

BuildingName  
The Description of the Project  
P00000000 0000

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

**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**