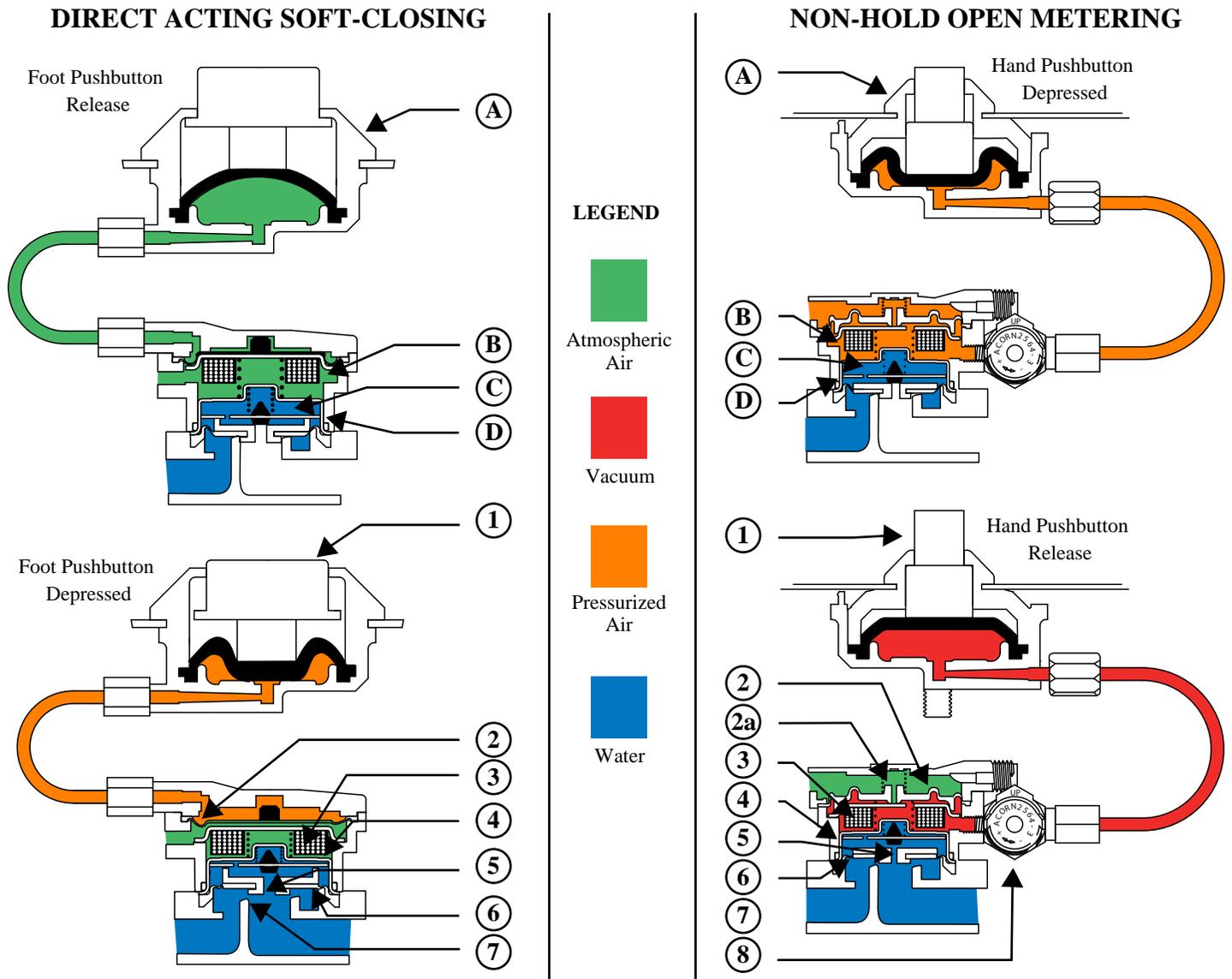


Air-Control® Valve Operation



The Air-Control valve assembly is composed of three major components; Remotely located push button (A), Pneumatic servomotor (B), and Water supply control valve (C). The servomotor and supply valve are encased in a housing divided by the stainless steel separator cup (D). The only interconnection between these two chambers is magnetic force.

Direct Acting Valve Operation

Valve Opens: Depressing the button (1), creates a slight increase in pressure above actuating diaphragm (2). This forces the diaphragm (2) and magnet (3), down. The pilot orifice plate (4), is pulled up by the magnet (3), opening the pilot orifice (5), bleeding off line pressure from above the seat diaphragm (6). Water pressure then fits the seat diaphragm (6), off the seat (7), and opens the valve.

Valve Closes: Releasing the button (1), normalizes pressure above actuating diaphragm (2). Diaphragm (2), and magnet (3), are forced up. The pilot orifice plate (4), drops, covering the pilot orifice (5). Water pressure increases above seat diaphragm (6), closing the diaphragm (6), against the seat (7).

Non-Hold Open Metering Valve Operations

Valve Opens: Depressing the button (1), forces air through the actuating diaphragm check valve (2a), and to atmosphere. Releasing the button (1), creates a vacuum below actuating diaphragm (2), and magnet (3). Diaphragm *2), and magnet (3), are forced down. Pilot orifice plate (4), is pulled up by magnet (3), opening the pilot orifice (5), bleeding off line pressure from above the seat diaphragm (6). Water pressure then lifts the seat diaphragm (6), off the seat (7), and opens the valve.

Valve Closes: Air bleeds in through the timer (8), into the chamber below the actuating diaphragm (2). When the pressure in this chamber returns to normal, the diaphragm (2), and the magnet (3), are forced up. The pilot orifice plate (4), drops, covering the pilot orifice (5). Water pressure increases above the seat diaphragm (6), closing the diaphragm (6), against the seat (7).