-made
YORK Scroll Chillers to USA

First Phase \leftarrow

30%

of our output is exported to **26 countires**



When you partner with Johnson Controls Arabia, we treat your mission as our own. We put our deep expertise, leading technology and world-class products to work for you, never resting until you achieve your goals.

Whether your mission is to heal, teach, create or connect, Johnson Controls Arabia can help you achieve it. We provide the next generation of smart building technology for these industries:



Smart Buildings



Smart Cities



Data Centers



Healthcare



Airports



Schools & Higher Education



Sports & Entertainment



Industrial

Our Addresses:

Headquarter: Alrawdah District, Madinah Road

YORK Manufacturing Complex: King Abdullah Economic City (KAEC), Industrial Valley

Contact us



jcarabia.com

S 8001242240
S ⊚ f YORKksa
S in JC_arabia
Shop.york.com.sa



Book your Factory visit now!