INTRODUCTION:

Preferred Manufacturers:

The University of Michigan evaluates products (and in some cases services) for reliability, performance, cost effectiveness, and other factors, as pertinent for the product or service. These preferred products/services are to be utilized on U-M projects.

- Preferred products/services for which U-M publishes a master specification on its website are automatically listed in the respective U-M master specification.
- If the Architect/Engineer does not use U-M's master specification as the basis for the project's specification, he/she shall list the same approved manufacturers in the project specification as listed in U-M's master specification.
- If U-M does not publish a master specification for a particular product or service, the preferred products are listed in this list, the "PML".
- If there is a significant need to use a manufacturer or service not listed in the U-M master specification or PML, the A/E shall consult the U-M Design Manager for approval.

In all cases a manufacturer's product must be listed as approved in the project's contract documents or specifications. Listing in U-M's master specifications or the PML does not guarantee a product will automatically be listed in a specific project's documents or specifications.

Conditional Approval: Listed manufacturer's product may be used on select U-M projects, however approval from the respective A & E Technical Committee must first be obtained. If approved, it may be listed as approved in the project's contract documents or specifications. Manufacturers in the Conditional Approval category have gone through successful preliminary review, but the Technical Committee requires additional in-service input prior to final listing.

Under Consideration: Listed manufacturer's product is being evaluated. The product should not be included in U-M projects.

SECTION 211313 - WET-PIPE SPRINKLER SYSTEMS

Preaction Systems
Siemens (Pyrotronics), Notifier, Viking

SECTION 220000 - UNDERGROUND PIPING IN CONDUIT SYSTEM

Piping Systems - Underground
Perma-Pipe, Rovanco, Under Consideration: Urecon

SECTION 220500 - COMMON WORK RESULTS FOR MECHANICAL

Roof Curbs
Pate
Creative Metals
Roof Curbs Engineered and Manufactured by the Manufacturer of the Equipment to be supported

SECTION 220516 - PIPE EXPANSION JOINTS
Expansion Joints - Externally Pressurized
Hyspan, ATS

SECTION 220523 - VALVES
Valves - Lubricated Plug
Homestead, Milliken, Resun

Valves – Safety Relief
Spirax-Sarco, Watts, Leslie, Anderson-Greenwood, Conbraco, Keckley

SECTION 221113 - PIPING MATERIALS & METHODS
Pipe Hangers and Mechanical Supports
Anvil, Cooper B-Line, Carpenter & Paterson, PHD Manufacturing, Unistrut, Powerstrut

SECTION 221519 - GENERAL SERVICE PACKAGED AIR COMPRESSORS AND RECEIVERS
Air Compressors - Screw Type (1800 RPM)
Atlas - Copco
Quincy QSI Series

Air Compressors - Reciprocating
Quincy
Gast
Devilbliss

SECTION 223300/223400 - DOMESTIC WATER HEATERS
Domestic Water Heaters - Gas Fired Or Electric
Lochinvar
A.O. Smith
State
Rheem
Raypak
Under Consideration: Copper Fin (Quality water & air)

Instantaneous Water Heater (Steam Fired)
Cemline
Hubbell

Semi-Instantaneous Water Heater (Steam Fired)
Cemline
Hubbell

SECTION 224200 - PLUMBING FIXTURES
Water Filters - Inline Type
SECTION 226200 - VACUUM SYSTEMS FOR LAB AND HEALTHCARE FACILITIES

Vacuum Pumps

Nash
Domestic
Sehi
Shipco
Under Consideration: Skidmore (K.L.McCoy), Busch (Kerr pump & supply)

SECTION 226719 - PROCESS WATER EQUIPMENT FOR LABORATORY AND HEALTHCARE FACILITIES

Deionized Water and Reverse Osmosis Water Suppliers

Crown Solutions (Veolia)
Siemens/U.S. Filter
Ionpure
Millipore

SECTION 230000 - HEAT EXCHANGERS & CONVERTERS

Dry Coolers

McQuay, Trane, York, Bohn

Laser Heat Exchangers - Water Cooled

Haskris
Remcor
Neslab
Laser Pure (Coherent)

SECTION 230000 - MULTIMEDIA FILTRATION SYSTEM

Acceptable Manufacturers

Crown Equipment Systems, PEP Filters, Everfilt

SECTION 230000 - PACKAGED TERMINAL AIR CONDITIONERS, AIR-COOLED

Air Conditioning Units - Package Type (thru the wall self-contained DX)

IslandAire, McQuay, Trane, York

Air Conditioning Units - Window Type (Flush installation with wall exterior)

Comfort-Aire, Fedders, White Westinghouse

SECTION 230000 - TERMINAL UNITS

Baseboard Radiation, Finned Tube Radiation

Dunham-Bush, Rittal, Slantfin, Sterling Radiator, Trane, Vulcan Radiator

Panel Radiators
Jaga, Runtal Radiator, Sterling

**Convector**
- Dunham-Bush, Rittling, Sterling, Trane

**Unit Heaters**
- Dunham-Bush, McQuay, Modine, Reznor, Rittling, Sterling, Trane, Wing

**Cabinet Heaters**
- Dunham-Bush, McQuay, Modine, Rittling, Sterling, Trane

**Unit Ventilators**
- American Air Filter, Trane

**Electric Cabinet Heaters**
- Berko, Qmark, Trane

**Electric Heating Coils**
- Brasch, Chromalux, Indeeco, Trane

**Gas Fired Duct Furnaces**
- Modine, Reznor, Sterling, Trane

**Radiant Ceiling Panel - Hot Water**
- Aero-Tech, Air-Tex, Sun-El, Sterling/TWA, Price

**SECTION 232123 – PLUMBING AND HYDRONIC PUMPS**

**Pumps - Condensate Waste**
- Little Giant, Hartell, Marsh, Bekette

**SECTION 232200 - STEAM CONDENSATE RETURN UNITS**

**Condensate Receiver**
- ITT Domestic, Skidmore, Shipco, Spirax-Sarco

**Condensate Meters - Magnetic Induction**
- Refer to U-M Master Specification 230900

**Pumps - Condensate (Condensate Receiver Must Be Cast Iron)**
- ITT Domestic (Hoffman), Skidmore, Spirax-Sarco, Shipco, Weinman

**Pumps - Condensate, Steam Or Air Pressure Powered**
- Sarco, Armstrong

**SECTION 232216 - STEAM AND CONDENSATE PIPING SPECIALTIES**

**Steam Pressure Reducing Stations**
- Armstrong, Leslie, Spence, Spirax-Sarco,

**Steam Safety Relief Valves**
- Armstrong, Consolidated, Spence, Spirax-Sarco, Watson McDaniel

**SECTION 233100 - HVAC DUCTS & CASINGS**

**Exhaust Ductwork - Teflon Coated Stainless Steel**
- Fab-Tech (PermaShield Pipe)

**Exhaust Ductwork - FRP**
- Perry, Spunstrand, Tangent
SECTION 233400 - FANS

Fans - FRP Construction
M.K. Plastics
Under Consideration: Harrington

SECTION 235300 – HEATING BOILER FEEDWATER EQUIPMENT

Pumps - Boiler Feed
Skidmore, Spirax-Sarco, Shipco, Weinman

SECTION 236100 – REFRIGERANT COMPRESSORS

Refrigeration Compressors
Copeland, Dunham Bush, McQuay, Tecumseh, Trane, York

SECTION 236313 - AIR COoled CONDENSING UNITS

Air Cooled Condensers
Bohn, Dunham Bush, McQuay, Trane, York

SECTION 236400 - PACKAGED WATER CHILLERS

Chillers - Screw or Scroll
Dunham-Bush
York by Johnson Controls
Trane

Chillers - Reciprocating, Air-Cooled
Trane, York by Johnson Controls
Under Consideration: Carrier.

Chillers - Process Cooling
Filtrine, Liebert, Trane, Neslab

SECTION 236413 - STEAM ABSORPTION CHILLERS

Chillers - Absorption
Trane, York by Johnson Controls

SECTION 237300/237400 GAS FIRED MAKE-UP UNITS

Gas Fired Make-Up Air Units (direct and indirect)
Rapid, Reznor, Sterling, Trane
Under Consideration: Modine (Air Design), Greenheck

SECTION 238123 - PACKAGED COMPUTER ROOM AIR CONDITIONING SYSTEM

Air Conditioning Units - Computer Room
APC, Liebert, Stulz

SECTION 238126 - SPLIT SYSTEM AIR CONDITIONERS

Air Conditioning Units - Ductless, Spot Coolers
Daikin, Friedrich, Liebert, Mitsubishi, Sanyo, Trane