1 GENERAL

1.1 REFERENCES

.1 American National Standards Institute (ANSI)/ American Society of Mechanical Engineers (ASME).
- .1 ANSI/ASME B16.18-2012, Cast Copper Alloy Solder Joint Pressure Fittings.

.2 American Society for Testing and Materials International, (ASTM).
- .1 ASTM B 62-09, Specification for Composition Bronze or Ounce Metal Castings.
- .2 ASTM B 283-12, Specification for Copper and Copper Alloy Die Forgings (Hot-Pressed).
- .3 ASTM B 505/B 505M-12a, Specification for Copper-Base Alloy Continuous Castings.

.3 Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS).
- .1 MSS-SP-25-2008, Standard Marking System for Valves, Fittings, Flanges and Unions.
- .2 MSS-SP-80-2008, Bronze Gate Globe, Angle and Check Valves.
- .3 MSS-SP-110-2010, Ball Valves, Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

1.2 SUBMITTALS

.1 Submittals in accordance with Section 01 00 10 – General Instructions.

.2 Product Data: submit WHMIS MSDS – Material Safety Data Sheets in accordance with Section 01 00 10 – General Instructions.
- .1 Submit shop drawings and product data in accordance with Section 01 00 10 – General Instructions.
- .2 Submit data for valves specified in this section.

.3 Closeout Submittals:
- .1 Submit maintenance data for incorporation into manual specified in Section 01 00 10 – General Instructions.

1.3 QUALITY ASSURANCE

.1 Health and Safety:
- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 – Health and Safety Requirements.

2 PRODUCTS

2.1 MATERIALS

.1 Valves:
- .1 Except for specialty valves, to be single manufacturer.
- .2 All products to have CRN registration numbers.

.2 End Connections:
.1 Connection into adjacent piping/tubing:
.1 Copper tube systems: Solder ends to ANSI/ASME B16.18.

.3 Check Valves:
.1 Requirements common to check valves, unless specified otherwise:
.1 Standard specification: MSS SP-80.
.2 Connections: screwed with hexagonal shoulders.
.2 NPS 2 and under, swing type, bronze disc, Class 125:
.1 Body: Y-pattern with integral seat at 45 degrees, screw-in cap with hex head.
.2 Disc and seat: renewable rotating disc, two-piece hinge disc construction; seat: regrindable.
.3 NPS 2 and under, swing type, bronze disc:
.1 Body: Y-pattern with integral seat at 45 degrees, screw-in cap with hex head.
.2 Disc and seat: renewable rotating disc, two-piece hinge disc construction; seat: regrindable.

.4 Ball Valves:
.1 NPS 2 and under:
.1 Body and cap: cast high tensile bronze to ASTM B 62.
.2 Pressure rating: Class125.
.3 Connections: solder ends to ANSI.
.4 Stem: tamperproof ball drive.
.5 Stem packing nut: external to body.
.6 Ball and seat: replaceable stainless steel, solid ball and teflon seats.
.7 Stem seal: TFE with external packing nut.
.8 Operator: removable lever handle.

3 EXECUTION

3.1 INSTALLATION

.1 Remove internal parts before soldering.

.2 Install valves with unions at each piece of equipment arranged to allow servicing, maintenance, and equipment removal.