UNIVERSITY OF MICHIGAN
ARCHITECTURE, ENGINEERING AND CONSTRUCTION

ARCHITECTURE & ENGINEERING
326 East Hoover, Mail Stop B
Ann Arbor, MI 48109-1002
Phone: 734-764-3414
Fax: 734-936-3334

BuildingName
The Description of the Project
P00000000 0000

SPECIFICATION DIVISION 22

NUMBER SECTION DESCRIPTION

DIVISION 22 PLUMBING
SECTION 221500 - COMPRESSED AIR ACCESSORIES

END OF CONTENTS TABLE

DIVISION 22 PLUMBING
SECTION 221500 - COMPRESSED AIR ACCESSORIES

REVISIONS:
8-1-99: CONTENT APPROVED AS NEW MASTER
8-11-99: REVISED TO VBS.DOT TEMPLATE

EDITOR: SEE 230900 FOR COMPRESSORS, DRYERS, AND ACCESSORIES FOR CONTROL (INSTRUMENT) AIR USE. THE ACCESSORIES SPECIFIED BELOW ARE NOT TYPICALLY SPECIFIED FOR CONTROL AIR USE; NOTE THE DESCRIPTION IN THE SCOPE OF WORK, BELOW.

APRIL 2018: REVISED TO LIST MFR.S FROM PML. R BENEDEK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

INCLUDE PARAGRAPH 1.1.A AND B IN EVERY SPECIFICATION SECTION. EDIT RELATED SECTIONS 1.1.B TO MAKE IT PROJECT SPECIFIC.

A. Drawings and general provisions of the Contract, Standard General and Supplementary General Conditions, Division 1 Specification Sections, and other applicable Specification Sections including the Related Sections listed below, apply to this Section.

1.2 SCOPE OF WORK:

A. Provide piping, fittings, and specialties for the following systems:

1. Compressed air regulators, filters, drain valves, relief valves and lubricators, for compressed air systems **not** associated with control (instrument) air or medical air systems.

PART 2 - PRODUCTS:

2.1 COMPRESSED AIR SPECIALTIES:

SPEC EDITOR: BELOW FOR LARGE CAPACITY ON AIR MAINS. MODIFY DESCRIPTION AS REQUIRED. ADDITIONAL RESEARCH REQUIRED.

A. Pressure Regulating Valve: Bronze body, direct-acting, spring-loaded, manual pressure setting adjustment, pressure gauges, and rated for 150-psig inlet pressure. Manufacturers: Landis and Staefa Series 201, Van Aire, Wilkerson, Zeks, Parker-Hannifin, Fisher, Siemens

B. Compressed Air Filter - General Requirements: Housings shall be corrosion resistant, rated for minimum of 150psig. Capacity, accessories and configuration (simplex or duplex) as indicated on drawings. Furnish spare filter set. Manufacturers: Hankinson, Van Aire, Wilkerson, Zeks

SPEC EDITOR: THIS IS A GOOD GENERAL PURPOSE FILTER, SUITED FOR REMOVAL OF HIGH VOLUMES OF OIL AND WATER.

C. Compressed Air Filter - Centrifugal/Coalescing and Impingement: Cleanable perforated stainless steel coalescing inner core, with automatic drain and in-depth impingement filter outer section. Designed for efficient removal of water droplets (99%) and oil aerosols (40%) via coalescence, and removal of particles to 3 microns. Manufacturer: Hankinson Centriflex

SPEC EDITOR: THE FOLLOWING IS FOR MORE EFFICIENT REMOVAL OF WATER AND OIL AND PARTICLES.

D. Compressed Air Filter - Combination Coalescing and Impingement: Glass fiber coalescing inner core, with automatic drain and in-depth impingement filter outer section. Designed for efficient removal of water droplets (100%) and oil aerosols (70%) via coalescence, and removal of particles to 1 microns. Manufacturer: Hankinson 3100 Series

SPEC EDITOR: THE FOLLOWING IS FOR FINE FILTRATION AND WATER AND OIL REMOVAL, BUT IN LOWER QUANTITIES. GOOD FINAL FILTER FOR CONTROL AIR, BUT USE ONE OF THE FILTERS ABOVE FIRST.

E. Compressed Air Filter - Fine Impingement: Inner foam distributing core, fine glass fiber coalescing and impingement core, foam final coalescing outer section, and with automatic drain. Designed for efficient removal of oil (99.999%) via coalescence, and removal of particles to 0.025 microns. Manufacturer: Hankinson Aerolescer

SPEC EDITOR: THE FOLLOWING IS NOT GENERALLY REQUIRED. IF USED, IT SHOULD HAVE A COALESCING FILTER FIRST.

F. Compressed Air Filter - Adsorption: Include activated carbon capable of removing virtually 100% of oil aerosols, with color change dye to indicate when carbon is saturated, and with final filter to contain carbon dust to 0.025 microns. Manufacturer: Hankinson Hypersorb

SPEC EDITOR: THE FOLLOWING IS AN OLD CARRYOVER SPEC WITH SOME EDITS AND MANUFACTURERS ADDED. ADDITIONAL RESEARCH IS REQUIRED. CONSIDER AUTOMATIC BALL FLOAT TYPE (WRIGHT AUSTINB MODEL 90-AC OR ARMSTRONG NO.21 VS. ATOMIZING TYPE, NICHOLSON DRAIN-AIR.)

G. Automatic Drain Valves: Corrosion-resistant metal body and internal parts, rated for 150-psig minimum working pressure, capable of automatic discharge of collected condensate. Manufacturer: Drain-all, Van Aire Draintender, Zeks, Hankinson Snap-Trap

SPEC EDITOR: RELIEF VALVE IS USUALLY SPECIFIED WITH THE AIR COMPRESSOR.

H. Pressure Relief Valve: Brass body, spring relief, capacity and factory set relief pressure as indicated on drawings.

SPEC EDITOR: LUBRICATORS ARE INFREQUENTLY REQUIRED, ONLY WHERE PNEUMATIC TOOLS REQUIRE OIL FOR LUBRICATION. ADDITIONAL RESEARCH IS REQUIRED. CHECK FISHER TYPE 67FR.

I. Air-Line Lubricators: Sizes and capacities indicated; equip with drip chamber and sight dome for observing oil drop entering air stream; with oil feed adjustment screw, and quick-release collar for easy bowl removal.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. See Related Section 221113 for piping materials and installation requirements.

3.2 SPECIALTIES INSTALLATION AND START-UP

A. Install drain and vent from automatic drain valves per manufacturer's instructions. Route drain to floor drain or location approved by engineer.

B. After installation is complete test operation of regulators, and automatic drain valves.

C. Instruct owner on location, operation, and maintenance of piping specialties.

END OF SECTION 221500