Title: 999 - Campus Air Compressor FY-17 - Bid Specs

General notes:

1. The contractor to follow WSU-DCS standards: http://facilities.wayne.edu/design/index.php
2. The contractor will provide warranty per bid’s documents, one year warrantee parts and labor
3. All pathways to be field verified by contractor
4. The contractor will coordinate with the dayshift building engineer for access, and work will be performed during normal business hours of 7 AM – 5 PM / M - F

Air Compressors General

1. The contractor shall obtain WSU approval in writing on new air compressor units prior to installation.
2. New units will be designated for commercial applications and specified by their manufacture for climate control or lab air as applicable in each case.
3. Unless specifically noted the air compressors will match the capacities and specifications of the existing units, in-so-much as possible, unless written approval is obtained to vary from them. In cases where there is no existing equipment or data on existing equipment cannot be found size will be determined by operational measurements and industry best practice calculations. (See note #1 this section).
4. Approved manufactures are: Quincy, Ingersoll-Rand, Champion, FS Curtis. Other manufactures may be proposed, but will not be considered acceptable unless you receive permission, in writing, from WSU. Standardization to a manufacture may be considered if it is in the best interest of WSU to do so.

Scope of Work

089 - Biological Sciences Building

Provide new air compressor and listed accessories meeting or exceeding below:

Air compressor:

- Quincy - QGDV-25 or equivalent
- Pressure 125 PSIG
- Capacity CFM (ACFM) 120
- 240/3/60
- Direct drive
- Tank mounted
- Tank size 120 Gallons
Title: 999 - Campus Air Compressor FY-17 - Bid Specs

Emulsion Separator:

- Quincy QCS 200 or equivalent
- Condensate Connections - (2) 1/2" NPT
- Water Outlet - 1/2" NPT
- Capacity (CFM) - 200

Existing air compressor & accessories

- Disconnect existing electrical wiring
- Disconnect piping
- Disconnect mechanical connections
- Disassemble air compressor into sections, if needed for removal
- Remove and replace all obstacles as necessary for unit removal
- Remove from WSU property
- Properly dispose of old air compressor
- Maintain proper records per WSU OEHS guidelines

New air compressor

- Furnish all labor, tools, material and equipment to perform the work, as per plans and specifications, in a timely and orderly manner
- Set new air compressor in existing footprint
- Furnish and install new dual PRV station with Bypass
- Connect to existing refrigerated air dryer (new within last year)
- Furnish and install emulsion separator(s)
- Furnish and install 1 1/2” schedule 40 black piping with flex connection from air compressor to dryer
- Furnish and install 3/8” OD poly tubing from drain off of air compressor to oil/water separator
- Furnish and install automatic blowdown valves on both tank, air dryer, and separator drain lines
- Furnish and install wire and conduit from existing disconnect to air compressor following NEC guidelines
- Check motor rotation
- Check and test piping
- Supply all installation / operation literature and/or shop drawings, etc.
- Remove and replace all obstacles as necessary for unit placement
- Preform factory start-up
- Provide owner operations and maintenance training

140 - Education

Provide new air compressor and listed accessories meeting or exceeding below:

Air compressor:

Quincy QR05012S or equivalent
Title: 999 - Campus Air Compressor FY-17 - Bid Specs

- Pressure 90 PSIG
- Capacity CFM (ACFM) 21.2 @ 90 PSIG
- Pressure lubrication
- 480/3/60
- Tank mounted
- Tank size 120 gallons horizontal (ASME stamped)
- Korfun pad mounts
- Start / Stop Control
- PRV station to be included

Emulsion Separator:

- Quincy - QCS 100 or equivalent
- Condensate Connections - (1) 1/2" NPT
- Water Outlet - 1/2" NPT
- Capacity (CFM) – 100

Refrigerated air dryer:

- Quincy QPNC-25 or equivalent
- Air cooled
- Dew point 38 F
- Pressure 100 PSIG
- Capacity 25 CFM
- Electrical 120/1/60
- Connections 1.5” NPT

Existing air compressor & accessories

- Disconnect existing electrical wiring
- Disconnect piping
- Disconnect mechanical connections
- Disassemble air compressor into sections, if needed for removal
- Remove and replace all obstacles as necessary for unit removal
- Remove from WSU property
- Properly dispose of old air compressor
- Maintain proper records per WSU OEHS guidelines

New air compressor

- Furnish all labor, tools, material and equipment to perform the work, as per plans and specifications, in a timely and orderly manner
- Install housekeeping pads and Korfun pads for all floor mounted units
- Set new air compressor in existing footprint
- Furnish and install 1” schedule 40 black piping with flex connection from air compressor to dryer
- Furnish and install 1” valved outlet between air compressor to dryer to tie to existing air compressor
Furnish and install new dual PRV station with Bypass
Furnish and install three valve bypass around dryer
Furnish and install refrigerated air dryer
Furnish and install emulsion separator
Furnish and install 1” schedule 40 black pipe from dryer to existing air header
Furnish and install 3/8” OD poly tubing from drain off of air compressor to oil/water separator
Furnish and install ¾” PVC piping form oil/water separator to existing floor drain
Furnish and install automatic blowdown valves on both tank, air dryer, and separator drain lines
Furnish and install 30 Amp fused disconnect in existing power panel to new unfused disconnect located near new compressor, following NEC guidelines
Furnish and install new unfused disconnect near new compressor, following NEC guidelines
Furnish and install including wire and conduit for connections to all components, following NEC guidelines
Check and test piping
Supply all installation / operation literature and/or shop drawings, etc.
Remove and replace all obstacles as necessary for unit placement
Preform factory start-up
Provide owner operations and maintenance training

039 - Community Arts

Provide new air compressor and listed accessories meeting or exceeding below:

Air compressor:

- Quincy QR05012D (duplex) or equivalent
- Pressure 90 PSIG
- Capacity CFM (ACFM) 9 per unit @ 90 PSIG
- Pressure lubrication
- 480/3/60
- Tank mounted
- Tank size 120 gallons horizontal (ASME stamped)
- Korfun pad mounts
- Start / Stop Control
- PRV station to be included

Emulsion Separator:

- Quincy QCS 100 or equivalent
- Condensate Connections - (1) 1/2" NPT
- Water Outlet - 1/2" NPT
- Capacity (CFM) – 100

Refrigerated air dryer:

- Quincy QPNC-10 or equivalent
- Air cooled
Dew point 39 F
Pressure 100 PSIG
Capacity 25 CFM
Electrical 120/1/60
Connections 1.5” NPT

Existing air compressor & accessories

- Disconnect existing electrical wiring
- Disconnect piping
- Disconnect mechanical connections
- Disassemble air compressor into sections, if needed for removal
- Remove and replace all obstacles as necessary for unit removal
- Remove from WSU property
- Properly dispose of old air compressor
- Maintain proper records per WSU OEHS guidelines

New air compressor

- Furnish all labor, tools, material and equipment to perform the work, as per plans and specifications, in a timely and orderly manner
- Provide and install Korfun pads
- Set new air compressor in existing footprint (alternates for relocation out of “hot room” requested)
- Furnish and install new dual PRV station with Bypass
- Furnish and install 1” schedule 40 black piping with flex connection from air compressor to dryer
- Furnish and install 1” valved outlet between air compressor to dryer to tie to existing air compressor
- Furnish and install refrigerated air dryer
- Furnish and install emulsion separator
- Furnish and install three valve bypass around dryer
- Furnish and install 1” schedule 40 black pipe from dryer to existing air header
- Furnish and install 3/8” OD poly tubing from drain off of air compressor to oil/water separator
- Furnish and install 3/8” OD poly tubing form oil/water separator to existing floor drain
- Furnish and install automatic blowdown valves on both tank, air dryer, and separator drain lines
- Furnish and install new unfused disconnect near new compressor, following NEC guidelines
- Furnish and install including wire and conduit for connections to all components, following NEC guidelines
- Check and test piping
- Supply all installation / operation literature and/or shop drawings, etc.
- Remove and replace all obstacles as necessary for unit placement
- Perform factory start-up
- Provide owner operations and maintenance training

026 – Purdy Library

Provide new air compressor and listed accessories meeting or exceeding below:
Title: 999 - Campus Air Compressor FY-17 - Bid Specs

Air compressor:
- Quincy QR03008D (duplex) or equivalent
- Pressure 90 PSIG
- Capacity CFM (ACFM) 13.9 per unit @ 90 PSIG
- Pressure lubrication
- 240/3/60
- Tank mounted
- Tank size 80 gallons horizontal (ASME stamped)
- Korfun pad mounts
- Start / Stop Control
- PRV station to be included

Emulsion Separator:
- Quincy QCS 100 or equivalent
- Condensate Connections - (1) 1/2" NPT
- Water Outlet - 1/2" NPT
- Capacity (CFM) – 100

Refrigerated air dryer:
- Quincy QPNC-15 or equivalent
- Air cooled
- Dew point 39 F
- Pressure 100 PSIG
- Capacity 25 CFM
- Electrical 120/1/60
- Connections 1.5” NPT

Existing air compressor & accessories
- Installed in addition to existing air compressor

New air compressor
- Furnish all labor, tools, material and equipment to perform the work, as per plans and specifications, in a timely and orderly manner
- Provide and install Korfun pads
- Set new air compressor
- Furnish and install new dual PRV station with Bypass
- Furnish and install 1” schedule 40 black piping with flex connection from air compressor to dryer
- Furnish and install 1” valved outlet between air compressor to dryer to tie to existing air compressor
- Furnish and install refrigerated air dryer
- Furnish and install emulsion separator
- Furnish and install three valve bypass around dryer
• Furnish and install 1” schedule 40 black pipe from dryer to existing air header
• Furnish and install 3/8” OD poly tubing from drain off of air compressor to oil/water separator
• Furnish and install 3/8” OD poly tubing form oil/water separator to existing floor drain
• Furnish and install automatic blowdown valves on both tank, air dryer, and separator drain lines
• Furnish and install new unfused disconnect near new compressor, following NEC guidelines
• Furnish and install electrical including wire, conduit, breakers and fuses for connections to all components, following NEC guidelines
• Furnish and install electrical non-fused disconnect local the new compressor
• Furnish and install electrical including wire, conduit, breakers and fuses for connections to all components, following NEC guidelines
• Furnish and install electrical non-fused disconnect local the new compressor
• Check and test piping
• Supply all installation / operation literature and/or shop drawings, etc.
• Remove and replace all obstacles as necessary for unit placement
• Perform factory start-up
• Provide owner operations and maintenance training

629 - Elliman

Provide new air compressor and listed accessories meeting or exceeding below:

Air compressor:

• Quincy MSTB54P5-Lab or equivalent
• Pressure 90 PSIG
• Capacity SCFM 62.4 per unit @ 100 PSIG
• Oil Less
• 460/3/60
• Tank size 200 gallons vertical (ASME stamped)
  • Pressure gauge
  • Relief valve
  • Sight glass
  • Manual and automatic blowdown system
  • Three valve tank bypass
  • Internal corrosion resistant lining
• Korfun pad mounts
• Isolation valve, check valve, and safety valve for each base mount unit
• ODP motor belts and belt guard for each base mount unit
• Air cooled aftercooler with separator for each base mount unit
• Thermal malfunction protection device for each base mount unit
• Minimum 30,000 hour run life
• Dual PRV station to be included
• Control panel
  • NFPA rated
  • PLC control start / stop – lead / lag, etc.
  • Display showing pump status, faults, run hours, system pressure, system alarms, service alerts, for pumps, dryers, dew point and CO monitors
  • IP over BACnet connection (please present as an alternate with cost called out)

Emulsion Separator:
Title: 999 - Campus Air Compressor FY-17 - Bid Specs

- Quincy QCS 100 or equivalent
- Condensate Connections - (1) 1/2" NPT
- Water Outlet - 1/2" NPT
- Capacity (CFM) – 100

Air Control and Purification System:

- Dual heat-less desiccant air dryers
- Dual pre and after filters
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency

Existing air compressor & accessories

- Disconnect existing electrical wiring
- Disconnect piping
- Disconnect mechanical connections
- Disassemble air compressor into sections, if needed for removal
- Remove and replace all obstacles as necessary for unit removal
- Remove from WSU property
- Properly dispose of old air compressor
- Maintain proper records per WSU OEHS guidelines

New air compressor

- Furnish all labor, tools, material and equipment to perform the work, as per plans and specifications, in a timely and orderly manner
- Provide and install Korfun pads
- Set new air compressor in existing footprint (alternates for relocation out of “hot room” requested)
- Furnish and install new PRV station with Bypass
- Furnish and install 1” schedule 40 black piping with flex connection from air compressor to dryer
- Furnish and install 1” valved outlet between air compressor to dryer to tie to existing air compressor
- Furnish and install refrigerated air dryer
- Furnish and install emulsion separator
- Furnish and install three valve bypass around dryer
- Furnish and install 1” schedule 40 black pipe from dryer to existing air header
- Furnish and install 3/8” OD poly tubing from drain off of air compressor to oil/water separator
- Furnish and install 3/8” OD poly tubing form oil/water separator to existing floor drain
- Furnish and install automatic blowdown valves on both tank, air dryer, and separator drain lines
- Furnish and install new unfused disconnect near new compressor, following NEC guidelines
- Furnish and install including wire and conduit for connections to all components, following NEC guidelines
- Check and test piping
- Supply all installation / operation literature and/or shop drawings, etc.
• Remove and replace all obstacles as necessary for unit placement
• Perform factory start-up
• Provide owner operations and maintenance training

New Work Notes:

• The contractor is responsible for all necessary equipment, lifts, ladders, wire Dollies, power, and hand tools required to complete the project

• The contractor is responsible for all mechanical, electrical, piping, etc. connections and/or modifications

Bid type:

Request bids broken down by material, disposal cost and labor per unit
Campus Air Compressor FY-17 - Drawings

089 – Biological Science Building

Air Compressor Station

BIOLICAL SCIENCE BUILDING
BUILDING #089
FIRST FLOOR

CAC – FY-17 – D – 1
Additional Air Compressor will be located in this mechanical room where appropriate.
Campus Air Compressor FY-17 - Drawings

039 – Community Arts

- Existing Air Compressor Station
- New Location for Air Compressor Station
Campus Air Compressor FY-17 - Drawings

026 – Purdy Library

Existing Air Compressor Station
Location for New Additional Air Compressor Station
Existing Medical Air Compressor