

PART 1 - GENERAL

1.1 REFERENCES

- .1 American Society of Mechanical Engineers (ASME)
 - .1 ASME B31.9-14, Building Services Piping
 - .2 ASME B16.22-2013, Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM B88-14, Standard Specification for Seamless Copper Water Tube
 - .2 ASTM B32-08(R2014), Standard Specification for Solder Metal.
- .3 AWS A5.8/5.8M-2011-AMD1, Specification for Filler Metals for Brazing and Braze Welding.
- .4 MSS SP123-2013, Non Ferrous Threaded and Solder-Joint Unions for Use with Copper Water Tube.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 Submit shop drawings and product data in accordance with Section 01 33 00.

1.3 CLOSEOUT SUBMITTALS

- .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00.

PART 2 - PRODUCTS

2.1 COMPRESSED AIR PIPE, VALVES AND FITTINGS

- .1 Copper Tube: ASTM B88, Type L seamless, drawn-temper, water tube:
 - .1 Wrought-Copper Fittings: ASME B16.22, solder-joint pressure type or MSS SP-73, wrought copper with dimensions for brazed joints.
 - .2 Copper Unions: ASME B16.22 or MSS Sp-123

2.2 JOINING MATERIALS

- .1 Solder Filler Metals: ASTM B32, lead free alloys. Include water flushable

flux per ASTM B813.

- .2 Brazing Filler Metals: AWS A5.8/A5.8M, B Cup Series, copper-phosphorus alloys for general duty brazing.

2.3 QUICK COUPLINGS

- .1 Assembly with locking mechanism feature for quick connection and disconnection of compressed air hose.
- .2 Straight through brass body with stainless steel or nickel plated steel operating parts.
 - .1 Socket end: with O-ring or gasket seal, without valve, and with barbed inlet for attaching hose.
 - .2 Plug end: with barbed outlet.

PART 3 - EXECUTION

3.1 COMPRESSED AIR PIPING CONNECTIONS AND INSTALLATION

- .1 Install piping and fittings as shown on the Drawings.
- .2 Install unions to permit removal or replacement of equipment.
- .3 Grade piping at 1% slope minimum.
- .4 Make branch connections from top of main.
- .5 Cleaning: Blow out piping to clean interior thoroughly of oil and foreign matter.
- .6 Testing: Pressure test in accordance with requirements of Section 23 05 00 for 4 h minimum, to 1100 kPa, with outlets closed and with compressor isolated from system. Pressure drop not to exceed 10 kPa.

3.2 HANGERS AND SUPPORTS

- .1 Comply with requirements of Section 23 05 29 – Hangers and Supports.
- .2 Vertical piping: MSS Type 8 or 42, clamps.
- .3 Support horizontal piping within 300mm of each fitting and coupling.
- .4 Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameter:
 - .1 Less than or equal to 13mm: 1800mm with 10mm rod.
 - .2 19mm: 2100mm with 10mm rod.

- .3 25mm: 2400mm with 10mm rod.
- .5 Support vertical pipe every 3m.

3.3 LABELLING

- .1 Install identification labels to new compressed air piping.

END OF SECTION