

INSTRUCTIONS

Insert these specifications in section 23 09 23 – Control Valves where applicable. Additionally, request a CAD detail from your Nexus Valve representative for your automatic flow control valve piping detail.

General:

Contractor shall provide and install pressure independent flow control valves at all locations as specified in the construction documents.

Function:

1. The valve must be usable with/or without actuator, either as an adjustable pressure independent flow limiter or as pressure independent control valve. The valve must have no requirements for straight up stream or downstream piping.
2. The valve must provide an integrated pressure regulator to control pressure across the control valve orifice, externally adjustable maximum flow setting, and integrated direct flow measuring venturi for flow verification.
3. The valve must have a single assembly removable flow cartridge for system flushing. The must have a universal actuator connection system to allow for 360° actuator positioning on the valve housing.
4. The valve actuator must have full stroke available from the pre-setting position and provide 100% control valve authority. The valve shall have a linear flow characteristic.

Valve Body:

1. Valves 2" and smaller shall be a forged DZR brass, (2) pressure/temperature test ports for flow measuring, EPDM o-ring seals, permanent flow direction indication arrow, and rated at 360 PSI WOG, 250 degrees F. Valves shall be available in NPT connections; like the Nexus Dynamic™ (Model ND.)
2. Optional extended temperature test plugs shall be available.
3. The valve shall carry a 5-year product warranty.

Flow Regulation Cartridge:

1. The flow cartridge's design shall control the regulation of pressure with and integrated EPDM diaphragm, stainless steel spring pressure control disc.
2. The flow cartridge shall be factory flow tested and calibrated to maintain accuracy of $\pm 7\%$; the accuracy shall be maintained over a standard operating range of 4 – 58 PSID and consist of an integrated Venturi nozzle with $\pm 3\%$ accuracy for direct flow measurement.
3. The flow cartridge shall be color coded to indicate the flow range for each valve size and must be visible without removing the cartridge. Cartridges that are not marked with the manufacture flow rate range or must be removed to verify are not acceptable.
4. The flow cartridge shall carry a 5-year product warranty.

ACTUATORS

1. Actuator shall be manufactured by Nexus Valve or approved equal.
2. Actuator shall be provided by Nexus Valve or “By Others”.
3. Actuator control signal shall either be; 0-10v proportional, 2-10v proportional, On/Off, or 3-Position Floating.
4. Actuators are warranted per the supplier’s terms & conditions.

General:

1. Contractor should, to reduce field connections and leak points, provide pre-assembled kit including isolation valves, strainers, unions and other required accessories. See Coil Pak™ specification for requirements in section_____.
2. Contractor should, to reduce system flushing time around the coil, strainer, and PICV without the removal of the strainer screen or flow regulation cartridge, provide permanent bypass piping including tees, unions and isolations valves prior to all factory cleaned components. See UltraBK™ specification for the requirements in section_____.
3. Approved Manufacturers:
Nexus Valve, Inc.