Sanitary Diaphragm Valve Specifications

HC4 Diaphragm Valves

HC4/U01/01/01.01U

Body

Valve shall be weir type diaphragm valve with forged type 316L stainless steel body (ASTM A-182), with additional requirements of sulfur content of 0.005% to 0.017% per ASME BPE table DT-3 and maximum ferrite content of 0.5%. Valve shall have integral buttweld ends or integral hygienic clamp ends. Valve with buttweld ends shall have sufficient tangent length to accommodate orbital welding without the addition of welded tube end extensions. Interior surface shall conform to specified ASME BPE surface finish code per table SFV-6. Exterior surface finish shall be as forged. Valve shall fully drain when installed in the self-drain angle as indicated by orientation marks on valve ends. Valve shall be permanently marked with heat number, pressure rating, material type and SFV code per ASME BPE DT-V-3.1 and DT-V-3.2. Additionally, unique order reference number will be marked on valve.

Topworks

Bonnet shall be O-ring sealed, rising handwheel type with high visibility yellow position indicator. Bonnet shell and handwheel shall be of polyethersulphone (PES) suitable for wash down protocols and autoclaving to 150° C. OD profile shall be smooth and hygienic with enclosed fasteners when possible. Spindle, compressor and fasteners shall be stainless steel. Bonnet shall incorporate internal adjustable travel stop to prevent diaphragm overclosure. Modular design can incorporate optional features such as limit open stop, proximity sensors, padlocking device, V-notch plug.

Pneumatic actuator shall be compact piston-type with polyethersulphone (PES) housing and stainless steel air connections and fastener inserts. High visibility yellow position indicator shall be standard. Actuator shall be suitable for wash down protocols and autoclaving to 150°C. OD profile shall be smooth and hygienic with enclosed fasteners when possible. All three operational modes (double-acting spring-to-close, spring-to-open) will feature the same physical dimensions for a given valve size and can be easily converted to different modes. Actuator shall be of inherently safe design with no hazardous spring-load during disassembly. Modular design can incorporate optional features such as switch modules, solenoids, positioners, limit opening stop.

Stainless steel option available with all features as described above.

Diaphragm

E2: Diaphragm shall be peroxide cured EPM with threaded stud connection. Diaphragm shall be FDA conforming, comply to 21CFR177, be third party tested and certified to USP Class V and VI, be certified ADCF (animal derived compound free) and phthalate free, and be fully lot traceable. Sealing beads shall be molded into diaphragm face and located at perimeter and across weir of diaphragm.

E3: Diaphragm shall be peroxide cured EPM and post cured at 240°F for 144 hours and shall have threaded stud connection. Diaphragm shall be FDA conforming, comply to 21CFR177, be third party tested and certified to USP Class V and VI, be certified ADCF (animal derived compound free) and phthalate free, and be fully lot traceable. Sealing beads shall be molded into diaphragm face and located at perimeter and across weir of diaphragm.

P2: Diaphragm shall be two-piece leaf-type with wetted PTFE face and EPM backing cushion and be connected to compressor with quarter-turn bayonet connection. Diaphragm shall be FDA conforming, comply to 21CFR177, be third party tested and certified to USP Class V and VI, be certified ADCF (animal derived compound free) and phthalate free, and be fully lot traceable. Sealing beads shall be molded into diaphragm face and located at perimeter and across weir of diaphragm.

S5: Diaphragm shall be two-piece leaf-type with wetted modified PTFE face and EPM backing cushion and be connected to compressor with quarter-turn bayonet connection. Diaphragm shall be FDA conforming, comply to 21CFR177, be third party tested and certified to USP Class V and VI, be certified ADCF (animal derived compound free) and phthalate free, and be fully lot traceable. Sealing beads shall be molded into diaphragm face and located at perimeter and across weir of diaphragm.

Additional Information

Additional specifications, including specifications for Zerostatic Tee, U-bend, Tandem and machined from solid Bio-Block Valves as well as control options, alternate materials and end specifications are available on request. Please contact your local Saunders HC4 distributor or CPFT sales office for assistance.

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