



# Engineering Data

## CAUTION

IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR SYSTEM DESIGNER TO ENSURE THAT THESE VALVES ARE INSTALLED IN ACCORDANCE WITH APPLICABLE AND CURRENT ANSI B31 STANDARDS.

FOLLOWING, ARE SOME SAFEGUARDS THAT MUST BE CONSIDERED PRIOR TO INSTALLATION.

**EASE OF OPERATION** - BALL VALVES ARE EASIER TO OPERATE THAN OTHER TYPES OF SHUT-OFF VALVES. WHEN THESE VALVES ARE INSTALLED SO THAT THERE IS A POSSIBILITY THAT THE HANDLES CAN BE HOOKED OR SNAGGED, APPROPRIATE ACTION TO PREVENT ACCIDENTAL OR UN-WANTED OPENING OR CLOSING OF THE VALVE MUST BE TAKEN. VIBRATIONS IN, THROUGH OR AROUND THE VALVE CAN ALSO CAUSE ACCIDENTAL OR UN-WANTED OPENING OR CLOSING OF THE VALVE.

**PRESSURE RELIEF** - DETERMINE AND PROVIDE CORRECTIVE ACTION AGAINST EXCESSIVE PRESSURE BUILD UP IN THE VALVE OR PIPING SYSTEM DUE TO THERMAL EXPANSION. THERMAL EXPANSION CAN CREATE EXTREME PRESSURES WELL ABOVE THE WORKING PRESSURE LIMIT OF THE VALVE WHICH CAN CAUSE LEAKING OR BURSTING OF THE VALVE.

**SUPPORTS** - IF YOU CHOOSE TO CONNECT A FLEXIBLE HOSE OR OTHER NON-RIDGED CONDUIT TO THE VALVE, THE DESIGN OF SUCH INSTALLATION MUST PREVENT ANY "WHIPPING ACTION" THAT COULD INJURE OR DAMAGE PERSONNEL OR EQUIPMENT. VALVE MUST BE IMMOBILE.

**FITTINGS** - USE ONLY THOSE FITTINGS OR PIPING THAT ARE COMPATIBLE WITH THE VALVES BEING USED TO PREVENT BREAKAGE AND/OR LEAKAGE. (AS FOR ONE EXAMPLE, IT IS POOR PRACTICE AND NEVER RECOMMENDED TO USE PLASTIC PIPE OR FITTINGS WITH METALLIC VALVES SINCE THERMAL EXPANSION, EXTERNAL FORCES OR OTHER SITUATIONS CAN CAUSE BREAKAGE OR LEAKAGE AT OR NEAR THE JOINT).

**PRESSURE/TEMPERATURE LIMITS** - THE MAXIMUM WORKING PRESSURE LIMIT OF THE VALVE IS MARKED ON THE VALVE BODY. NEVER EXCEED THIS "WOG/CWP" RATING WHICH IS SPECIFIED UP TO 100°F. TEMPERATURES HIGHER THAN 100°F DECREASE THE MAXIMUM WORKING PRESSURE LIMIT. REFER TO THE APPROPRIATE PRESSURE/TEMPERATURE CHART THAT IS PUBLISHED IN THE CATALOG.

**FREEZING** - PROVIDE MEANS TO PROTECT THE VALVE FROM FREEZING AND BURSTING WHEN USED WITH LIQUIDS.

**FLUID COMPATIBILITY** - CONSIDER THE CORROSIVE, EROSIVE AND ADHESIVE EFFECTS OF FLUIDS ON THE VALVE AND PIPING COMPONENTS. IT IS YOUR RESPONSIBILITY TO ENSURE THAT THE VALVE IS COMPATIBLE WITH THE MATERIAL(S) USED IN THE SYSTEM.

**INSTALLATION** - THE USE OF TFE PIPE TAPE AS A SEALANT IS RECOMMENDED FOR THREADED VALVES WHEN MAKING JOINTS. CORRECT LUBRICATION OF STAINLESS STEEL PIPE THREADS IS ESPECIALLY IMPORTANT TO PREVENT THREAD GALLING. DO NOT APPLY EXCESSIVE TORQUE WHEN INSTALLING THE VALVE. TO PREVENT DISTORTION OR DAMAGE TO THE VALVE, DO NOT APPLY TORQUE THROUGH THE VALVE. USE PROPER SUPPORTS IN HANDLING PRE-FABRICATED SECTIONS AND IN FINAL INSTALLATION. **ALWAYS TEST THE SYSTEM BEFORE USING.**

**MAINTENANCE** - DO NOT DISASSEMBLE THE VALVE WHILE UNDER PRESSURE. REQUEST A MAINTENANCE MANUAL BEFORE ATTEMPTING REPAIRS TO THE VALVE.

**FOR BRONZE VALVES - WARNING** - THIS PRODUCT IS MADE FROM BRONZE ALLOYS WHICH CONTAIN LEAD; A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM. (PLUMBER CALIFORNIA LAW REQUIRES THAT THIS WARNING BE GIVEN TO THE CONSUMER).