JEFFERSON PARISH
Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

September 18, 2018

ADDENDUM # 1

Bid No.: 50-00123954 **Bid Opening Date: October 2, 2018**

For: Purchase of Water Cooled Chiller with Variable Speed Drive and Refrigerant Purge System, Including a Five (5) Year Maintenance Agreement, for the Jefferson Parish Department of General Services

CLARIFICATION.

Question: Facility Management System and the Johnson Controls 24/7 Monitoring System are separate system requiring separate connections. Correct? If so, is it the intent of this spec to provide all equipment and software needed to make the final connections and to ensure proper operation?

Answer: Yes the Facility Management System and the Johnson Controls 24/7 Monitoring System are separate system that will require separate connections. As per section 7.0 of the specifications it calls for the bidder to supply and install all equipment and software needed to connect the new chiller to the existing Johnson Controls 24/7 Monitoring system.

Question: When connecting to the Facility Management System, since the points mapped to the system will be different than what is existing for chiller2, Should removing the existing points and mapping the new points be included in the purchasing of the chiller?

Answer: Connection of the facility management system will be provided by owner under a different contract.

Sincerely,

Misty A. Camardelle

Misty A. Camardelle, Buyer II
Jefferson Parish Purchasing Department

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form as indicated. Failure to do so will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

Joseph S. Yenni Building – 1221 Elmwood Park Blvd., Ste. 404, Jefferson, LA 70123
Office 504.364.2678
General Government Bldg. – 200 Derbigny St – Suite 4400 - Gretna, LA 70053
Office 504.364.2678
Email: Purchasing@jeffparish.net Website: www.jeffparish.net

JEFFERSON PARISH
Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

AUGUST 29, 2018

JEFFERSON PARISH ADVERTISED BID:

Re: BID #50-00123954 – PURCHASE OF WATER COOLED CHILLER WITH VARIABLE SPEED DRIVE AND REFRIGERANT PURGE SYSTEM, INCLUDING A FIVE (5) YEAR MAINTENANCE AGREEMENT, FOR THE JEFFERSON PARISH DEPARTMENT OF GENERAL SERVICES

Bid Opening Date: OCTOBER 2, 2018

To whom it may concern:

Please accept this letter as notification of the above referenced bid.

As per specifications on file in the:
Jefferson Parish Purchasing Department
200 Derbigny Street, Suite 4400
Gretna, LA 70053
(504)364-2678

AVAILABLE FOR VIEWING AND ELECTRONIC SUBMISSION AT:
http://www.jeffparishbids.net

For more information on this bid, please contact the buyer:

Misty A. Camardelle
504-364-2683
MCamardelle@jeffparish.net

Or you may visit the Purchasing Department's webpage at **www.jeffparish.net**.

Bid Number 50–00123954

PURCHASE OF WATER COOLED CHILLER WITH VARIABLE SPEED DRIVE AND REFRIGERANT PURGE SYSTEM, INCLUDING A FIVE (5) YEAR MAINTENANCE AGREEMENT, FOR THE JEFFERSON PARISH DEPARTMENT OF GENERAL SERVICES

BID DUE: OCTOBER 2, 2018 AT 2:00 PM

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received in the Purchasing Department by the bid due date and time.

Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Buyer Name: Misty A. Camardelle
Buyer Email: mcamardelle@jeffparish.net
Buyer Phone: 504-364-2683

JEFFERSON PARISH
Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

July 2018

CHANGES TO JEFFERSON PARISH BIDDING PROCEDURES

The East bank Office of Purchasing is now open! We are located in the Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Suite 404, Jefferson, LA 70123. Bidders may submit bid responses at this location, pending authorization in each bid package. **Bidders should carefully read and must respond accordingly per the requirements of the bid packages. NOTE: Bidders submitting bids on the day of bid opening, bidders must submit at the West Bank location only.**

Other Changes Continued:

- For all advertised sealed bids, written evidence of signature authority must be included with bid submission.
- Current W9 Forms and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, a current W-9 form must be supplied upon contract execution, should you be awarded a contract and/or issued a purchase order.
- **Proof of insurance in the form of a current certificate evidencing coverages is required with bid submission.** Bidders must read the insurance requirements attachment included in each bid package for specific instructions. Upon contract execution, successful bidder must produce final insurance certificates in accordance with Jefferson Parish insurance requirements.

Bidders should reference the "Additional Requirements" section of the bid instructions and/or the "Important Notice to Bidders" included in the bid package for specific requirements to respond accordingly.

For more information, please call Jefferson Parish Purchasing at 504-364-2678.

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Purchase One (1) New 350 Ton Mag Drive Centrifugal Water Cooled Chiller with Variable Speed Drive

Section 1.0 – Pre-Bid Conference:

A MANDATORY Pre-Bid Conference will be held:

Location: **Purchasing Department, 200 Derbigny Street, Suite 4400, Gretna, LA 70053**

Date: **September 14, 2018**

Time: **10:00 am**

All bidders must attend the Mandatory pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the Mandatory pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.

Section 2.0 – Scope:

We extend this proposal to provide and deliver one (1) New Mag Drive Centrifugal YMC2 York 350 Centrifugal Water Cooled Chiller with Variable Speed Drive or owner approved equal for the Jefferson Parish General Government Complex Central Plant located at 960 1st Street Gretna, LA 70053.

Section 3.0 –License Requirements:

The following Louisiana State license shall be required for this project:

- Mechanical work

Section 4.0 – Performance Bond:

A Performance Bond in the amount of 50 % of the total contract amount will be required. Performance bond shall be produced upon contract execution.

Section: 5.0 – Standards:

All equipment shall meet or exceed the following industry standards:

- ARI 550/590 – Standard for Water Chilling Packages Using the Vapor Compression Cycle
- ARI 575 – Method of Measuring Machinery Sound Within an Equipment Space
- ARI 580 – Non-Condensable Gas Purge Equipment for Low Pressure Centrifugal Chillers
- ARI 740 – Refrigerant Recovery / Recycling Equipment
- ASHRAE 15 – Safety Standard for Refrigeration Systems
- ASHRAE 34 – Designation and Safety Classification of Refrigerants
- ASHRAE 90.1 – Energy Standard for Buildings Except Low-Rise Residential Buildings
- ASME Boiler and Pressure Vessel Code: Section VIII, Division 1
- NFPA 70 / NEC – National Electrical Code
- UL 465 – Construction of Centrifugal Chillers
- UL 508 – Industrial Control Equipment (Short Circuit Current Rating)
- UL 1995 – Standard for Safety for Heating and Cooling Equipment
- AC-156, Acceptance Criteria for Seismic Certification by Shake-Table

Section 6.0 Submittals:

If another product is being bid other than the specified equipment, the bidder shall submit with their bid the chiller unit manufacturer's specification sheet/engineering guide. Failure to provide the requested information will result in the bid being deemed non-responsive.

Note: The manufacturer specification sheet/engineering guide shall include the following information:

- Chiller performance ratings conforming to and reported in accordance with ARI-550/590 [capacity (tons), energy efficiency (kW/ton), water pressure drop (ft. of water), Integrated Part Load Value (IPLV) efficiency or Non-Standard Part Load Value (NPLV)].
- Include additional power or water sources for auxiliaries (water for oil coolers, etc.) and the effect of compressor motor heat losses to the refrigerant stream in all rating calculations.
- NPLV calculated to ARI Standard 550/590 equation.
- Statement of Compliance with ASHRAE 90.1
- Part Load Performance efficiencies at 10% load increments at the following entering condenser water temperatures (ECWTs): 85°F, 80°F, 75°F, 70°F, 65°F, 60°F, and 55°F and clearly note any points where continuous, stable operation may not be achievable. Condenser water flow shall be held constant at all points.
- Sound pressure level ratings expected from measurements performed in accordance with ARI-575. Include estimates for each octave band and A-Weighted values at each of the four standard ARI points.

- Unit Drawing: Indicate overall unit dimensions, key component locations and dimensions, and field connection details for piping and electrical wiring.
- Floor layout drawing: Indicate centerlines; Indicate locations and dimensions of chiller points of contact with the floor.
- Thermal insulation requirements diagram and vibration isolator diagrams
- Shipping weight, operating weight, weight of each major component, weight load at each vibration isolator
- Capacities and Charges: Refrigerant and Oil
- Wiring Diagram: main power connections, control wiring connections (contacts and terminations), internal wiring schematic including transformers and other devices.
- Electrical data: Motor full load amperage, Job full load amperage, inrush amperage, minimum circuit ampacity, max fuse size / breaker size. Electrical requirements for power supply wiring including wiring diagrams for interlock and control wiring, clearly indicating factory-installed and field-installed wiring.
- Control Panel Details: system operating data points, status messages, safety shutdowns, cycling shutdowns, trending capability, programmable set points, interface capability for data transfer.

Section 7.0 – Bid Specifications:

The successful bidder shall supply the following:

- One (1) new fully assembled Mag Drive Centrifugal YMC2 York 350 Centrifugal Water Cooled Chiller with Variable Speed Drive or owner approved equal
- Reference attachment "A" for unit floor layout, unit data and piping locations
- Delivery of fully assembled chiller
- Supply and install all equipment software need to connect new chiller to the existing Johnson Controls 24/7 monitoring system at installation location.
- Factory commissioning and startup of new chiller
- Owner will install new bidder supplied chiller

SHIPMENT

- Protect, pack and secure loose-shipped items and attach to chiller. Include detailed packing list of loose-shipped items, including illustrations and instructions for application.
- Cap and seal water nozzle openings to prevent moisture, foreign materials and other objects from entering heat exchangers.
- Provide reinforced shrink-wrap around entire exterior of the chiller. The membrane shall cover the entire top, sides and ends to fully protect the chiller during shipping and storage. Cover equipment, regardless of size or shape.
- Ship units that are not shrink wrapped in an enclosed truck or shipping container.
- Tarping is not acceptable.

- Ship chiller in one major assembly.
- Ship refrigerant in the condenser barrel of the chiller.
- Chiller shall be fully assembled and tested before it is disassembled and prepared for shipment.
- All insulation shall be applied at the factory.
- If assembly of any part of the provided chiller is needed a manufacturer's technician shall complete re-assembly, including tightening of bolts to their recommended torque ratings, reconnection of intra-chiller electrical wiring, control wiring and refrigerant lines, etc.

Section 8.0 Chiller Description:

GENERAL DESCRIPTION

- Mag Drive Centrifugal YMC2 York 350 Centrifugal liquid chiller
- Compressor motor voltage: 460 volt, 3 phase
- Packaged centrifugal chiller including the following:
  - I. Evaporator: Shell and Tube, Hybrid Falling Film design.
  - II. Motor and compressor
  - III. Capacity control device
  - IV. Condenser with integral sub cooler
  - V. Refrigerant metering device
  - VI. Variable Speed Drive
  - VII. Control panel with user interface
- Chiller utilizing an HFC refrigerant that has an Ozone Depletion Potential (ODP) of ZERO, and that has no refrigerant production phase-out date and no phase out date for equipment that uses that refrigerant.
- Chiller to meet or exceed the scheduled performance within the limits of the scheduled parameters.
- Chiller shall be capable of operating at condenser water temperatures as low as 36°F continuously.
- Chiller shall be capable of starting with entering condenser water temperatures as low as 30°F below the leaving chilled water design point at constant flows. Chillers unable to start up with tower water temperatures as low as 36°F entering are not acceptable.
- Chillers shall have a quick start feature that allows the chiller to be up and running to original operating conditions following a power loss in as little as two and a half minutes.
- Neoprene vibration isolation pads (for slab-on-grade or basement installations): provide four neoprene pads 7/8" thick (minimum) bonded to a steel plate for each support point.
- Location of chill water and condenser water connections shall be located in the same proximity as the existing piping See attachment "B" for existing conditions.

Heat Exchangers:

- Evaporator Shell and tube, hybrid falling film design
- Condenser Shell and tube, flooded design
- Shells Carbon steel with fusion welded seams
- Constructed in accordance with ANSI/ASHRAE-15-1994 Safety Code for Mechanical Refrigeration and ASME Pressure Vessels Code and shall bare the ASME stamped nameplate.
- Tubes internally rifled, externally enhanced, individually cleanable and individually replaceable from either chiller end, or roller expanded into tube sheets.
- Tube supports Carbon steel, 3/8" thick minimum, and no more than 4 feet apart, self-supporting and welded to the shell.
- End sheets Carbon steel, 1" thick minimum.
- Water boxes Steel, bolted to end sheet, cover plate bolted to box, taps for vent and drain.

Evaporator

- Waterside working pressure 150 psig or 300 psig
- Water boxes Compact (end nozzle locations) or marine (side nozzle connections) with grooved connections or flanged connections.
- Provide water box hinges or davits on one end of the heat exchanger.
- Tubes Copper, removable from either end, minimum tube wall thickness of 0.035" at the plain lands contacting the intermediate tube supports and end sheets.
- Suction baffle Installed along the entire length of the evaporator.
- Sight glass located such that the proper refrigerant charge is near the center of the glass when the machine is off.

Condenser

- Waterside working pressure 150 psig or 300 psig
- Water boxes Compact (end nozzle locations) or marine (side nozzle connections) with grooved connections or flanged connections.
- Provide water box hinges or davits on one end of the heat exchanger.
- Tubes: Copper, removable from either end, minimum tube wall thickness of 0.035" at the plain lands contacting the intermediate tube supports and end sheets.
- Water boxes compact (end nozzle locations) or marine (side nozzle connections) with grooved connections or flanged connections. Provide water box hinges on one end of the heat exchanger.

Refrigerant Flow Control:

- Refrigerant level sensing monitor refrigerant level in the condenser; report refrigerant level back to unit control panel and control chiller accordingly.
- Refrigerant level control adjust valve position via control panel to optimize refrigerant level.

Compressor:

- Single or Multi stage.
- Single compressor that delivers the specified performance at all load and lift conditions.
- Compressor must be manufactured by the Chiller manufacture. No third party compressor will be accepted for this project.
- Fully accessible housing with vertical circular joints.
- Direct driven.
- Magnetic Bearing
- The driveline (compressor and motor) and chiller starter shall be individual unit assemblies allowing for independent inspection, service, and repair/replacement. If an integrated driveline and starter package is utilized which is not fully field repairable, the supplier must provide one spare package with the unit.
- Levitated shaft position shall be actively controlled and monitored by an X-, Y-, and Z-axis digital position sensor.
- The compressor shall be capable of coming to a controlled, safe stop in the event of a power failure by diverting stored power from the DC bus to the magnetic bearing control system.

Motor:

- Semi-hermetic permanent magnet motor
- Electrical connection: Steel terminal box with gasketed front access cover; overload and overcurrent transformers.

Source Quality Control: Test and Inspection:

- Heat Exchangers (evaporator and condenser):
    - Design and test in full conformance to the ASME Boiler and Pressure Vessel Code, Section VIII, Division 1.
    - Hydrostatically test evaporator and condenser refrigerant side at 1.3 times design working pressure AFTER tubing using LIQUID REFRIGERANT.
    - Test at 1.3 times design working pressure BEFORE tubing, using WATER; then test at 1.1 times design working pressure AFTER tubing, using AIR

Compressor Components:

- Leak tested at design working pressure using air under water.
- Hydrostatic strength test at 1.5 times design working pressure.
- To ensure UL label qualification, manufacturer shall perform a hydrostatic strength test at 3 times design working pressure every year on the compressor castings.
- Statically and dynamically balance each impeller
- Only single point chiller wiring is acceptable on this project.
- Over speed test each impeller at 120% of its maximum design RPM

Motor

- Balance rotor in accordance with ISO 1940 G2.5 (performed by motor manufacturer)
- High-potential test stator for dielectric strength for 60 seconds per UL1995 and 984 and the following formula: 2 * RATED VOLTAGE + 1000 (performed by chiller manufacturer).

Chiller air run test for 30 minutes:

- Measure current and voltage across each phase
- Stroke pre-rotation vane actuator and cycle vanes from fully closed to fully open
- Operate control panel, test functionality and log instrument readings at 10-minute intervals.

Chiller leak integrity testing:

- Pressurize entire system to design working pressure. Leak test using soap and water.
- Repair any leaks and repeat test until leak tight

Vacuum hold testing:

- Evacuate system to 500 microns and hold for one hour. Ensure that pressure does not rise more than 150 microns during the hour. Repair and repeat until passes.

Control Panel:

- Microprocessor based, stand alone
- Scope: chiller operation; monitoring of chiller sensors, actuators, relays and switches; display of all operating parameters
- Capability stable chiller operation at 36°F leaving chilled water temperature without warnings or shutdowns; no freezing or slushing of chilled water.
- Enclosure lockable, NEMA 1

- Information Display 10.4" (minimum) color liquid crystal display (LCD) mounted on control panel enclosure door.
- User interface operating parameters displayed in a user-friendly, color and graphical format.
- Keypad universal type with soft-keys
- Height Eye level; readable and operable without the need for ladder or stool.
- Temperature rating: 0 to 40 degrees Celsius
- System status information displayed on screen at all times, including the following as a minimum:
    - Unit shall have a short Circuit Current Rating (SCCR) of 100kA at 460 VAC.
    - System status
    - System details
    - Control source (remote or local)
    - User access level
    - Date and time
    - Startup sequence timer
    - Shutdown sequence timer
- Status messages: in color according to importance, indicate the following as a minimum:
    - Ready to start
    - Running and running mode (chilled water set point control or current limit control)
        - Coasting down (with countdown timer)
    - Safety shutdown – chiller requires manual restart
    - Cycling shutdown – chiller will automatically restart
    - Start inhibit and inhibit mode (anti-recycle, vane motor switch open, excess motor current)
    - System operating information, including the following as a minimum:
        - Return and leaving chilled water and condenser water temperatures
    - Evaporator and condenser refrigerant saturation temperatures
    - Evaporator and condenser pressure
    - Evaporator tube and condenser tube small temperature difference
    - Compressor discharge temperature
    - Percent of motor full load current
    - Number of compressor starts
    - Operating hours
    - Pre-rotation vane position
    - Refrigerant level position (condenser)
    - Voltage (each phase)
    - Current (each phase)
    - Input power (kW)
    - Cumulative power usage (kWh)
    - VSD – output frequency

- VSD – output voltage (each phase)
- VSD – current (each phase)
- VSD – Internal ambient temperature
- VSD – converter heat-sink temperature
- VSD – inverter heat sink temperature (each phase)
- Programmable set points: including the following as a minimum:
  - Chilled liquid temperature (set point and range)
  - Chilled liquid temperature cycling offset (shutdown and restart)
- Motor current limit (%)
- Pull-down demand (limit and time)
- Remote chilled liquid temperature (reset set point and range)

Warning Messages: the following, as a minimum:

- Real time clock failure
- Transducer errors
- Refrigerant level out of range
- Set point overridden
- Condenser high pressure limit
- Evaporator low pressure limit
- Motor high current limit

Safety Shutdowns: trigger a safety shutdown for any of the following as a minimum:

- Evaporator – low pressure
- Condenser – high pressure
- Condenser – high pressure contacts open
- Auxiliary safety – contacts closed
- Compressor discharge – high or low refrigerant temperature
- Control panel – power failure
- Motor or starter – current imbalance
- Watchdog – software reboot
- Sensor – failure or out of range
- Transducer – failure or out of range
- Motor controller – fault
- VSD – shutdown, requesting fault data
- VSD – stop contacts open
- VSD – 105% motor current overload
- VSD – high converter heat sink temperature
- VSD – high inverter heat sink temperature (indicate phase)
- VSD – pre charge lockout

Safety Shutdowns: for each safety shutdown, indicate the following as a minimum:

- System status and details
- Day and time of shutdown
- Cause of shutdown
- Type of restart required

Cycling Shutdowns: indicate the following as a minimum:

- Multiunit cycling – contacts open
- System cycling – contacts open
- Control panel – power failure
- Leaving chilled liquid – low temperature
- Leaving chilled liquid – flow switch open
- Condenser – flow switch open
- Motor controller – contacts open
- Motor controller – loss of current
- Power fault
- Control panel – schedule
- VSD shutdown – requesting fault data
- VSD – stop contacts open
- VSD – initialization failed
- VSD – high instantaneous current (indicate phase)
- VSD – gate driver (indicate phase)
- VSD – single phase input power
- VSD – high or low DC bus voltage
- VSD – DC bus voltage imbalance
- VSD – pre charge: low DC bus voltage
- VSD – pre charge: DC bus voltage imbalance
- VSD – high internal ambient temperature
- VSD – invalid current scale selection
- VSD – low converter heat sink temperature
- VSD – low inverter heat sink temperature (indicate phase)
- VSD – logic board processor
- VSD – run signal
- VSD – serial communications
- Security Access through ID and password recognition defined by a minimum of three different levels of user capability:
    - View prevent unauthorized changing of set points
    - Operator allow local or remote control of chiller
    - Service allow manual operation of pre-rotation vanes and oil pump

- Chiller information screen on-screen display of
  - Model number
  - Chiller serial number
  - Control panel serial number
  - Manufacturer contract number
  - Design voltage
  - Refrigerant type
  - Starter type
  - Original factory rating information (per ARI rating)
- Data tracking and trend display: on-screen graphical display of:
  - Parameters selected from a list of a minimum of 100 possibilities
  - Data collected once per second up to once per hour for each parameter
  - Data trend lines displayed for a minimum of 5 parameters at once
  - History: store last ten shutdowns and display all system parameters at the time of shutdown
- Memory: non-volatile type containing operating program and set points, capable of retention for 10 years without memory loss, despite AC or backup battery power loss.
- Overcurrent protection: fused connection through a transformer in the motor starter panel to protect all controls
- Terminal Strip clearly numbered to accept field interlock wiring

Remote communications: via electrical contacts, control panel capability to indicate the following as a minimum:

- Ready to start contacts
- Safety shutdown contacts
- Cycling shutdown contacts
- Running contacts

Remote communications: via 4-20 mA or 0-10V analog signals, control panel capability to adjust the following as a minimum:

- Leaving chilled liquid set point
- Current limit set point
- Chiller start and stop

Data logging and printing: via RS-232 or similar, control panel capability for exporting at user-programmable intervals:

- All system operating data
- Shutdown and cycling messages
- Operating details of last 10 cycling or safety shutdowns
- Units of measure: capable of displaying in either English or Metric units

Compressor Motor Starter: Variable Speed Drive

General:

- Variable Speed Drive (VSD) compressor motor starter to start motor and control motor speed by controlling the frequency and voltage of the electrical power supplied to the motor.
- Drive type Pulse width modulated (PWM) utilizing insulated gate bipolar transistors (IGBTs)
- Control Logic independently control motor speed and pre rotation vane (PRV) position for optimum efficiency and operational stability. Base motor speed and PRV position on a minimum of 4 inputs: leaving chilled water temperature, return chilled water temperature, evaporator refrigerant pressure, condenser refrigerant pressure; Verify motor speed and PRV position and also use as inputs to the control logic.
- Power Factor at all loads and speeds provide a minimum of a .95 power factor; or a .97 power factor with active harmonic filtration.
- Capacitors shall not require scheduled replacement. If capacitors do not meet this requirement, the chiller manufacturer shall provide one spare sets of capacitors per compressor for the building owner's stock.
- Enclosure NEMA-1; hinged access door with door interlock; lock and keys; padlock able.
- Cooling cool drive and harmonic attenuation components and internal ambient air via fluid-cooled, closed loop; all starter components accessible for service and replacement without opening the chiller's main refrigerant circuit.
- Factory run test Perform an electrical and mechanical run test of VSD starter prior to shipment to verify proper wiring and phasing.
- Factory settings: Set starting design current and current overload settings prior to shipment
- Current: 5% maximum current total demand distortion
- Inrush amperage: limited to the design full load amperage of the chiller.
- Protective devices provide the following, as a minimum:
    - Electronic current-sensing overloads (1 per phase) – with indicating message on the control panel and reset button; shut down chiller upon detection of operating current exceeding 105% full load amperage.
    - High instantaneous current overload – with indicating message on the control panel and reset button; shut down chiller upon detection of starting current exceeding 115% of design inrush starting current for 1 second
    - Phase rotation insensitivity
    - Single phase failure protection circuit with indicating light – shut unit down if power loss occurs in any phase at startup.

- High temperature safety protection system on IGBTs with indicating light and reset button; via thermistors embedded on IGBT heat sinks – shut unit down if IGBT temperature exceeds acceptable limits.
- Power fault protection for momentary power interruptions – interrupt power to the compressor motor within 4 line cycles upon detection of power interruptions longer than ¾ of a line cycle
- High and low line voltage protection
- Additional Voltage surge suppression devices if standard design unable to exceed IEEE C62.41.1 recommendations

Features:

- Control transformer 115volt, sized to power control panel and all unit controls
- Electrical lugs: tin plated, sized to accept the copper power lines required by the chiller
- Single point power from electrical lugs at starter, power all powered devices on the chiller including control panel, control devices, line reactor circuitry, active harmonic filter, oil pump and refrigerant purge
- Circuit-breaker disconnect door interlocked; ground fault protection; minimum 100,000A short circuit withstand RMS Symmetrical Amperes capacity

Control panel readouts: display on the control panel and provide to BAS via communication port the following as a minimum:

- Output frequency
- Output voltage
- Three phase current
- Input power (kW)
- Energy consumption (kWh)
- Elapsed running time
- Three phase voltage total harmonic distortion (THD)
- Three phase current total demand distortion (TDD)
- Total unit power factor
- Total supply KVA

Finishes:

- Dry chiller components for shipment, including inside of water boxes and tubes.
- Blast and clean chiller surfaces thoroughly. Apply prime coat for painting
- Paint all exposed surfaces with alkyd-modified, vinyl enamel machinery paint, including all factory-applied insulation for consistent color matching. If not painted in the factory, paint over insulation in the field with manufacturer's standard paint and color.

Additional Options to be Included with Chiller:

- Refrigerant isolation valves: two butterfly valves, one on the compressor discharge line and one on the liquid line.
- Insulation package (available on units shipping in a single piece): factory insulate evaporator, end sheets, suction line, liquid line and other cold surfaces with 3/4" or 1-1/2" closed-cell neoprene foam insulation. Adhere with vapor-proof cement. (Water boxes and nozzles must be field insulated with removable covers over bolts)
- Factory installed thermal flow sensors located in the chilled and condenser water nozzles.
- Thermal flow sensor shall be factory wired to new chiller control panel.
- Direct Digital Control System (DDC)
- BACnet compatible
- Must be capable of connecting to the existing Johnson Control facility management system.

Section 9.0 – Start Up and Commissioning:

Technician shall perform the following steps as a minimum with an owner's representative present:

- Check chiller installation
- Inspect chiller for water and refrigerant leaks and report any leaks to owner.
- Charge machine with refrigerant and oil if applicable
- Energize the unit disconnect switch
- Verify correct voltage, phases and cycles
- Verify correct direction of rotation prior to start up.
- Start chiller
- Test machine for performance within design rating parameters
- Make adjustments as required
- Submit a startup report summarizing findings and activities performed.
- Review operating and maintenance manual with owners representatives
- Instruct owner's personnel with proper operation of the control panel, including its special features and capabilities.
- Provide four (4) hours of training by manufacturer's factory-trained and factory-employed service technician on the following:
    A. Startup
    B. Shutdown
    C. Control panel
    D. Motor starter

E. Variable Speed Drive (VSD)
F. Lubrication system
G. General operation
H. Maintenance
I. General Maintenance
J. Trouble Shooting

- Clean exterior prior to transfer to owner
- The manufacturer's technician shall leak test the unit, checking thoroughly for leaks.
- Any leaks must be fixed before the technician charges machine with refrigerant and oil.
- Provide Installation, Operation & Maintenance Manual(s) in the chiller control panel door. Provide three (3) additional copies for owner
- Provide three (3) copies of Spare Parts Manual for owner's project system manual

Section 10.0 – Delivery of Chiller:

- Supply all labor, materials, travel charges, and transportation fees to ship chiller.
- Offloading of chiller will be provided under another contract
- Chiller and all associated equipment shall be shipped to American Machine Movers Inc. 247 IRIS Avenue, Jefferson, LA 70121

Section 11.0 – Warranty:

Provide a five (5) year warranty in writing from the manufacturer of the chiller to include the following:

- All parts
- Labor
- Refrigerant
- Incidental Materials
- Travel Charges
- Lodging

Warranty shall begin at completion of startup and commissioning.

Section 12.0 – Maintenance Agreement:

Provide a five (5) year Maintenance Agreement from the manufacturer of the chiller to perform the following each year:

Maintenance agreement shall begin at completion of startup and commissioning.

Quarterly inspections (January, April, July, and October)

The following items shall be inspected and tested quarterly:

1. Generate a Log in the Johnson Controls 24/7 Monitoring Service for Reference.
2. Preform all maintenance task as recommended by the Chiller Manufacture.
2. Operating temperatures and pressures
3. Operating and safety controls

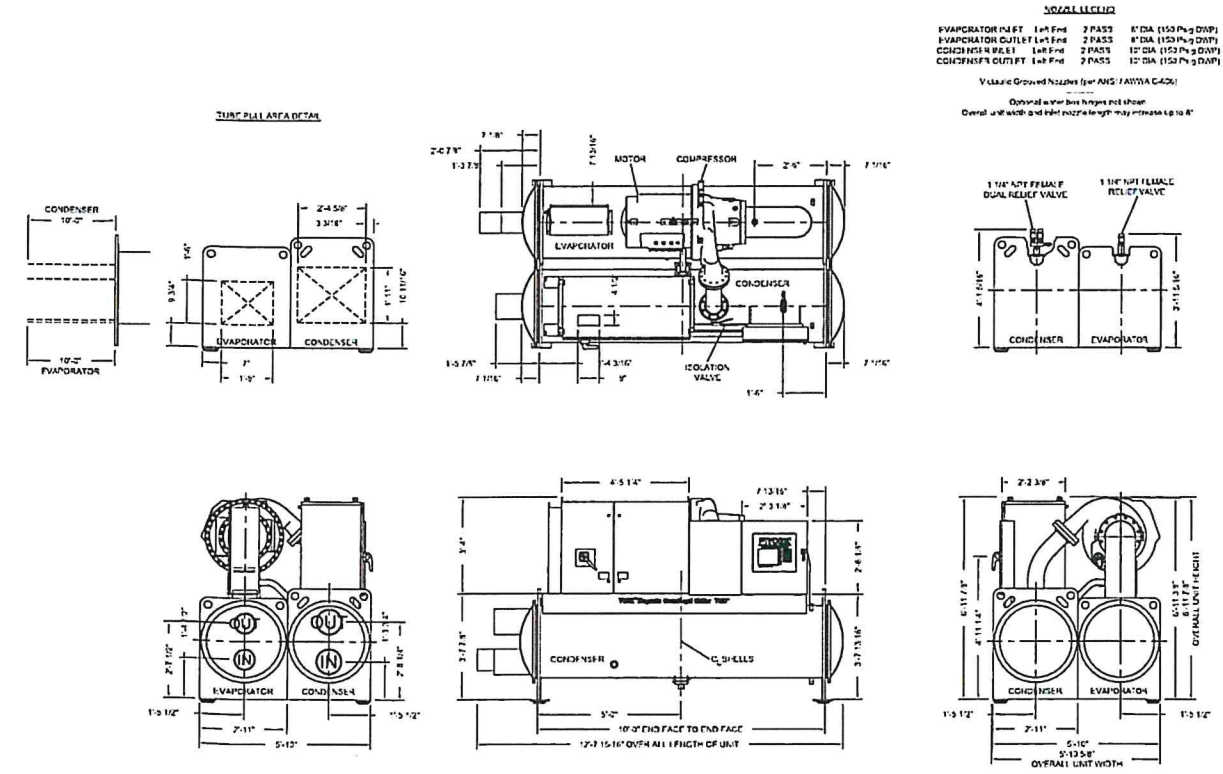
Annual Inspections and recommendations:

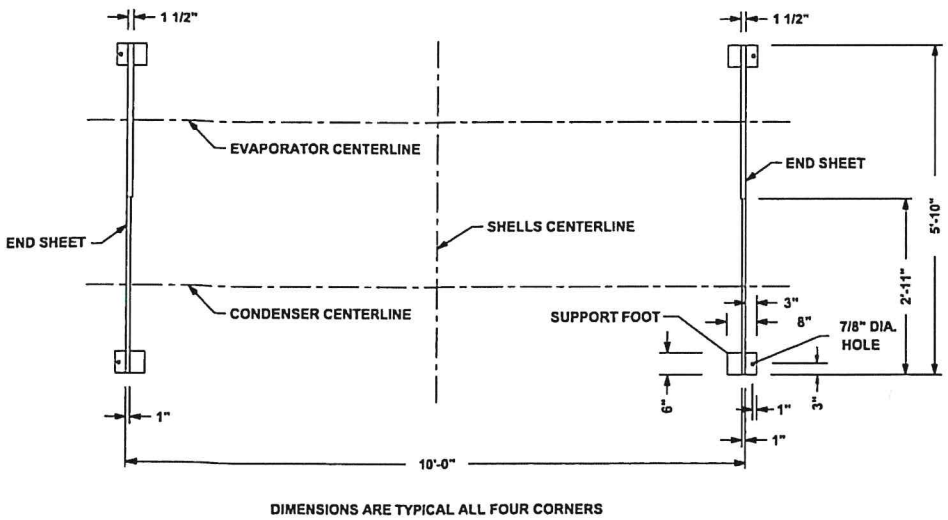
- Once per year, make recommendations for the cleaning of each heat exchanger. Technician shall take measurements of small temperature difference across heat exchanger tubes and base the recommendation on this data.
- Preform all maintenance task as recommended by the Chiller Manufacture.
- Generate a log in the Johnson Controls 24/7 Monitoring service for Reference.
- Eddy current testing of evaporator (baseline and year 5)
- Eddy current testing of condenser (baseline, year 3 and year 5)

Section 13.0 – Notice to Proceed/Pre-Delivery Meeting:

No materials shall be ordered until the successful bidder receives a written Notice to Order Materials and no work shall be performed until the successful bidder receives a written "Notice to Proceed" to begin work, from the Department of General Services.

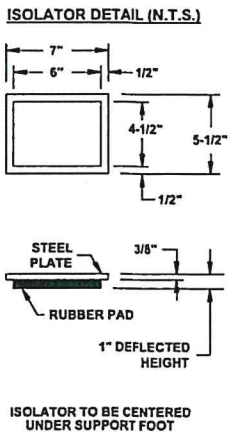
Attachment "A"





DIMENSIONS ARE TYPICAL ALL FOUR CORNERS

FLOOR LAYOUT (NOT TO SCALE)



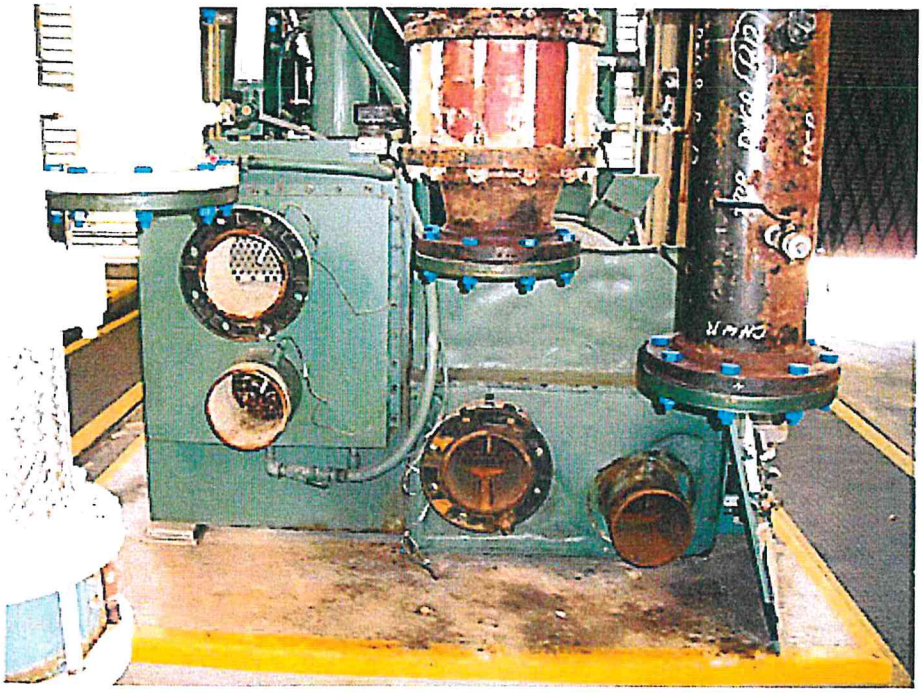
ISOLATOR TO BE CENTERED UNDER SUPPORT FOOT

Unit Tag	Qty	Model No.		Net Capacity (tons)	Power	Refrigerant
Ch-*1	1	YMC2-S1231AB		350.0	460/3/60.0	R-134A

Unit Data	Evaporator	Condenser
Compressor Model: M2C-218FAC	Model: EB2910-658-3S1-2GSL	Model: CB2910-262-DS1-2GSL
EWT (°F):	54.00	85.00
LWT (°F):	44.00	94.30
Flow Rate (gpm):	837.3	1059
Pressure Drop (ft H2O):	9.14	7.79
Fluid Type (%):	WATER	WATER
Circuit No. of Passes:	2	2
Fouling Factor (ft² °F hr / Btu):	0.000100	0.000250
Tube No. / Description:	658 - 0.035" thick. Enhanced Copper (1")	262 - 0.035" CSL Enhanced Copper
Design Working Pressure (psig):	150	150
Entering Water Nozzle @ Location:	L	L
Leaving Water Nozzle @ Location:	L	L
Water Box Weight. ea (lb) :	211	210
Cover Plate Weight . ea (lb):	N/A	N/A
Return Head Weight (lb):	144	144
Water Weight (lb):	699	915
Water Volume(gal):	84	110
Min Flow Rate (gpm):	476.0	752.4
Max Flow Rate (gpm):	1904	2736

Performance Data		Electrical Data		Other	
Job KW:	198.8	Job FLA:	261	Operating Wt. (lb):	17126
KW/Ton.R:	0.5680	Min Circuit Ampacity (Amps):	327	Per Isolator (lb):	4282
IPLV.IP(KW/Ton.R):	0.3519	Max Fuse/Breaker:	500	Refrigerant Wt. (lb):	892
				Compressor Wt. (lb):	2987
Isolation Valves:	YES			Ship Wt (lb):	15544
		Type Starter: VSD w/ filter			
		VSD Model: HYP0490XHC30B-46A			

Attachment "B"



DATE: 8/29/2018

BID NO.: 50-00123954

INVITATION TO BID
THIS IS NOT AN ORDER

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

BUYER: MCamardelle@jeffparish.net

BIDS WILL BE RECEIVED IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053 UNTIL 2:00 PM, 10/02/2018 AND PUBLICLY OPENED THEREAFTER.

For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only. All bids will be publicly opened at the West Bank location.

At no charge, bidders may also submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

Unless submitting via online (see Page 3), each bid must be submitted in a sealed envelope bearing on the outside; the name of the Bidder, his address, and the name of the project for which the bid is submitted and the bid number.

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from http://purchasing.jeffparish.net and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submitted a bid in response to this solicitation may submit a protest in writing to the Director of the Purchasing within 48 hours of bid opening. The Purchasing Director will review it in connection with the Parish Attorney's Office which will then respond in writing as soon as possible.

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and Parish taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at http://purchasing.jeffparish.net.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 dated 12/09/09. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at http://purchasing.jeffparish.net and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

1, 3, 4, 5, 6, 8, 10, 11, 12, 13, 15

MANDATORY

PRE-BID CONFERENCE TO BE HELD AT: *MANDATORY* 200 DERBIGNY ST., SUITE 4400 GRETNA, LA 70053 AT 10:00 AM ON 9/14/2018

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.

2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.

3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.

4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.

5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.

6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. PUBLIC WORKS BIDS: All awards for public works in excess of $5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of $25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.

8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.

9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.

10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.

11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies) If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.

12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.

13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.

14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment"). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owned on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session – Louisiana Revised Statute 47:301(8)(c). Owner will furnish contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

BID FORM

Non Public Works

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES _____ NO ✓

MAXIMUM ESCALATION PERCENTAGE REQUESTED _____%

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF 1-30-2019.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed,for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES 15 WEEKS

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) 504

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: JOHNSON CONTROLS INC.

ADDRESS: 2835 HESSMER AVE

CITY, STATE: METAIRIE LA. ZIP: 70002

TELEPHONE: (504) 779-8500 FAX: (504) 779-8520

EMAIL ADDRESS: david.a.roux@JCI.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form.Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: 1

NUMBER: _____

NUMBER: _____

NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: $ 209,718.00

AUTHORIZED SIGNATURE: _____ CHAD STRAUGHAN

Printed Name

TITLE: MARKET DIRECTOR

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00123954

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			PURCHASE OF WATER COOLED CHILLER WITH VARIABLE SPEED DRIVE AND REFRIGERANT PURGE SYSTEM, INCLUDING A FIVE (5) YEAR MAINTENANCE AGREEMENT, FOR THE JEFFERSON PARISH DEPARTMENT OF GENERAL SERVICES		
1	1.00	EA	0010 - 350-TON WATER COOLED CHILLER (MAG DRIVE CENTRIFUGAL) CENTRAL PLANT WE EXTEND THIS BID TO PROVIDE AND DELIVER ONE (1) NEW MAG DRIVE CENTRIFUGAL YMC2 YORK 350 CENTRIFUGAL WATER COOLED CHILLER WITH VARIABLE SPEED FOR CENTRAL PLANT LOCATED AT 960 1ST STREET, GRETNA, LA FOR THE DEPARTMENT OF GENERAL SERVICES AS PER THE ATTACHED SPECIFICATIONS. OWNER WILL INSTALL	209,718.00	209,718.00

Johnson Controls

DELEGATION OF AUTHORITY CERTIFICATE

The undersigned, Vice President and President, Building Solutions, North America, pursuant to the authority vested in him by: (i) a Sub-Delegation of Authority from **Johnson Controls, Inc.**, a Wisconsin corporation ("JCI"), dated June 6, 2017, (ii) an Incumbency Certificate and Delegation of Authority from the general partner of **Johnson Controls Fire Protection LP** (formerly known as SimplexGrinnell LP), a Delaware limited partnership ("JCFP"), dated June 8, 2017, and (iii) a Written Consent in Lieu of Special Meeting of the Management Board from **Johnson Controls Security Solutions LLC** (formerly known as Tyco Integrated Security LLC), a Delaware limited liability company ("JCSS"), dated June 8, 2017, hereby authorizes:

Chad M. Straughan
Market Director / Construction Sales Manager

(the "Delegate") to perform, on behalf of each of JCI, JCFP and JCSS, the acts described below:

> To execute and deliver any and all contracts for the performance of work, sale of goods, and furnishing of services, and any other instruments in connection therewith and in the ordinary course of business and in accordance with the current Global Approval Authority Matrix.

This authority does not extend to:

a. further sub-delegation of the above acts absent necessary approvals in writing;
b. the execution of surety, performance or bid bonds;
c. the signing of any notes, contracts, or any other agreement to borrow money in the name of JCI, JCFP and JCSS, or any form of guaranty for the payment or performance of obligations of any subsidiary, affiliate, or joint venture of JCI, JCFP and JCSS; or
d. the signing, on behalf of JCI, JCFP and JCSS, of any deeds, abstracts, offers to purchase or any other instruments pertaining to the purchase or sale of real property.

Any actions taken by such Delegate within the scope of acts authorized herein taken between the date of expiration of any prior delegation of authority and the date hereof are hereby ratified, confirmed and approved as the acts and deeds of JCI, JCFP and JCSS.

This authority shall remain in full force and effect through June 3, 2019.

Signed at Milwaukee, Wisconsin, this 4th day of June, 2018.

Johnson Controls, Inc., Johnson Controls Fire Protection LP, and Johnson Controls Security Solutions LLC

Rodney N. Rushing
Vice President and President
Building Solutions, North America

ATTESTS:

Steven W. Keane
Vice President and Assistant Secretary
Johnson Controls, Inc.

Jennifer L. Leong
Vice President and Secretary
Johnson Controls Fire Protection LP

Lee M. Finney
Vice President and Secretary
Johnson Controls Security Solutions LLC

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF _____ INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____ INCORPORATED, DULY NOTICED AND HELD ON _____, A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

RESOLVED THAT _____, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BEEN REVOKED OR RESCINDED.

_____

SECRETARY-TREASURER

_____

DATE

Non-Public Works Bid
Affidavit Instructions

- **Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.**
- **Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.**
- **Affidavit must be notarized or the affidavit will not be accepted.**
- **Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.**
- **Affiant MUST select either A or B when required or the affidavit will not be accepted.**
- **Affiants who select choice A must include an attachment or the affidavit will not be accepted.**
- **If both choice A and B are selected, the affidavit will not be accepted.**
- **Affidavit marked N/A will not be accepted.**
- **It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.**

Instruction sheet may be omitted when submitting the affidavit

Non-Public Works Bid

AFFIDAVIT

STATE OF LOUISIANA

PARISH/COUNTY OF JEFFERSON

BEFORE ME, the undersigned authority, personally came and appeared: CHAD STRAUGHAN _____, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized MARKET DIRECTOR of JOHNSON CONTROLS INC (Entity), the party who submitted a bid in response to Bid Number 50-00123954 to the Parish of Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

Choice B ✓ there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

Choice B ✓ There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[*The remainder of this page is intentionally left blank.*]

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

Signature of Affiant

CHAD STRAUGHAN
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 24TH DAY OF September, 2018

Mary M. White
Notary Public

Mary M. White
LA Bar Roll No. 08506
Notary Id No. 20856
Printed Name of Notary

Notary/Bar Roll Number

My commission expires AT DEATH.

Print

Notary Search - Detail

Name:	**MS. MARY MODENBACH WHITE**
Address:	**P.O. BOX 6768** **METAIRIE, LA 70002**
Phone:	**(504) 885-9994**
Phone 2:	**(504) 734-8218**
Notary ID Number:	**20856**
Parish:	JEFFERSON **with STATEWIDE JURISDICTION**
Agency:	N/A
Notary Type:	Attorney
	Bar Roll #: 8506
Status:	Active
Commission Date:	08/10/2005
Oath Date:	07/27/2005
Surety Expiration Date:	Not Required
Annual Report Current:	**Not Applicable**

Notary Events

Parish Change	Previous Parish: ORLEANS	Previous Commission Date: 08/01/1984

Deceased, Inactivated, Leave of Absence, Pre-Assessment Registration, Pre-Assessment Taken, Resigned, Retirement, and Revoked events are not available prior to February 11, 2012.

Back to Search Results | New Search

STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES

All required insurance under this bid shall conform to Jefferson Parish Resolution No. 113646 or No. 113647, as applicable. Contractors may not commence any work under any ensuing contract unless and until all required insurance and associated evidentiary requirements thereto have been met, along with any additional specifications contained in the **Invitation to Bid**. Except as where otherwise precluded by law, the Parish Attorney or his designee, with the concurrence of the Director of Risk Management or his designee, may agree on a case-by-case basis, to deviate from Jefferson Parish's standard insurance requirements, as provided in this Section. Vendors requesting deviation therefrom shall submit such requests in writing, along with compelling substantiation, to the Purchasing Department prior to the bid's due date. Any changes to the insurance requirements will be reflected in the bid specifications and addenda. Prior to contract execution and at all times thereafter during the term of such contract, contractors must provide and continuously maintain all coverages as required by the foregoing Resolutions, and the contract documents. Failure to do so shall be grounds for suspension, discontinuation or termination of the contract.

For bidding purposes, bidders must submit with bid submission a current (valid) insurance certificate evidencing the required coverages. Failure to comply will cause bid to be rejected. The current insurance certificate will be used for proof of insurance at time of evaluation. Thereafter, and prior to contract execution, the low bidder will be required to provide final insurance certificates to the Parish which shall name **the Jefferson Parish, its Districts Departments and Agencies under the direction of the Parish President and the Parish Council** as additional insureds regarding negligence by the contractor for the Commercial General Liability, Workmen's Compensation Insurance and the Comprehensive Automobile Liability policies. Additionally, said certificates should reflect the name of the Parish Department receiving goods and services and reference the respective Jefferson Parish bid number.

JEFFERSON PARISH REQUIRED STANDARD INSURANCE

☑ **WORKER'S COMPENSATION INSURANCE**

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be $1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than $500,000 per occurrence.

Note: If your company is not required by law to carry workmen's compensation insurance, i.e. not a Louisiana company, sole employee of the company, then bidders must request a workmen's compensation insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being

rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

☑ **COMMERCIAL GENERAL LIABILITY**

Shall provide limits not less than the following: $1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

☑ **COMPREHENSIVE AUTOMOBILE LIABILITY**

Bodily injury liability $1,000,000.00 each person; $1,000,000.00 each occurrence. Property Damage Liability $1,000,000.00 each occurrence.

Note: This category may be omitted if bidders do not/will not utilize company vehicles for the project or do not possess company vehicles. Bidder must request an automobile insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

DEDUCTIBLES

No insurance required shall include a deductible not greater than $10,000.00. The cost of the deductible shall be borne by the contractor.

NOTE: If the vendor requires a change in deductibles, the request must be submitted in writing to the Purchasing Department prior to the due date of the bid. Such request shall be reviewed by the Parish Attorney's Office with the concurrence of the Director of Risk Management.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

FOR CONSTRUCTION AND RENOVATION PROJECTS:

The following are required unless otherwise specified in the bid. Such insurance is due upon contract execution.

1) **OWNER'S PROTECTIVE LIABILITY**

   To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

2) **BUILDER'S RISK INSURANCE**

   The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.

Proposal for

JEFFERSON PARISH PURCHASING DEPARTMENT

Bid Number 50-00123954

Purchase of Water Cooled Chiller with Variable Speed Drive and Refrigerant Purge System, Including a Five (5) Year Maintenance Agreement, for The Jefferson Parish Department of General Services.

Prepared for:

Jefferson Parish Department of Purchasing

Submitted By:

New Orleans Branch
2835 Hessmer Ave.
Metairie LA 70002
Phone (504) 779-8500
Fax (504) 779-8522

Louisiana Contractors License No. 504

October 2, 2018

Johnson Controls

PROPOSAL

2835 Hessmer Avenue
Metairie, LA 70002
504-779-8500

October 2, 2018

Jefferson Parish Purchasing Department
200 Derbigny Street
Gretna, LA. 70053

Attn. Purchasing Department

Re. Bid No. 50-00123954

Please acceptance this as part of our Bid submitted for the Subject Bid Number.

In response to the Subject Bid, Johnson Controls offers below, descriptions of our understanding as we responded to the Bid Documents.

Our Total Price is inclusive of the Chiller Purchase along with the total price of a five year maintenance agreement as described in the bid document.

Our Bid Bond covers the total price of the bid as specified in the bid documents.

If selected, JCI will provide a performance bond in the amount of 50% of the total contract amount as specified in the bid documents.

In accordance with Page 2 of the Invitation to Bid, Paragraph D, No taxes were included with the prices provided in this Bid.

Included with this Bid

Bid Bond

W-9 Form for Johnson Controls Inc.

Certificate of Insurance for Johnson Controls Inc.

Submittal Data for YMC2 Chiller Proposed.

YORK YMC2 Sales Brochure

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Johnson Controls, Inc.
2835 Hessmer Avenue
Metairie, LA 70002

SURETY:
(Name, legal status and principal place of business)
Liberty Mutual Insurance Company
175 Berkeley Street
Boston, MA 02116
Mailing Address for Notices
175 Berkeley Street
Boston, MA 02116

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)

Jefferson Parish Government
200 Derbigny Street
Gretna, LA 70053

BOND AMOUNT: 5% Five Percent of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)

Purchase of water cooled chiller with variable speed drive and refrigerant purge system, including a five year maintenance agreement for Jefferson Parish Department of General Services, # 50-00123954

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 19th day of September, 2018.

(Witness) Eric Strba

Johnson Controls, Inc.
(Principal) *(Seal)*

By:
(Title) Donna Planeta Attorney-in -Fact

(Witness) Nicholas Turecamo

Liberty Mutual Insurance Company
(Surety) *(Seal)*

By:
(Title) Joshua Sanford, Attorney-in-Fact

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS

Johnson Controls
5757 N. Green Bay Avenue
Milwaukee, WI 53209
414-524-1200

Johnson Controls

DELEGATION OF AUTHORITY

The undersigned, President of Johnson Controls, Inc., a Wisconsin corporation (the "Company"), pursuant to the authority vested in him by a certain resolution adopted by the Board of Directors of the Company on October 25, 2016, hereby authorizes:

Donna Planeta, Assistant Client Services Specialist
Willis of New York, Inc.
10 State House Square, Floor 11
Hartford, CT, 06103

to perform, on behalf of the Company, the acts described below:

> To execute, seal and deliver, as attorney-in-fact for the Company, surety bonds forwarded to Willis of New York, Inc. by the Company that do not exceed Two Million Dollars ($2,000,000.00) that are necessary and proper in carrying on the business of the Company.

This authority shall remain in full force and effect for one (1) year from the date of issue unless earlier revoked in writing by the Company President or any Vice President.

Signed at Milwaukee, Wisconsin, this 17 day of August 2018.

Michael R. Peterson, President

Attest:

Marc E. L. Vandiepenbeeck, Treasurer

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. To confirm the validity of this Power of Attorney call 610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joshua Sanford of the city of New York, state of NY its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond:

Principal Name: Johnson Controls, Inc.

Obligee Name: Jefferson Parish Government

Surety Bond Number: Bid Bond **Bond Amount:** See Bond Form

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 6th day of March, 2017.

The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 6th day of March, 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 19th day of September, 2018.

By: _____
Renee C. Llewellyn, Assistant Secretary

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

JOHNSON CONTROLS INC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☑ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) 5

Exemption from FATCA reporting code (if any) E

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

5757 N GREEN BAY AVE

Requester's name and address (optional)

6 City, state, and ZIP code

MILWAUKEE WI 53209

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

3	9	–	0	3	8	0	1	0

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ [signature] Date ▶ 2/16/2018

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 9/21/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	Attn: Cert Center		
Marsh USA Inc. 411 East Wisconsin Avenue Suite 1300 Milwaukee, WI 53202	PHONE (A/C, No, Ext):	(866) 966-4664	FAX (A/C, No):	(212) 948-5167
	E-MAIL ADDRESS:	JCI.CertRequest@marsh.com		

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	OLD REPUBLIC INSURANCE CO	24147
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
Johnson Controls, Inc.
Tyco International Holding S.a.r.l.
SimplexGrinnell LP
(see attached Acord 101)
5757 North Green Bay Avenue
Milwaukee, WI 53209

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☒ OCCUR ☒ CONTRACTUAL LIABILITY ☒ XCU Included GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PROJECT ☐ LOC ☐ OTHER			MWZY 313947	10/01/2018	10/01/2019	EACH OCCURENCE	$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$2,000,000
							MED EXP (Any one person)	$50,000
							PERSONAL & ADV INJURY	$2,000,000
							GENERAL AGGREGATE	$2,000,000
							PRODUCTS - COMP/OP AGG	INC IN GEN AGG
A	AUTOMOBILE LIABILITY			MWTB 313946 (Excludes New Hamp)	10/01/2018	10/01/2019	COMBINED SINGLE LIMIT (Ea Accident)	$2,000,000
A	☒ ANY AUTO			MWTB 313949 (Primary NH $250k)	10/01/2018	10/01/2019	BODILY INJURY (Per person)	
A	☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ONLY ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY			MWZX 313950 (Excess NH $1.75mm) Excess NH Auto is follow form to Primary NH Auto	10/01/2018	10/01/2019	BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	
	☐ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N: N	N/A	MWC 313943 00 (AOS – See Pg 2)	10/01/2018	10/01/2019	☒ PER STATUTE ☐ OTH-ER	
A				MWXS 313944 (OH & WA)	10/01/2018	10/01/2019	E.L. EACH ACCIDENT	$2,000,000
							E.L. DISEASE - EA EMPLOYEE	$2,000,000
							E.L. DISEASE - POLICY LIMIT	$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

JCI / Tyco Contract Number:
JCI / Tyco Project Name:
Customer PO Number:

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
of Marsh USA Inc.
by Ann Moody

AGENCY CUSTOMER ID: _____

LOC#: _____

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Marsh USA Inc.	Johnson Controls, Inc. Tyco International Holding S.a.r.l. SimplexGrinnell LP 5757 North Green Bay Avenue Milwaukee, WI 53209
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE: 10/01/2018

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 (2016/03) FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

WORKERS COMPENSATION:
Workers Compensation "AOS" Policy includes coverage for employees from the following States WHILE WORKING IN ANY STATE:AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NJ, NM, NV, NY, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WI, & WV.

PRIMARY COVERAGE:
The General Liability and Automobile Liability policies are primary and not excess of or contributing with other insurance or self-insurance, where required by written lease or written contract. For General Liability, this applies to both ongoing and completed operations.

WAIVER OF SUBROGATION:
The General Liability, Automobile Liability, Workers' Compensation and Employers Liability policies include a Waiver of Subrogation in favor of the certholder and any other person or organization, BUT ONLY to the extent required by written contract.

ADDITIONAL INSURED – AUTOMOBILE LIABILITY:
The Automobile Liability policy, if required by written contract, includes coverage for Additional Insureds as required by such written contract.

ADDITIONAL INSURED – GENERAL LIABILITY:
For General Liability, if required by written contract, the following are included as additional insureds, as required pursuant to a written contract with a named insured, per attached Policy Endorsements A2 and A2A: THE CERTIFICATE HOLDER LISTED ON THIS CERTIFICATE OF LIABILITY INSURANCE, AND EACH OTHER PERSON OR ORGANIZATION REQUIRED TO BE INCLUDED AS AN ADDITIONAL INSURED PURSUANT TO A WRITTEN CONTRACT WITH THE NAMED INSURED.

SCHEDULE FOR POLICY ENDORSEMENTS A2 AND A2A
Name of Additional Insured Person(s) or Organization(s):
If required by contract, the person or organization listed on the certificate of insurance as additional insured, and each other person or organization required to be included as an additional insured pursuant to a contract with a named insured.

Location(s) of Covered Operations:
As required by contract.

POLICY ENDORSEMENT A2
ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – NAMED INSURED'S ACTS OR OMISSIONS ONLY

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused solely by:
   1. Your acts or omissions; or
   2. The acts or omissions of those acting on your behalf;

   in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:
   The insurance does not apply to "bodily injury" or "property damage" occurring after:
   1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
   2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

POLICY ENDORSEMENT A2A
ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS – NAMED INSURED'S ACTS OR OMISSIONS ONLY
Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused solely by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

ONGOING OPERATIONS AND COMPLETED OPERATIONS INSURANCE
The General Liability Insurance includes insurance for ongoing operations and completed operations.

LIMIT OF LIABILITY:
The Liability Limit that applies is the amount indicated on the face of this Certificate of Liability Insurance, or the minimum Liability limit that is required by the written contract, whichever is less. If there is no contract then the Liability Limit is limited to $1,000,000.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDERS:
Should any of the above described policies be cancelled, other than for non-payment, before the expiration date thereof, 30 days advice of cancellation will be delivered to certificate holders in accordance with the policy endorsements.

AGENCY CUSTOMER ID: _____

LOC#: _____

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Marsh USA Inc.	Johnson Controls, Inc. Tyco International Holding S.a.r.l. SimplexGrinnell LP 5757 North Green Bay Avenue Milwaukee, WI 53209
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE: 10/01/2018

ADDITIONAL REMARKS

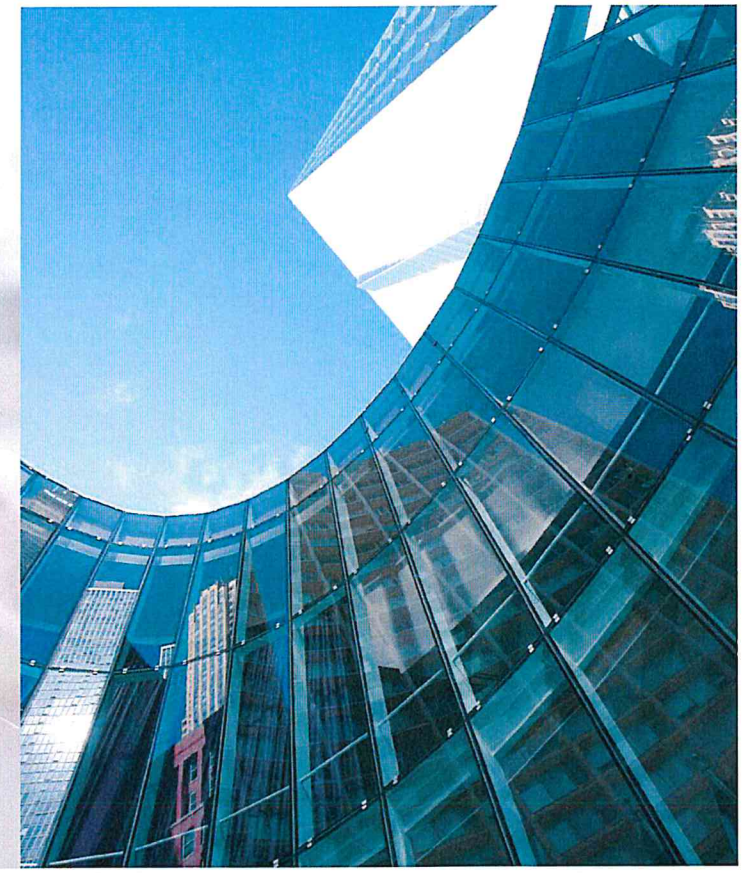
THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 (2016/03) FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

NAMED INSURED:

Insureds include: Air Distribution Technologies IP, LLC; Air System Components, Inc.; Carter Brothers, LLC; CEM Access Systems, Inc.; Central CPVC Corporation; Central Sprinkler LLC; Chemguard, Inc.; Connect 24 Wireless Communications Inc.; Digital Security Controls, Inc.; Eastern Sheet Metal, Inc.; Elpas, Inc.; Exacq Technologies, Inc.; FBN Transportation, Inc.; Grinnell LLC; Hart & Cooley Trucking Company; Hart & Cooley, Inc.; Haz-Tank Fabricators, Inc.; IMECO LLC; Integrated Systems and Power, Inc.; Interstate Battery System International, Inc.; Johnson Controls, Inc.; Johnson Controls (Suisse) SA; Johnson Controls Advanced Power Solutions, LLC; Johnson Controls Air Conditioning and Refrigeration, Inc.; Johnson Controls APS Production, Inc.; Johnson Controls Battery Group, Inc.; Johnson Controls Building Automation Systems, LLC; Johnson Controls Engineering, LLC; Johnson Controls Federal Systems, Inc.; Johnson Controls Federal Systems/Versar, LLC; Johnson Controls Fire Protection LP f/k/a SimplexGrinnell LP; Johnson Controls Government Systems LLC; Johnson Controls Navy Systems, LLC; Johnson Controls Security Solutions LLC f/k/a Tyco Integrated Security, LLC; Koch Filter Corporation; Master Protection, LP d/b/a FireMaster; Qolsys, Inc.; Retail Expert, Inc.; Ruskin Company; Ruskin Rooftop Systems, Inc.; Ruskin Service Company; Selkirk Corporation; Senelco Iberia, Inc.; Sensormatic Asia/Pacific, Inc.; Sensormatic Electronics (Puerto Rico) LLC; Sensormatic Electronics, LLC; Sensormatic International, Inc.; ShopperTrak International Investment LLC; ShopperTrak RCT Corporation; Shurjoint America, Inc.; SimplexGrinnell LP; Tyco Fire & Security LLC; Tyco Fire Products LP; Tyco International Holding S.a.r.l.; Visonic Inc.; WillFire HC, LLC; York International (SA), Inc.; York International Corporation; BC Liquidation, Inc.; Grinnell Fire Protection Solutions LLC; JCW HVAC Supply Center, LLC; Lau Holdings, LLC; Tyco Integrated Security LLC; and Tyco International Management Company, LLC

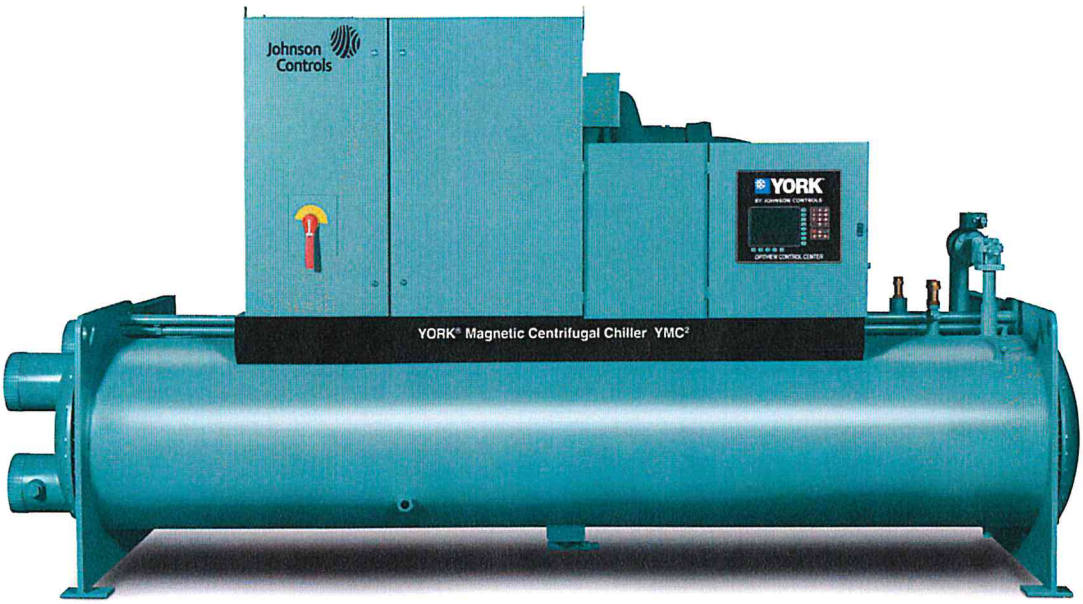
YORK®

INSTALL CONFIDENCE



YORK® YMC² Chiller:
The new standard in chiller technology

Johnson Controls



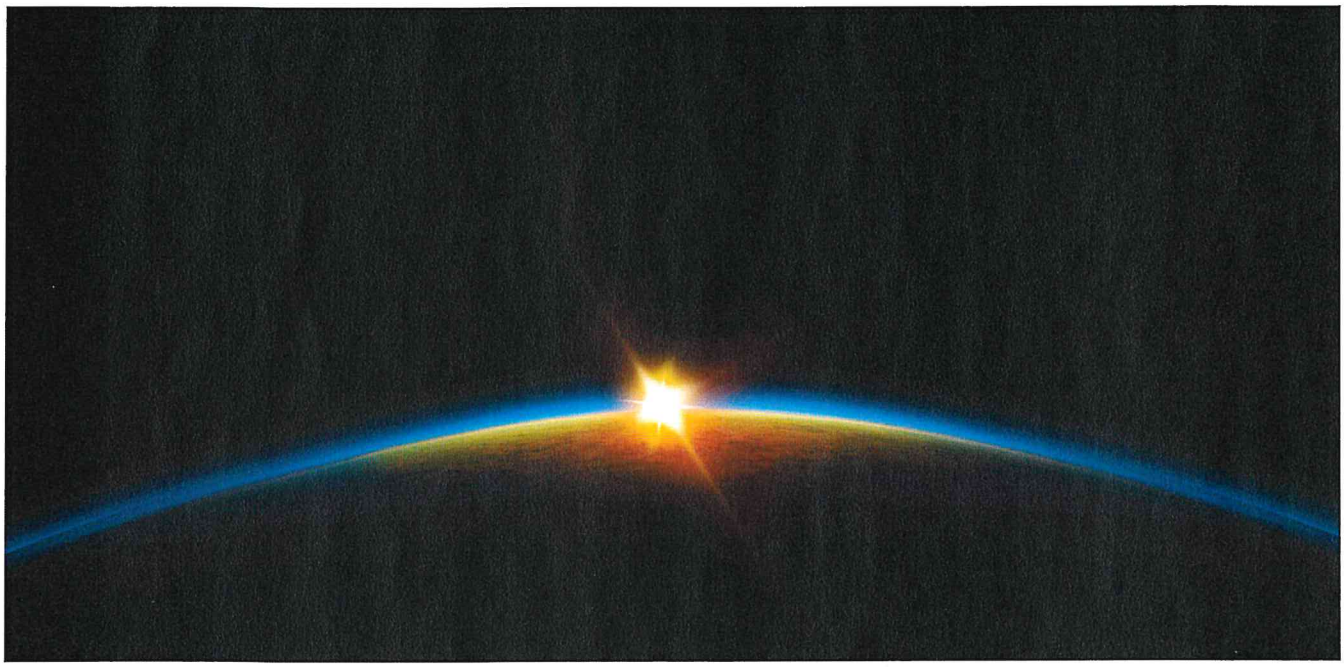
YORK® YMC² chiller, a perfect example of how far Johnson Controls has advanced chiller technology

The YMC² sets a new standard in chiller technology.

Incorporating years of YORK chiller advancements with the benefits of active magnetic-bearing technology enables the YMC² chiller to deliver lower overall cost of ownership, extraordinary efficiency, versatility, dependability and quiet operation. All in the widest fully integrated optimized chiller design on the planet.

The YMC² chiller offers the widest operational range on the market with a system design that minimizes downtime. And, because it can operate with evaporator and condenser temperatures inverted, the YMC² chiller can eliminate the water-to-water heat exchanger used for free-cooling, simplifying the system and saving money on operating and maintenance costs.

Innovations from Johnson Controls enable the YMC² chiller to define a new standard in chiller technology. The YMC² chiller has proven durability records in hospitals, chemical plants, gas processing plants, data centers and other applications, where minimal downtime is a crucial concern.



The dawn of lower cost of ownership

It's a new day in the realm of chiller technology. The YMC² chiller's revolutionary design reduces both initial and long-term operating and maintenance costs.

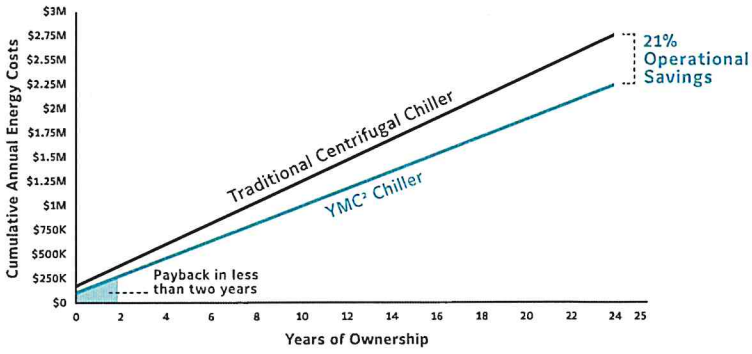
The proven integrated YORK chiller design offers an optimized initial purchase price for the YMC² chiller.

Because of its exceptional efficiency, the YMC² chiller uses less energy, which results in lower operating costs.

The YMC² chiller can also promise lower maintenance costs. With magnetic-bearing technology, there are fewer moving parts to wear down and require replacement.

When you take into account the YMC² chiller's competitive initial cost, plus its lower operating and maintenance costs, this means you get a truly exceptional lower total cost of ownership.

Lower operating costs save over $500,000 with the YMC² chiller*



*Assumptions: 800 ton (2810 kW) chiller operating 24/7 with medium building load, at $.10kW/hour with no demand charge.

Designed to make the most of energy

Like satellites that make optimum use of every bit of energy available, the YMC² chiller is designed for maximum energy efficiency.

In the real world, nearly 99 percent of a chiller's time is spent in off-design conditions. That's when colder weather can reduce compressor workload by lowering the entering condenser water temperature (ECWT). The ability of YORK chillers to take advantage of ECWT as low as 36°F(2°C) reduces compressor speed during off-design conditions. This helps deliver over 30 percent more annual energy savings than fixed-speed oil chillers and 21 percent more annual energy savings than variable-speed oil chillers, regardless of how much time the chiller spends at full or part load.

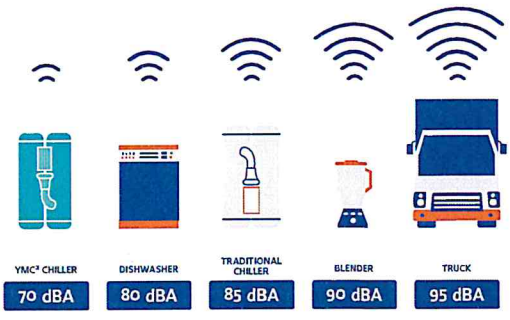
Extraordinarily quiet

Space is known for the absence of sound and, thanks to a design that features fewer moving parts, so is the YMC² chiller.

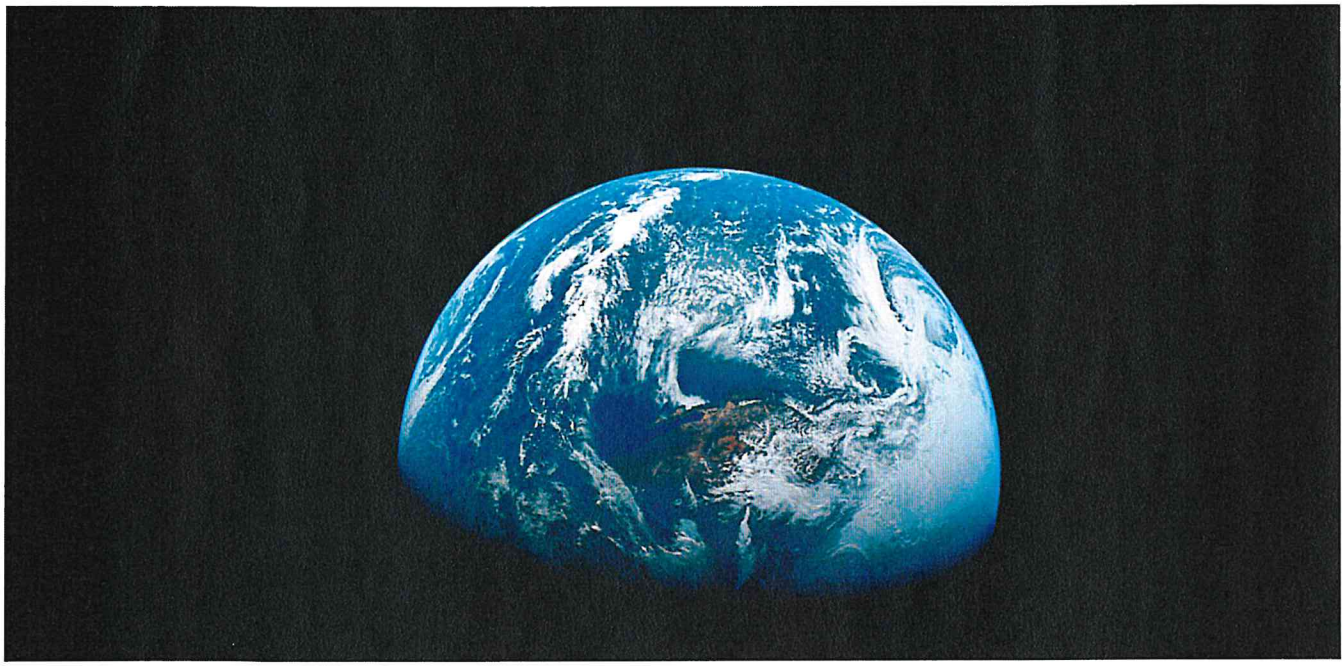
The YMC² chiller's permanent magnetic motor eliminates the noise that comes from mechanical contact. This results in a sound level lower than any water-cooled centrifugal or screw chiller on the market – as low as 70 dBA at AHRI-575 full-load standard conditions, the volume of a typical vacuum cleaner.

In fact, the human ear perceives the YMC² chiller as about half as loud when compared to competitive chillers. Our permanent-magnet motor with active magnetic-bearing technology eliminates driveline sound. Variable speed drive and our OptiSound™ also help reduce noise, making the YMC² chiller ideal for sound-sensitive locations such as museums, theaters or auditoriums.

Sound levels as low as 70 dBA



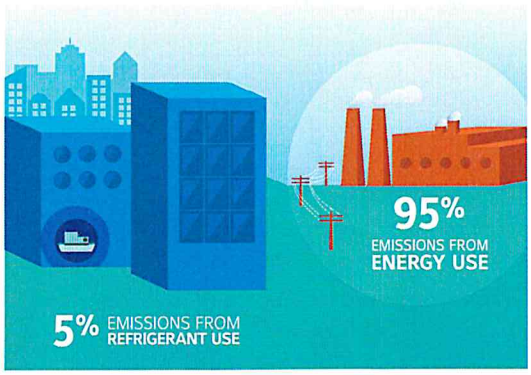
Although the typical traditional chiller has impressive sound levels, the YMC² chiller is one of the quietest chillers available.



Helping to keep the "Blue Planet" green

The YMC² chiller was created with sustainability in mind. It was carefully designed to minimize emissions that could negatively impact the environment.

The YMC² chiller takes a holistic approach to the lowest net carbon footprint.* To minimize the direct effect global warming potential, the YMC² chiller has a minimal amount of charge and is designed for leak-tight operation. The YMC² chiller uses R-134a and is future-compatible with R-513A, a low GWP and nonflammable refrigerant, which eliminates any concerns customers may have about uncertain regulations. The largest impact to GWP is seen through the indirect effect; the YMC² chiller requires less energy consumption, reducing the necessary energy production and the resulting carbon emissions.



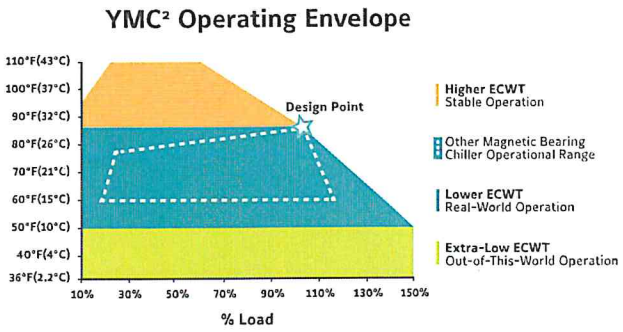
What makes the biggest impact on total CO_2 emissions from air conditioning? Refrigerant choice or energy efficiency.

A YMC² chiller offers out-of-this-world efficiency that will reduce your carbon footprint.

*95 percent of the global warming potential of a centrifugal chiller is from the indirect effect – or the greenhouse gases generated in the production of electricity to run the chiller. Five percent of the GWP is from the direct effect or if the refrigerant is completely released into the atmosphere – which is an unlikely occurrence, thanks to the YMC² chiller's leak-tight technology.

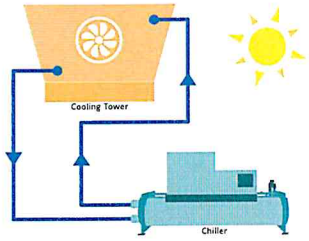
The versatility to perform under demanding conditions

The YMC² chiller features an unequaled range of operation, allowing continuous performance under conditions that would normally shut down other chillers.



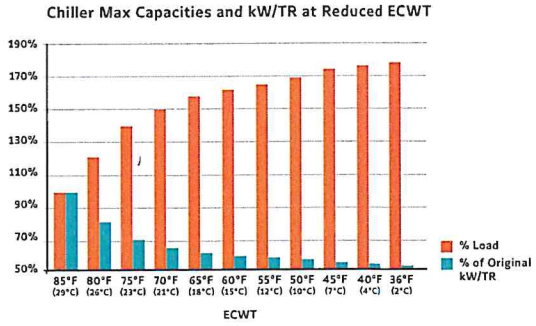
Higher ECWT – Stable Operation

The YMC² chiller is prepared to handle unforeseen transients. This ability is valuable for almost any application. The YMC² chiller is designed so that if temperatures rise from the tower water, it will continue to stay online and won't surge and shut down. Competitive units in a similar situation require the equipment to cycle, potentially losing temporary control of the needed cooling.



Lower ECWT – Real-World Operation

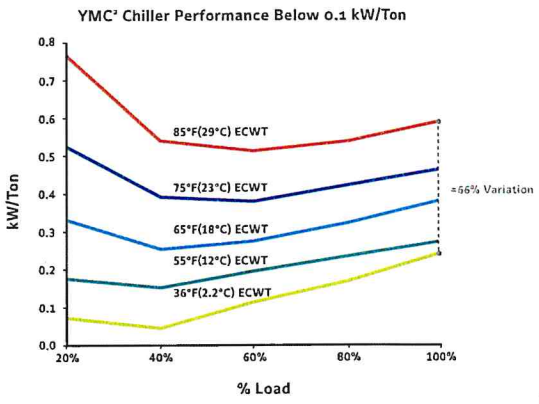
The YMC² chiller can accept lower entering condenser water temperature and, in turn, produce more tons of cooling. In less versatile chillers, this situation of lower ECWT may require a long wait before the unit can be turned back on. An example of this capability in practice is in a multiple-chiller plant where you have a less efficient chiller that you want to keep off-line as long as possible to keep your plant efficiencies as high as possible. The YMC² chiller can produce more tons to keep the other chiller off-line longer.



Extra-Low ECWT – Out-of-This-World Operation

The YMC² chiller is able to operate with minimum entering condenser water temperatures below the leaving chilled water set point, sometimes referred to as inverted or upside down. It can operate stably with entering condenser water temperatures 30°F(16.7°C), below the leaving chilled water set point. Ratings are available down to a minimum of 36°F(2.2°C) entering condenser water.

Because free-cooling isn't so free anymore, the YMC² chiller lowers costs by eliminating the need for a water-to-water heat exchanger and its accompanying expenses, such as piping controls and operation and maintenance costs.



YORK®

Johnson Controls

Few things are as dependable as the YMC² chiller

Just as you can count on the North Star to invariably take its appointed place in the sky, you can count on the YMC² chiller to stay online in situations that would shut down less-resilient chillers.

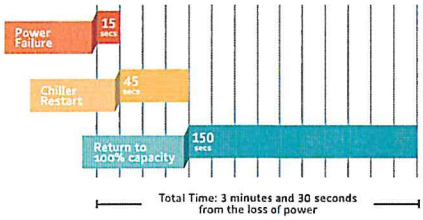
The YMC² chiller's fully integrated oil-free design has set a new standard in chiller dependability. The YMC² chiller can also promise lower maintenance costs. With magnetic-bearing chiller technology, there are fewer moving parts to wear down and require replacement.

The YMC² chiller's magnetic-bearing technology features a single moving assembly, suspended in a magnetic field, enhancing its durability and eliminating the problems that can come from continuous contact. This translates into the kind of exceptional dependability that reduces downtime and promotes fast starts and restarts. No wonder it's been chosen for use on naval ships and submarines – places where you can't just open a window.

The YMC² chiller does not require scheduled maintenance after a set number of run hours, such as timely and costly compressor teardowns. All oil maintenance requirements are removed, meaning no motor lubrication, checking of oil levels and return system, or the replacing of an oil filter or oil filter/dryer.

To maintain the efficiency and performance of the YMC² chiller, Johnson Controls factory service technicians can provide all necessary on-site service. Johnson Controls can even enhance service agreements with embedded Smart Connected Chiller technology. Through a secure connection, this cloud-based analytics platform combines remote monitoring and predictive diagnostics, allowing our service technicians to proactively diagnose issues before they become problems.

YMC² restart and capacity recovery time, in seconds



Restart and capacity recovery times for a typical YMC² chiller after a 15-second power failure.

Everything you need in a chiller. Everything you want in a chiller.

Low overall cost of ownership. Highly efficient. Exceptionally versatile. Very dependable. Reduced direct and indirect environmental impact. Quiet operation. In short, the YMC² chiller sets a new, higher standard of performance and announces the arrival of a whole new world of advanced chiller technology.

YORK®

INSTALL CONFIDENCE.

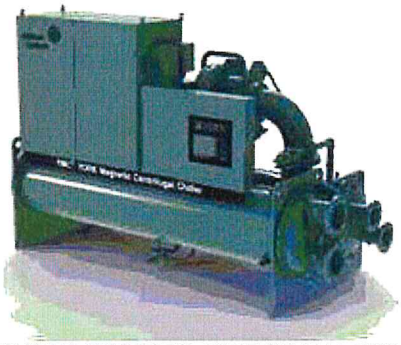
For more information on the YMC² chiller, call your sales representative or visit **york.com/ymc2.**

Johnson Controls

EQUIPMENT SUBMITTAL FOR APPROVAL

PROJECT: **Jeff parish Dept General Serv**

LOCATION: **Gretna La**



YORK YMC2 MAGNETIC CENTRIFUGAL CHILLER

EQUIPMENT	YMC2 Chiller
UNIT TAGS	CH-1
QUANTITY	1

SOLD TO:

Jefferson Parish

CONSULTING ENGINEER:

PREPARED BY:

David Strawn

DATE:
Friday, June 01, 2018

REVISION:
0

Johnson Controls

Bill Of Material (BOM) Data Section

Product Type: YMC2 Chiller

Unit Tags: Ch-*1

BILL OF MATERIAL DATA

EQUIPMENT	YMC2 Chiller
UNIT TAGS	Ch-*1
QTY	1

Items Included by Johnson Controls

- Motor, 460 volts, 3 phase, 60 Hz
  - Motor Enclosure: Hermetically Sealed
- Variable Speed Drive, factory mounted and wired.
- Isolation Valves
- Evaporator:
  - Compact Water Boxes, rated for 150 psig water-side pressure.
  - Victaulic Connection.
  - Water Box Hinges
  - Factory Thermal Insulation for Evaporator 3/4" inches.
  - Flow Sensors, factory mounted and wired.
- Condenser:
  - Compact Water Boxes, rated for 150 psig water-side pressure.
  - Victaulic Connection.
  - Water Box Hinges
  - Flow Sensors, factory mounted and wired.
- Unit Warranty: Optional 66 Month (5 Year) Entire Unit Parts and Labor. (from date of shipment)
- Refrigerant Warranty: Optional 66 Month (5 Year) (from date of shipment)
- Smart Equipment Support Package(Include Smart Equipment Board)
  - Chiller Start up (PCAT)

Items Included but INSTALLED BY OTHERS

- 1" Thick Neoprene Pad

Items NOT Included

- Refrigerant monitor or SCBA
- Rigging, hauling, or providing access for equipment.
- Valves for vents and drains
- Pressure gauges for chilled water lines
- Relief piping to the atmosphere.
- Disassembly / Reassembly of chiller if required for installation.
- Coordination drawings of central plant.
- Occupancy adjustments after completion of Yorkâ€™s chiller start-up
- Piping and Wiring
- Evaporator Flow/Differential Pressure Switch
- Condenser Flow/Differential Pressure Switch

Unit and Wiring Drawings Section

Product Type: YMC2 Chiller

Unit Tags: Ch-*1

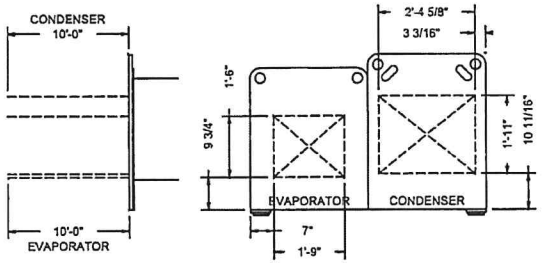
NOZZLE LEGEND

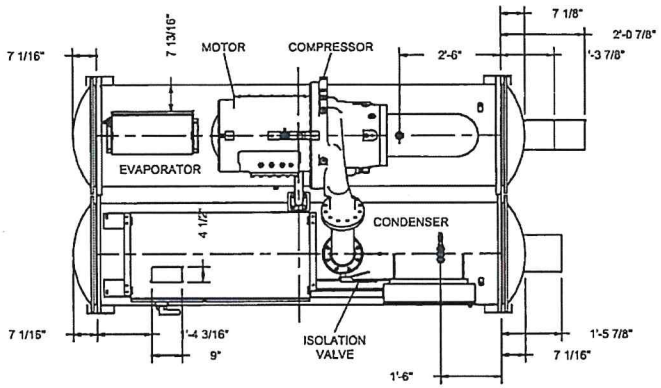
EVAPORATOR INLET	Right End	2 PASS	8" DIA. (150 Psig DWP)
EVAPORATOR OUTLET	Right End	2 PASS	8" DIA. (150 Psig DWP)
CONDENSER INLET	Right End	2 PASS	10" DIA. (150 Psig DWP)
CONDENSER OUTLET	Right End	2 PASS	10" DIA. (150 Psig DWP)

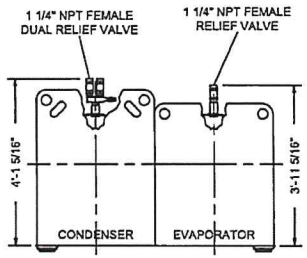
Victaulic Grooved Nozzles (per ANSI / AWWA C-606)

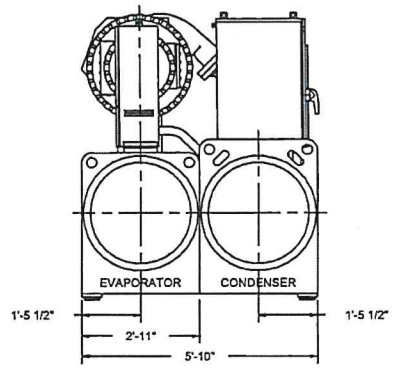
Optional water box hinges not shown.
Overall unit width and inlet nozzle length may increase up to 8".

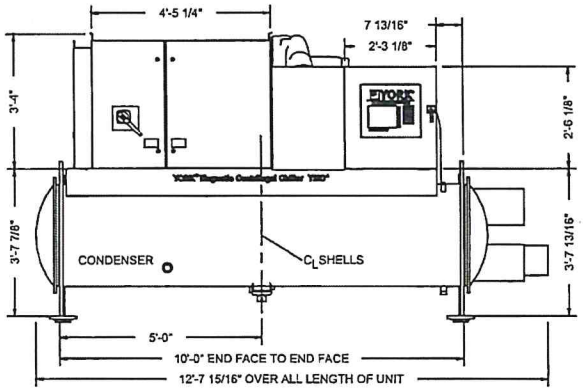
TUBE PULL AREA DETAIL

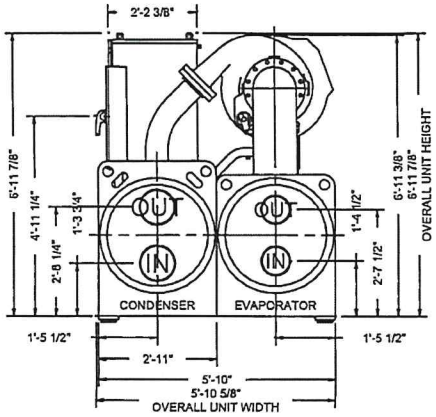












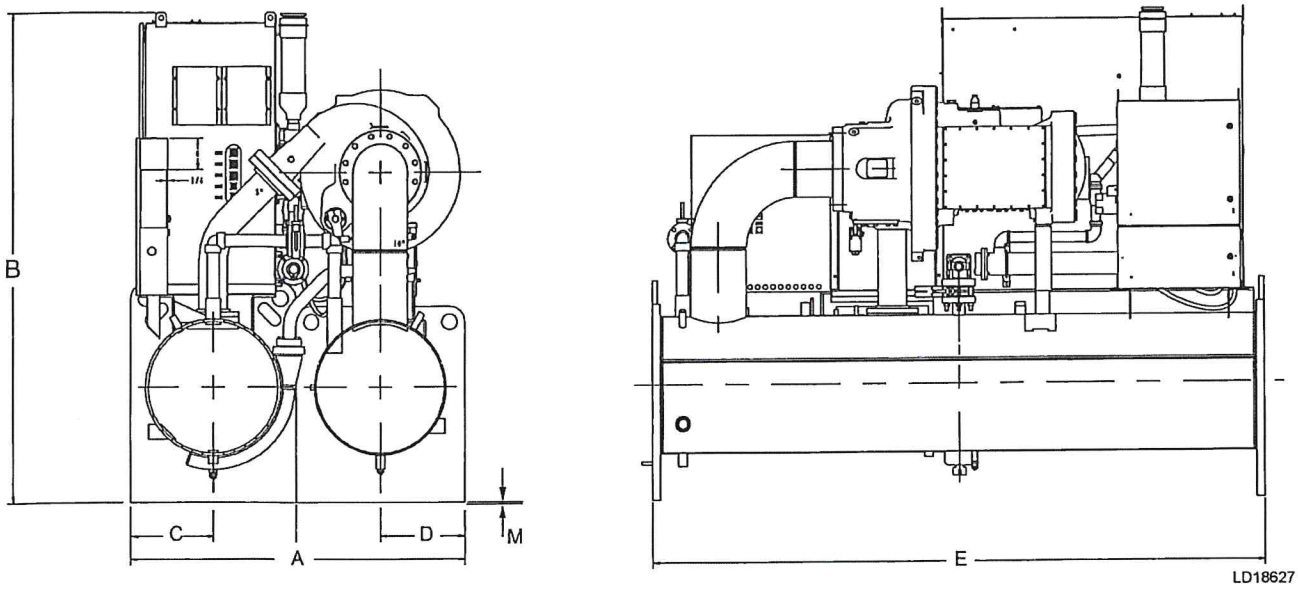
SHIPPING WT.SHIPPING WT. OF HEAVIEST COMPONENT: 15,544 LBS, OPERATING WT. 17,126 LBS, LOAD PER ISOLATOR 4,281 LBS
(SEE PERFORMANCE PAGE FOR ADDITIONAL SHIPPING WEIGHTS)

PRODUCT DRAWING YORK Magnetic Centrifugal Chiller MODEL: YMC2 **NOT FOR CONSTRUCTION**	COMPRESSOR: M2M2C-218FAC EVAPORATOR: EB2910-658-3S1-2GSR CONDENSER: CB2910-262-DS1-2GSR VSD: HYP0490XHC30B-46A SALES MODEL:	Jeff parish Dept General Serv UNIT TAG: Ch-*1	Date: August 02, 2018 Rev. Date: August 02, 2018 Form No.: 160.78-EG1 Dwg. Lev.: 0410 Dwg. Scale: NTS	YORK® A JOHNSON CONTROLS COMPANY

YORKworks Version:

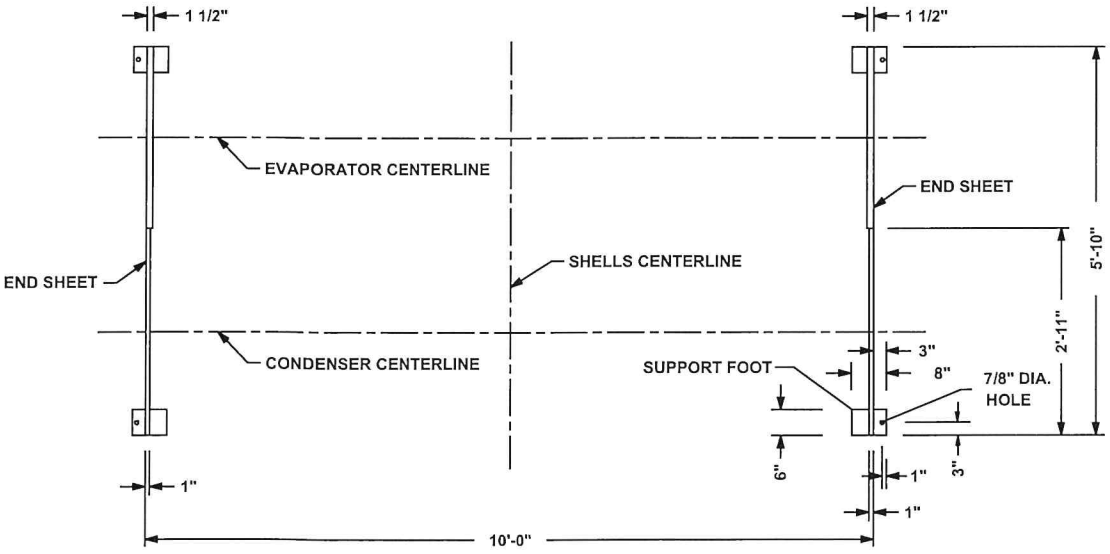
Unit Dimensions (Cont'd)

M2 MOTOR



ADDITIONAL OPERATING HEIGHT CLEARANCE TO FLOOR - IN (MM)	
TYPE OF CHILLER MOUNTING	M
NEOPRENE PAD ISOLATORS	1 3/4" (45)
SPRING ISOLATORS 1" DEFLECTION	1" (25)
DIRECT MOUNT	3/4" (19)

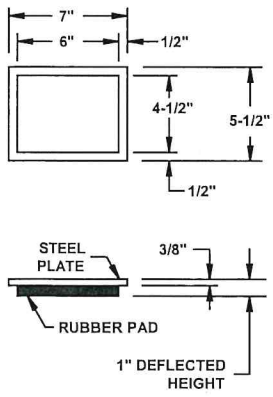
EVAPORATOR CODE	CONDENSER CODE	M2 MOTOR DIMENSIONS FT - IN (MM)						
		A	B			C	D	E
			490A VSD	612A VSD	774A VSD			
EB2508	CC2508	5' 6" (1676)	6' 5-9/16" (1970)	-	-	1' 4" (406)	1' 5" (432)	10' (3048)
EB2510	CB2110	5' 6" (1676)	6' 9-9/32" (2065)	7' 8-1/4" (2343)	7' 11-1/4" (2419)	1' 4" (406)	1' 5" (432)	10' (3048)
EB2510	CB2510	5' 6" (1676)	6' 7-11/16" (2024)	7' 6-11/16" (2303)	7' 9-11/16" (2380)	1' 4" (406)	1' 5" (432)	10' (3048)
EB2514	CB2114	5' 6" (1676)	6' 9-9/32" (2065)	7' 8-1/4" (2343)	7' 11-1/4" (2419)	1' 4" (406)	1' 5" (432)	14' (4267)
EB2514	CB2514	5' 6" (1676)	6' 7-11/16" (2024)	7' 6-11/16" (2303)	7' 9-11/16" (2380)	1' 4" (406)	1' 5" (432)	14' (4267)
EB2910	CB2510	5' 7" (1702)	6' 9-15/16" (2081)	7' 6-5/8" (2302)	7' 9-5/8" (2378)	1' 4" (406)	1' 5-1/2" (445)	10' (3048)
EB2910	CB2910	5' 10" (1778)	7' 2-3/8" (2194)	7' 10-7/8" (2410)	8' 1-7/8" (2486)	1' 5-1/2" (445)	1' 5-1/2" (445)	10' (3048)
EB2914	CB2514	5' 7" (1702)	6' 9-15/16" (2081)	7' 6-5/8" (2302)	7' 9-5/8" (2378)	1' 4" (406)	1' 5-1/2" (445)	14' (4267)
EB2914	CB2914	5' 10" (1778)	7' 2-3/8" (2194)	7' 10-7/8" (2410)	8' 1-7/8" (2486)	1' 5-1/2" (445)	1' 7-1/2" (495)	14' (4267)
EB3310	CB2910	6' 2" (1880)	7' 2-3/8" (2194)	7' 10-7/8" (2410)	8' 1-7/8" (2486)	1' 5-1/2" (445)	1' 7-1/2" (495)	10' (3048)
EB3310	CB3310	6' 7" (2007)	7' 3-3/8" (2219)	8' 2-3/8" (2499)	8' 5-5/16" (2573)	1' 8" (508)	1' 7-1/2" (495)	10' (3048)
EB3314	CB2914	6' 2" (1880)	7' 2-3/8" (2194)	7' 10-7/8" (2410)	8' 1-7/8" (2486)	1' 5-1/2" (445)	1' 7-1/2" (495)	14' (4267)
EB3314	CB3314	6' 7" (2007)	7' 3-3/8" (2219)	8' 2-3/8" (2499)	8' 5-5/16" (2573)	1' 8" (508)	1' 7-1/2" (495)	14' (4267)



DIMENSIONS ARE TYPICAL ALL FOUR CORNERS

FLOOR LAYOUT (NOT TO SCALE)

ISOLATOR DETAIL (N.T.S.)



ISOLATOR TO BE CENTERED
UNDER SUPPORT FOOT

PRODUCT DRAWING FLOOR LAYOUT W/NEOPRENE ISOLATORS MODEL: YMC2 **NOT FOR CONSTRUCTION**	COMPRESSOR: M2M2C-218FAC EVAPORATOR: EB2910-658-3S1-2GSL CONDENSER: CB2910-262-DS1-2GSL VSD: HYP0490XHC30B-46A SALES MODEL:	Jeff parish Dept General Serv UNIT TAG: Ch-*1	Date: June 01, 2018 Rev. Date: 3:11 PM Form No.: Dwg. Lev.: Dwg. Scale: NTS	YORK A JOHNSON CONTROLS COMPANY

YORKworks Version:

Johnson Controls

Unit Specification Text Section

Product Type: YMC2 Chiller

Unit Tags: Ch-*1

YMC² CHILLER
Jeff parish Dept General Serv

General
Furnish YORK YMC² Centrifugal Liquid Chilling-Unit(s) as indicated on the drawings.

Each unit shall produce a capacity of 350.0 tons, cooling 837.3 gpm of WATER from 54.00 to 44.00 °F when supplied with 1059 gpm of condenser water at 85.00°F. Power input shall not exceed 198.8 KW with an IPLV of 0.3519. The cooler shall be selected for 0.000100 fouling factor and a maximum liquid pressure drop of 9.14 ft H2O. Water side shall be designed for 150 psig working pressure. The condenser shall be selected for 0.000250 fouling factor and maximum liquid pressure drop of 7.79 ft H2O. Water side shall be designed for 150 psig working pressure. Power shall be supplied to the unit at 460 volts - 3 phase - 60 Hertz. The chiller shall use HFC R-134A.

Each unit shall be completely factory-packaged including evaporator, unit mounted Optispeed variable speed drive, condenser, sub-cooler, compressor, hermetic motor, Optiview control center. and all interconnecting unit piping and wiring. The chiller shall be painted prior to shipment.

Performance shall be certified in accordance with ARI Standard 550/590. Only chillers that are listed in the ARI Certification Program for Centrifugal and Rotary Screw Water Chillers are acceptable.

The initial charge of refrigerant shall be supplied, shipped in containers and cylinders for field installation or factory charged in the chiller.

Compressor
The compressor shall be a single-stage centrifugal type powered by a high speed electric motor. A cast aluminum, fully shrouded impeller shall be mounted directly to the motor shaft. The impeller shall be designed for balanced thrust, dynamically balanced and overspeed tested for smooth, vibration-free operation. Compressor castings shall be designed for 235 psig working pressure and hydrostatically pressure tested at 355 psig for HFC R-134A units.

Capacity control shall be achieved by the combined use of variable speed and variable diffuser geometry to provide fully modulating control from maximum to minimum load while maintaining constant chiller leaving water temperature.

Motor
The compressor motor shall be a hermetic, oil free, permanent magnet type directly coupled to the compressor. The motor will be bolted to a cast iron adapter plate mounted on the compressor to provide factory alignment of the shaft. The motor shaft shall be supported on active magnetic radial and thrust bearings. Magnetic bearing control shall be equipped with auto vibration reduction and balancing systems. During a power failure event, the magnetic bearings shall remain active throughout the compressor coast down. Rolling element bearings shall be provided as a backup to the magnetic bearings designed for emergency touch down situations. Motor stator and rotor shall be equipped with a pressure driven refrigerant cooling loop to maintain acceptable operating temperatures.

Variable Speed Drive
A variable speed drive shall be factory installed on the chiller. It will vary the compressor motor speed by controlling the frequency and voltage of the electrical power to the motor. The capacity control logic shall automatically adjust motor speed and compressor diffuser geometry for maximum part-load efficiency by analyzing information fed to it by sensors located throughout the chiller.

Drive shall be PWM type utilizing IGBT's with a power factor of 0.97 or better at all loads and speeds.

The variable speed drive shall be unit mounted in a NEMA 1 enclosure with all power and control wiring between the drive and chiller factory installed. Field power wiring shall be a single point connection and electrical lugs for incoming power wiring will be provided. The entire chiller package shall be UL listed.

The following features will be provided:

a. Door interlocked circuit breaker capable of being padlocked.
b. Ground fault protection.

c. Over voltage and under voltage protection.
d. 3-phase sensing motor over current protection.
e. 3-phase sensing input over current protection.
f. Single phase protection.
g. Insensitive to phase rotation.
h. Over temperature protection.
i. IEEE Std. 519-1992 compliance
j. Digital readout at the chiller unit control panel of output frequency, output voltage, 3-phase output current, input Kilowatts and Kilowatt-hours, self-diagnostic service parameters. Separate meters for this information will not be acceptable.
k. KW Meter - The unit's input power consumption will be measured and displayed digitally via the unit's control panel. The KW meter accuracy is typically +/- 3% of reading. KW meter scale is 0 - 788 KW
l. KWh Meter – The unit's cumulative input power consumption is measured and displayed digitally via the unit's control panel. The KWh meter is resetable and it's accuracy is typically +/- 3% of reading. KWh meter scale is 0 – 999,999 kWh.
m. Ammeter – Simultaneous three-phase true RMS digital readout via the unit control panel. Three current transformers provide isolated sensing. The ammeter accuracy is typically +/- 3% of readming. Ammeter scale is 0 - 545 A RMS .
n. Voltmeter – Simultaneous three-phase true RMS digital readout via the unit control panel. The voltmeter accuracy is typically +/- 3% of reading. Voltmeter scale is 0 – 670 VAC.
o. Elapsed Time Meter – Digital readout of the unit's elapsed running time (0 – 876,600 hours, resetable) is displayed via the unit control panel.

EVAPORATOR

Evaporator shall be a shell-and-tube, hybrid falling film type designed for 235 psig working pressure on the refrigerant side. Shell shall be fabricated from rolled carbon steel plate with fusion welded seams; have carbon steel tube sheets, drilled and reamed to accommodate the tubes; and intermediate tube supports spaced no more than four feet apart. The refrigerant side shall be designed, tested and stamped in accordance with ASME Boiler and Pressure Vessel Code, Section VIII- Division 1. Tubes shall be high-efficiency, internally and externally enhanced type having plain copper lands at all intermediate tube supports to provide maximum tube wall thickness at the support area. Each tube shall be roller expanded into the tube sheets providing a leak-proof seal, and be individually replaceable. Water velocity through the tubes shall not exceed 12 fps. A liquid level sight glass will be located on the side of the shell to aid in determining proper refrigerant charge. A suction baffle eliminator will be located above the tube bundle to prevent liquid refrigerant carryover to the compressor. The evaporator shall have a refrigerant relief device sized to meet the requirements of ASHRAE 15 Safety Code for Mechanical Refrigeration.

Water boxes shall be removable to permit tube cleaning and replacement. Stubout water connections having victaulic grooves will be provided. Waterboxes shall be designed for 150psi (10.3 bar) design working pressure and tested at 225 psig (15.5 bar). Vent and drain connections with plugs will be provided on each water box. Low flow protection shall be provided by a thermal-type flow sensor, factory mounted in the water nozzle connection and wired to the chiller control center.

CONDENSER

Condenser shall be of the shell-and-tube type, designed for 235 psig working pressure on the refrigerant side. Shell shall be fabricated from rolled carbon steel plate with fusion welded seams; have carbon steel tube sheets, drilled and reamed to accommodate the tubes; and intermediate tube supports spaced no more than four feet apart. The refrigerant side shall be designed, tested and stamped in accordance with ASME Boiler and Pressure Vessel Code, Section VIII- Division 1. Tubes shall be high-efficiency, internally and externally enhanced type having plain copper lands at all intermediate tube supports to provide maximum tube wall thickness at the support area. Each tube shall be roller expanded into the tube sheets providing a leak-proof seal, and be individually replaceable. Water velocity through the tubes shall not exceed 12 fps.

Water boxes shall be removable to permit tube cleaning and replacement. Stubout water connections having ANSI/AWWA C-606 grooves will be provided. Waterboxes shall be designed for 150 psi (10.3 bar) design working pressure and tested at 225 psig (15.5 bar). Vent and drain connections with plugs will be provided on each water box.

Refrigerant Flow Control

Refrigerant flow to the evaporator shall be controlled by a variable orifice for improving unloading capabilities. The variable orifice control shall automatically adjust to maintain proper refrigerant level in the condenser and evaporator. This shall be controlled by monitoring refrigerant liquid level in the condenser, assuring optimal subcooler performance.

Graphic Control Center

General: The chiller shall be controlled by a stand-alone microprocessor based control center. The chiller control center shall provide control of chiller operation and monitoring of chiller sensors, actuators, relays and switches.

Control panel: The control panel shall include a 10.4 in. diagonal color liquid crystal display (LCD) surrounded by "soft" keys which are redefined based on the screen displayed at that time. This shall be mounted in the middle of a keypad interface and installed in a locked enclosure. The screen shall detail all operations and parameters, using a graphical representation of the chiller and its major components. Panel verbiage shall be available in English as standard and in other languages as an option with English always available. Data shall be displayed in either English or Metric units. Smart Freeze Point Protection shall run the chiller at 36.00°F leaving chilled water temperature, and not have nuisance trips on low water temperature. The sophisticated program and sensor shall monitor the chiller water temperature to prevent freeze up. When needed Hot Gas Bypass is available as an option. The panel shall display countdown timer messages so the operator knows when functions are starting and stopping. Every programmable point shall have a pop-up screen with the allowable ranges, so that the chiller can not be programmed to operate outside of its design limits.

The chiller control panel shall also provide:

1. System operating information including:
    a. return and leaving chilled liquid temperature
    b. return and leaving condenser liquid temperature
    c. evaporator and condenser saturation temperature
    d. evaporator and condenser pressure
    e. compressor discharge temperature
    f. percent full load motor current
    g. motor frequency
    h. magnetic bearing levitation status
    i. magnetic bearing temperatures
    j. operating hours
    k. number of compressor starts

2. Digital programming of setpoints through the universal keypad including:
    a. leaving chilled liquid temperature
    b. percent current limit
    c. pull-down demand limiting
    d. six-week schedule for starting and stopping the chiller, pumps and tower
    e. remote reset temperature range

3. Status messages indicating:
    a. system ready to start
    b. system running
    c. system coastdown
    d. system safety shutdown-manual restart
    e. system cycling shutdown-auto restart
    f. MBC startup
    g. start inhibit

4.The text displayed within the system status and system details field shall be displayed as a color coded message to indicate severity: red for safety fault, orange for cycling faults, yellow for warnings, and green for normal messages.

5.Safety shutdowns enunciated through the display and the status bar, and consist of system status, system details, day, time, cause of shutdown, and type of restart required. Safety shutdowns shall include:

a.evaporator – low pressure
b. evaporator – transducer or leaving liquid probe
c. evaporator – transducer or temperature sensor
d. condenser – high pressure contacts open
e. condenser – high pressure
f. condenser – pressure transducer out of range
g. auxiliary safety – contacts closed
h. discharge – high temperature
i. discharge – low temperature
j. control panel – power failure
k. watchdog – software reboot
l. MBC – Internal Fault
m. MBC – High Bearing Temperature
n. MBC – Cable Fault
o. MBC – Speed Signal Fault
p. MBC – Overspeed Fault
q. MBC – Communication
r. MBC – High Bearing Current
s. MBC – Rotor Elongation
t. MBC – Oscillator Fault
u. MBC – Power Supply Fault
v. MBC – Unauthorized Rotation
w. MBC – No Rotation
x. VSD Shutdown – Requesting Fault Data
y. VSD – Stop contacts Open
z. VSD – DC Bus Preregulation Lockout
aa. VSD – Logic Board Plug
bb. VSD – Ground Fault
cc. VSD – Phase __ Input DCCT (A,B,C)
dd. VSD – Phase __ Motor DCCT (A,B,C)
ee. VSD – Input Current Overload
ff. VSD – 105% Motor Current Overload
gg. VSD – High Phase __ Input Baseplate Temperature (A,B,C)
hh. VSD – High Phase __ Motor Baseplate Temperature (A,B,C)
ii. VSD – Motor or Stator Current Imbalance
jj. VSD – Motor Current THD Fault
kk. VSD – Motor Synchronization Fault
ll. VSD – Rectifier Program Fault
mm. VSD – Inverter Program Fault

6.Cycling shutdowns enunciated through the display and the status bar, and consists of system status, system details, day, time, cause of shutdown, and type of restart required. Cycling shutdowns shall include:

a. multiunit cycling – contacts open
b. system cycling - contacts open
c. control panel - power failure
d. leaving chilled liquid - low temperature
e. leaving chilled liquid - flow switch open
f. condenser – flow switch open
g. motor controller – contacts open

h. motor controller – loss of current
i. MBC – Position
j. MBC – Low Frequency Displacement
k. MBC – Vibration
l. MBC – High Amplifier Temperature
m. MBC – High DC/DC Temperature
n. MBC – No Levitation
o. MBC – Serial Communications Fault
p. Power Fault
q. Control Panel – Schedule
r. VSD Precharge – Low DC Bus Voltage
s. VSD – DC Bus Preregulation
t. VSD – Logic Board Power Supply
u. VSD – High DC Bus Voltage
v. VSD – High Phase __ Input Current (A,B,C)
w. VSD – High Phase __ Motor Current (A,B,C)
x. VSD – Phase __ Input Gate Driver (A,B,C)
y. VSD – Phase __ Motor Gate Driver (A,B,C
z. VSD – Single Phase Input Power
aa. VSD – DC Bus Under Voltage
bb. VSD – Low Phase __ Input Baseplate Temperature (A,B,C)
cc. VSD – Low Phase __ Motor Baseplate Temperature (A,B,C)
dd. VSD – High Internal Ambient Temperature
ee. VSD – Serial Communications
ff. VSD – Logic Board Processor
gg. VSD – Run Signal
hh. VSD Shutdown – Requesting Fault Data
ii. VSD – Stop Contacts Open
jj. VSD – Initialization Failed

7.Security access to prevent unauthorized change of setpoints, to allow local or remote control of the chiller, and to allow manual operation of the prerotation vanes. Access shall be through ID and password recognition, which is defined by three different levels of user competence: view, operator, and service.

8.Trending data with the ability to customize points of once every second to once every hour. The panel shall trend up to 6 different parameters from a list of over 140, without the need of an external monitoring system.

9.The operating program stored in non-volatile memory (EPROM) to eliminate reprogramming the chiller due to AC power failure or battery discharge. Programmed setpoints shall be retained in lithium battery-backed RTC memory for a minimum of 11 years with power removed from the system.

10.A fused connection through a transformer in the compressor motor starter to provide individual over-current protected power for all controls.

11. A numbered terminal strip for all required field interlock wiring.

12.An RS-232 port to output all system operating data, shutdown / cycling message, and a record of the last 10 cycling or safety shutdowns to a field-supplied printer. Data logs to a printer at a set programmable interval. This data can be preprogrammed to print from 1minute to 1day.

13.The capability to interface with a building automation system to provide:
a. remote chiller start and stop
b. remote leaving chiller liquid temperature adjust
c. remote current limit setpoint adjust
d. remote ready to start contacts

e. safety shutdown contacts
f. cycling shutdown contacts
g. run contacts

Startup and Operator Training

The services of a factory trained, field service representative will be provided to supervise the final leak testing, charging and the initial startup and conduct concurrent operator instruction.

Factory Insulation

Factory-applied, anti-sweat insulation shall be attached to the cooler shell, flow chamber, tube sheets, suction connection, and (as necessary) to the auxiliary tubing. The insulation shall be a flexible, closed-cell plastic type, 3/4 thick, applied with vapor-proof cement. The insulation will normally prevent sweating in environments with relative humidity up to 75% and dry bult temperatures ranging from 50 to 90 °F.

Isolation Mounting

Included with the unit are four vibration isolation mounts, consisting of 1" thick neoprene isolation pads, for field mounting. The pads are to be mounted under the steel mounting pads on the tube sheets. Suitable for ground floor installation.

Shipment Form 1

The chiller is shipped complete with miscellaneous loose items shipped together. Refrigerant charges are included.

The unit is completely assembled at the factory.

- The driveline (compressor/motor assembly) is mounted and all the necessary interconnecting piping is assembled.
- The complete unit is factory leak-tested, evacuated, and shipped charged with R-134A refrigerant.
- The OptiView™ Control Center is mounted on the unit.
- The Variable Speed Drive (VSD) is mounted, wired, and shipped with glycol.

The following items are shipped together:

- Four (4) vibration isolation pads (or optional spring isolators and brackets).
- VSD Inhibitor
- Other shipped loose items, including piping, water temperature controls, wiring, etc.

Johnson Controls

Performance Ratings Section

Product Type: YMC2 Chiller

Unit Tags: Ch-*1

YMC² CHILLER PERFORMANCE SPECIFICATION

Unit Tag	Qty	Model No.		Net Capacity (tons)	Power	Refrigerant
Ch-*1	1	YMC2-S1231AB		350.0	460/3/60.0	R-134A

Unit Data	Evaporator	Condenser
Compressor Model: M2C-218FAC	Model: EB2910-658-3S1-2GSL	Model: CB2910-262-DS1-2GSL
EWT (°F):	54.00	85.00
LWT (°F):	44.00	94.30
Flow Rate (gpm):	837.3	1059
Pressure Drop (ft H2O):	9.14	7.79
Fluid Type (%):	WATER	WATER
Circuit No. of Passes:	2	2
Fouling Factor (ft² °F hr / Btu):	0.000100	0.000250
Tube No. / Description:	658 - 0.035" thick, Enhanced Copper (1")	262 - 0.035" CSL Enhanced Copper
Design Working Pressure (psig):	150	150
Entering Water Nozzle @ Location:	L	L
Leaving Water Nozzle @ Location:	L	L
Water Box Weight, ea (lb) :	211	210
Cover Plate Weight , ea (lb):	N/A	N/A
Return Head Weight (lb):	144	144
Water Weight (lb):	699	915
Water Volume(gal):	84	110
Min Flow Rate (gpm):	476.0	752.4
Max Flow Rate (gpm):	1904	2736

Performance Data		Electrical Data		Other	
Job KW:	198.8	Job FLA:	261	Operating Wt. (lb):	17126
KW/Ton.R:	0.5680	Min Circuit Ampacity (Amps):	327	Per Isolator (lb):	4282
IPLV.IP(KW/Ton.R):	0.3519	Max Fuse/Breaker:	500	Refrigerant Wt. (lb):	892
				Compressor Wt. (lb):	2987
Isolation Valves:	YES			Ship Wt (lb):	15544
		Type Starter: VSD w/ filter			
		VSD Model: HYP0490XHC30B-46A			

Notes:

AHRI Message:

Certified in accordance with the AHRI Water-Cooled Water Chilling and Heat Pump Water-Heating Packages Using Vapor Compressor Cycle Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Warranties Section

Product Type: YMC2 Chiller

Unit Tags: Ch-*1

OPTIONAL 66 MONTH (5 YEARS) REFRIGERANT WARRANTY
JOHNSON CONTROLS/YORK INTERNATIONAL CORPORATION
ENGINEERED SYSTEMS - YORK PA

PRODUCT TYPE: YMC² CHILLER
YORK CONTRACT NO.:
UNIT MODEL NUMBER: YMC2-S1231AB
UNIT SERIAL NUMBER: _____
UNIT TAG ID: CH-*1
UNIT LOCATION: _____
_____

COMPRESSOR SERIAL NUMBER(S):
_____
_____
_____
_____
_____
_____

PROJECT NAME: JEFF PARISH DEPT GENERAL SERV
INSTALLATION ADDRESS:

_____
Shipping Date

The term of this agreement is 66 months, commencing _____ and expires _____.

LIMITED WARRANTY

WHEN PROPERLY APPROVED AND AUTHORIZED BELOW, JOHNSON CONTROLS, INCORPORATED (JCI) WARRANTS TO THE CUSTOMER NAMED HEREIN, THAT YORK WILL PROVIDE THE CUSTOMER FREE OF CHARGE, WITH REPLACEMENT REFRIGERANT IN THE CASE OF ANY REFRIGERANT LOSS DUE TO ACCIDENTAL SYSTEM LEAKS. SERVICES TO RECYCLE CONTAMINATED REFRIGERANT ARE ALSO INCLUDED IN THE EVENT OF SYSTEM CONTAMINATION. THIS WARRANTY IS OFFERED ON PACKAGED STATIONARY WATER CHILLERS WITHIN THE EXTENDED WARRANTY PERIOD STATED ABOVE, AND IS TO BE OFFERED IN CONJUNCTION WITH A YORK 'MAINTENANCE CONTRACT' OR A YORK 'REFRIGERANT CONSERVATION SERVICE CONTRACT.' WE DO NOT AUTHORIZE ANY OTHER ENTITY TO PERFORM WARRANTY SERVICE ON OUR BEHALF. THIS WARRANTY IS OFFERED AS AN EXTENSION TO THE STANDARD LIMITED WARRANTY (FORM 50.05-NM2) AND IS SUBJECT TO THE SAME LIMITATIONS AND EXCLUSIONS STATED THEREIN, WHICH ARE HEREBY INCORPORATED HEREIN BY REFERENCE. REMOTE EVAPORATOR, REMOTE CONDENSER, FINNED TUBE, AND MOBILE UNITS ARE EXCLUDED FROM THIS COVERAGE.

THIS WARRANTY DOES NOT COVER REFRIGERANT LOSS RESULTING FORM FIRE, FLOOD, ABUSE, OR ACT OF GOD. ALSO EXCLUDED ARE DAMAGES OR FAILURES CAUSED BY OPERATION OR MAINTENANCE CONTRARY TO THE RECOMMENDATIONS OF THE EQUIPMENT MANUFACTURER. IN NO EVENT SHALL YORK BE LIABLE FOR SPECIAL CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGE, LOSS OR INJURY OF ANY NATURE. WARRANTY SERVICE SHALL BE PROVIDED THROUGH THE SERVICER LISTED HEREIN DURING NORMAL WORKING HOURS AND AFTER SYSTEM FAULTS HAVE BEEN REPAIRED.

THE WARRANTY AND LIABILITY SET FORTH ABOVE ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESS OR IMPLIED IN LAW OR IN FACT, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE WARRANTIES CONTAINED HEREIN SET FORTH BUYER'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A DEFECT IN WORKMANSHIP OR MATERIALS.

DISTRICT SERVICE OFFICE: _____

OFFERED BY: _____ _____
JCI/York Selling Representative Print/Sign — Date

APPROVED BY: _____ _____
JCI/York Area Service Manager Print/Sign — Date

ACCEPTED BY: _____ _____
Customer Signature — Date

(Manufacturer's Use Only)
AUTHORIZED BY: _____

Robert D. Kalczynski
Johnson Controls Quality Department, Customer Support Manager

6/1/2018 at 10:11
Date

Product Code Ref: 8599

OPTIONAL 66 MONTH (5 YEARS) PARTS & LABOR WARRANTY
FOR THE ENTIRE UNIT
JOHNSON CONTROLS/YORK INTERNATIONAL CORPORATION
ENGINEERED SYSTEMS - YORK PA

PRODUCT TYPE: YMC² CHILLER
YORK CONTRACT NO.:
UNIT MODEL NUMBER: YMC2-S1231AB
UNIT SERIAL NUMBER: _____
UNIT TAG ID: CH-*1
UNIT LOCATION: _____

COMPRESSOR SERIAL NUMBER(S):
_____
_____
_____
_____
_____
_____

PROJECT NAME: JEFF PARISH DEPT GENERAL SERV
INSTALLATION ADDRESS:

_____
Shipping Date

The term of this agreement is 66 months, commencing _____ and expires _____.

LIMITED WARRANTY

WHEN PROPERLY ENDORSED, THIS PROTECTION PLAN BETWEEN JOHNSON CONTROLS, INCORPORATED (JCI) AND CUSTOMER, WARRANTS, TO THE CUSTOMER NAMED HEREIN, PARTS AND LABOR FOR THE ENTIRE CHILLER UNIT. IT DOES NOT COVER REFRIGERANT COST, FREIGHT CHARGES, OR ANY OTHER COSTS.

THIS WARRANTY EXCLUDES IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND WE DO NOT ASSUME, OR AUTHORIZE ANY OTHER PERSON TO ASSUME OTHER WARRANTIES FOR US. THIS WARRANTY IS OFFERED AS AN EXTENSION TO THE STANDARD LIMITED WARRANTY (FORM 50.05-NM2) AND IS SUBJECT TO THE SAME LIMITATIONS AND EXCLUSIONS, EXCEPT WHERE NOTED.

THIS PROTECTION PLAN DOES NOT COVER FAILURE OR DAMAGE RESULTING FROM FIRE, FLOOD, ABUSE, OR ACT OF GOD. ALSO EXCLUDED ARE DAMAGES OR FAILURES CAUSED BY INSTALLATION, OPERATION, OR MAINTENANCE CONTRARY TO YORK RECOMMENDATIONS, OR THOSE OF THE MANUFACTURER IF OTHER THAN YORK. IN NO EVENT SHALL YORK BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGE, LOSS, OR INJURY. WARRANTY SERVICE SHALL BE AVAILABLE THROUGH THE SERVICER LISTED HEREIN DURING NORMAL WORKING HOURS.

DISTRICT SERVICE OFFICE: _____

OFFERED BY: _____ _____
JCI/York Selling Representative Print/Sign — Date

APPROVED BY: _____ _____
JCI/York Area Service Manager Print/Sign — Date

ACCEPTED BY: _____ _____
Customer Signature — Date

(Manufacturer's Use Only)
AUTHORIZED BY: _____

Robert D. Kalczynski
Johnson Controls Quality Department, Customer Support Manager

6/1/2018 at 10:11
Date

Product Code Ref: 8513

OPTIONAL 66 MONTH (5 YEARS) PARTS & LABOR WARRANTY
FOR THE VSD UNIT
JOHNSON CONTROLS/YORK INTERNATIONAL CORPORATION
ENGINEERED SYSTEMS - YORK PA

PRODUCT TYPE: YMC² CHILLER
YORK CONTRACT NO.:
UNIT MODEL NUMBER: YMC2-S1231AB
UNIT SERIAL NUMBER: _____
UNIT TAG ID: CH-*1
UNIT LOCATION: _____
_____

COMPRESSOR SERIAL NUMBER(S):
_____
_____
_____
_____
_____
_____

PROJECT NAME: JEFF PARISH DEPT GENERAL SERV
INSTALLATION ADDRESS:

_____
Shipping Date

The term of this agreement is 66 months, commencing _____ and expires _____.

LIMITED WARRANTY

WHEN PROPERLY ENDORSED, THIS PROTECTION PLAN BETWEEN JOHNSON CONTROLS, INCORPORATED (JCI) AND CUSTOMER, WARRANTS, TO THE CUSTOMER NAMED HEREIN, PARTS AND LABOR FOR THE VSD UNIT. IT DOES NOT COVER REFRIGERANT COST, FREIGHT CHARGES, MOTOR OR CONTROL PANEL, OR ANY OTHER COSTS.

THIS WARRANTY EXCLUDES IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND WE DO NOT ASSUME, OR AUTHORIZE ANY OTHER PERSON TO ASSUME OTHER WARRANTIES FOR US. THIS WARRANTY IS OFFERED AS AN EXTENSION TO THE STANDARD LIMITED WARRANTY (FORM 50.05-NM2) AND IS SUBJECT TO THE SAME LIMITATIONS AND EXCLUSIONS, EXCEPT WHERE NOTED.

THIS PROTECTION PLAN DOES NOT COVER FAILURE OR DAMAGE RESULTING FROM FIRE, FLOOD, ABUSE, OR ACT OF GOD. ALSO EXCLUDED ARE DAMAGES OR FAILURES CAUSED BY INSTALLATION, OPERATION, OR MAINTENANCE CONTRARY TO YORK RECOMMENDATIONS, OR THOSE OF THE MANUFACTURER IF OTHER THAN YORK. IN NO EVENT SHALL YORK BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGE, LOSS, OR INJURY. WARRANTY SERVICE SHALL BE AVAILABLE THROUGH THE SERVICER LISTED HEREIN DURING NORMAL WORKING HOURS.

DISTRICT SERVICE OFFICE: _____

OFFERED BY: _____ _____
JCI/York Selling Representative Print/Sign — Date

APPROVED BY: _____ _____
JCI/York Area Service Manager Print/Sign — Date

ACCEPTED BY: _____ _____
Customer Signature — Date

(Manufacturer's Use Only)
AUTHORIZED BY: _____

Robert D. Holczynski
Johnson Controls Quality Department, Customer Support Manager

6/1/2018 at 10:11
Date

Product Code Ref: 8541

2525 Quail Drive, Baton Rouge, 70808 (225) 765-2301 Text-To-Verify: 1 (855) 999-7896

Louisiana State Licensing Board for Contractors

Contractor Information

Business Name	JOHNSON CONTROLS, INC.
Mailing Address	Jeanne Corkern 18247 Petroleum Drive Baton Rouge, LA 70809
Phone Number	(414) 524-7765
Fax Number	(414) 524-7396
Email Address	jeanne.c.corkern@jci.com
Website	http://

Active Licenses

License Number	504
Type	Commercial License
Status	LICENSED
Effective	01/03/2017
Expiration	01/01/2020
First Issued	01/01/1957

Classifications

Class	Qualifying Party	Parishes
BUILDING CONSTRUCTION	Derland Paul Moore II	ALL
BUILDING CONSTRUCTION	Douglas Thomas Woolworth	ALL
BUILDING CONSTRUCTION	Thomas Edwin Whitten	ALL
BUSINESS AND LAW	David A. Roux	ALL
BUSINESS AND LAW	Derland Paul Moore II	ALL
BUSINESS AND LAW	Donald Lee Berthelot Jr.	ALL
BUSINESS AND LAW	Douglas Thomas Woolworth	ALL
BUSINESS AND LAW	Thomas Edwin Whitten	ALL
ELECTRICAL WORK (STATEWIDE)	Donald Lee Berthelot Jr.	ALL
ELECTRICAL WORK (STATEWIDE)	Todd Michael Cook	ALL
MECHANICAL WORK (STATEWIDE)	Donald Lee Berthelot Jr.	ALL
MECHANICAL WORK (STATEWIDE)	Douglas Thomas Woolworth	ALL
MECHANICAL WORK (STATEWIDE)	Stephen M. Starkey	ALL
MUNICIPAL AND PUBLIC WORKS CONSTRUCTION	Mark Canfield	ALL
SPECIALTY: INSTRUMENTATION AND CALIBRATION	David A. Roux	ALL
SPECIALTY: TELECOMMUNICATIONS	David A. Roux	ALL
SPECIALTY: TOWER CONSTRUCTION	David A. Roux	ALL

Johnson Controls

2835 Hessmer Ave.
Metairie, LA 70002

RETURN SERVICE REQUESTED

LA CONTRACTOR LICENSE # 504

JEFFERSON PARISH PURCHASING DEPT.
200 DERBIGNY STREET.
GENERAL GOVERNMENT BUILDING, SUITE 4400
GRETNA, LA. 70053

BID NO - 50-00123954 BID OPENING OCTOBER 2, 2018 AT 2:00PM