



Section 23 09 23.11 – INSTRUMENTATION AND CONTROL FOR HVAC

13.33 CONTROL VALVES

A. Threaded Globe Valves:

1. Water system globe valves:
 - i. NPS 3/4 and Smaller, female NPT: brass body, stainless steel stem, brass trim and EPDM O-ring packing.
 - ii. NPS 1 - 2, female NPT: bronze body, stainless steel stem, brass trim and EPDM O-ring packing.
 - iii. Flow Characteristics: 2-Way Valves - Equal Percentage 3-Way Valves - A (Coil) = Equal Percentage, B (Bypass) = Linear.
 - iv. Performance:
 - a. Media Temperature: **35°F to 250 °F (2°C to 120°C)** for CG and **20°F to 250 °F (-7°C to 120°C)** for DG.
 - b. Pressure:
 - 1) Body: **ANSI Class 250**
 - 2) Maximum Operating Differential: **25 psid (173 kPa)** brass / **50 psid (345 kPa)** Stainless steel trim
 - 3) Close-off (valve and actuation assembly): Refer to Close-off Charts (CG/DG 6)
 - c. Leakage IV (0.01% of Cv).
2. Steam system globe valves:
 - i. NPS 3/4 and Smaller, female NPT: brass body, stainless steel stem, stainless steel trim and Teflon V-ring/EPDM O-ring packing.
 - ii. NPS 1 – 2, female NPT: bronze body, stainless steel stem, stainless steel trim and Teflon V-ring/EPDM O-ring packing.
 - iii. Flow Characteristics: 2-Way Valves - Equal Percentage 3-Way Valves - A (Coil) = Equal Percentage, B (Bypass) = Linear.
 - iv. Performance:
 - a. Media Temperature: **35°F to 250 °F (2°C to 120°C)** for CG and **20°F to 337 °F (-7°C to 170°C)** for DG.
 - b. Pressure:
 - 1) Body: **ANSI Class 250**
 - 2) Maximum Operating Differential: **15 psid (103 kPa)** stainless steel for CG / **50 psid (345 kPa)** Stainless steel trim for DG
 - 3) Close-off (valve and actuation assembly): Refer to Close-off Charts (CG/DG 6)
 - c. Leakage IV (0.01% of Cv).
3. Manufactured or distributed by Bray or equal.