* 1. Main Valve

1. The main valve shall be a Singer *specify main valve model number (106/S106/206/S206)* -PG single chamber, diaphragm actuated *specify (full/reduced)* port model.
2. Main valves 4” (100mm) and smaller shall provide smooth, frictionless motion with actuation being achieved by the use of a flat style EPDM diaphragm. They shall be constructed of nylon fabric bonded with synthetic rubber. The diaphragm shall not be used as a seating surface.
3. Main valves, 6” (150mm) and larger, shall provide smooth frictionless motion to ensure a low flow stability to *specify minimum USGPM or L/s*, achieved using SRD-Single Rolling Diaphragm technology. The diaphragms shall not be used as a seating surface.
4. The main valve, bonnet and removable stem cap shall be constructed of ASTM A536 (Grade 65/45/12) ductile iron.
5. Main valves of 2.5” (65mm) and larger shall have a removable stem cap for access to the main valve stem for alignment check, spring installation and ease of service and assembly.
6. The main valve bonnet shall be located using two or more locating guide pins to maintain the inner valve assembly alignment and for ease of maintenance.
7. The main valve trim, consisting of seat ring and stem shall be constructed of AISI 316 stainless steel. The valve stem shall have wrench flats for ease of maintenance.
8. The main valve shall provide a drip-tight seal using a mechanically retained resilient disc, having a rectangular cross section, against the stationary AISI 316 stainless steel seat ring.
9. The stationary AISI 316 stainless steel seat ring of main valves 2.5” (65mm) and larger shall be held in place using Spiralock® self locking screws and seat ring retainers.
10. All internal and external ferrous components, including all mating surfaces, shall be coated with an NSF-61 approved fusion bonded epoxy to a minimum of 10 mils DFT-Dry Film Thickness. No machining of any external parts after final coating will be acceptable to ensure a continuous caoting surface throughout the entire valve.
11. The main valve elastomers: diaphragm, resilient disc and seals, shall be of EPDM or Buna-N.
12. All main valve fasteners (bolts, nuts, studs, cap screws) shall be supplied as AISI 18-8 or 304 stainless steel. All bonnet bolts shall be fitted with stainless steel washers to prevent damage to the bonnet coating.
13. All repairs and maintenance shall be possible without removing the valve from the line. To facilitate easy removal and replacement of the inner valve assembly and to reduce unecessary wear on the guide, the stem shall be vertical when the valve is mounted ina horizontal line.
14. Each valve shall be air tested prior to shipment. The standard test shall include leakage test, seat leakage test, and stroke test. Refer to IOM 622B for further details or contact Singer Valve. Ewhere the set point is provided, Singer Valve will preset the pilot. Further testing is available on request at published rates within the capabilioties of Singer Valve’s manufacturing facilities.
15. Valve shall have flanged, threaded or grooved end connections. Flanged connections shall be *specify ANSI/ASME B16.42 Class 150#/300# or ISO 7005-2 PN10/16/25/40* flange drilled, faced and rated. Threaded connections shall be *specify NPT*