



SPECIFICATION HOSE PAK – AUTOMATIC FLOW CONTROL VALVE

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Instructions:

Insert these specifications in section 23 21 13 – Hydronic Piping 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 automatic flow control valve flexible hose piping packages at all locations as specified in the construction documents.

Hose Pak – Automatic Flow Control:

1. Hose Paks shall be designed for a minimum 400 PSIG working pressure for sizes ½” – 1” and 300 PSIG working pressure sizes 1¼” – 2”; and 5 to 248 degrees F. operating temperature. 2½” hoses shall be designed for a minimum 300 PSIG work pressure at 500 degrees F. Minimum burst pressure shall be four times the working pressure.
2. Each Hose Pak is to include an UltraMatic™ combination automatic flow control valve, isolation valve, and union with (2) pressure & temperature test plugs; UltraY™ combination y-strainer, isolation valve, blow down / drain valve, and union with (1) pressure and temperature test plug; (2) UltraFlex™ stainless steel braided hoses from 12”, 18” 24” or 36” in length.
3. For sizes ½” through 1”, hoses shall direct couple to the valves using a double swivel hoses. Sizes 1” through 2” shall be male by female swivel hose. 2½” shall be a male by male hose.
4. Each Hose Pak shall be “Bagged & Tagged” for easy identification and storage.
5. Optional extended pressure and temperature test plugs, manual air vents and handles shall be available. Extended handles shall not break the vapor barrier when operated.

Automatic Flow Control Valves:

1. The flow cartridge’s non-clogging single orifice design shall include no metal-to-metal contact, no segmented ports, no rolling diaphragm, and incorporate a tapered profile flow nozzle and metering disk controlled by a pressure compensating spring.
2. The flow cartridge shall be a single assembly, constructed with stainless steel moving parts and be accessible without removing the valve from the piping. Flow cartridges constructed with composite or rubber materials are not acceptable.
3. The flow cartridge shall be factory flow tested and calibrated to maintain accuracy of ±5%; the accuracy shall be maintained over a standard operating range of 2 – 45 PSID. Cartridges that prevent flow above the maximum operating range are not acceptable.



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4. The flow cartridge shall be clearly inscribed with the designed manufactured flow rate. Cartridges that are not marked with the manufacture designed flow rate or use a coding system are not acceptable.
5. Manufacturer shall provide a full 100% cartridge exchange for up to one (1) year from date of delivery at no charge. Exchange shall be provided for flow rate changes within same valve body.
6. The flow cartridge and valve shall carry a 5-year product warranty.
7. Valves 1½” and smaller shall be a forged DZR brass Y-pattern body and valves 2” – 2½” shall be a cast DZR brass y-pattern body with integrated ball valve, (2) pressure/temperature test ports, a tag indicating the model, flow rate and PSID range, blowout proof stem with dual FKM o-ring seals, interchangeable union end with FKM o-ring seal, hard chrome plated solid ball with Teflon™ seats, and rated at 600 PSI WOG, 325 degrees F. Valves shall be available with NPT, SWT, PRESS or PUSH connections; like Nexus UltraMatic™ (Model UM.) Optional solid stainless steel ball and stainless steel valve stem shall be available.

Y Strainers:

Y type strainers ½” through 2½” shall be a combination Y Strainer and Ball Valve with integrated Union. Valves shall be a forged DZR brass construction for sizes ½” through 1½” and cast DZR brass for sizes 2” – 2½” with the following features; like Nexus UltraY™ (Model UY).

1. A minimum of 600 PSI WOG, 325 degrees F.
2. Interchangeable union end with FKM o-ring seal.
3. Multiple ¼” tapped ports for test plugs, vents or other accessories.
4. Blowout proof stem with dual FKM o-rings.
5. Hard chrome plated ball with Teflon™ seats.
6. A 304 stainless steel filter screen accessible without affecting the valve piping.
7. A port in the filter cap for a blow down/drain valve.
8. Valves shall be available with NPT, SWT, PRESS or PUSH connections.
9. Optional solid stainless steel ball and stainless steel valve stem shall be available.
10. Valve shall carry a 5-year product warranty.

Stainless Steed Braided Hoses:

1. Hoses shall be made of stainless steel braid over Kevlar reinforced EPDM for sizes ½” through 1” and Rayon reinforced EPDM for sizes 1¼” through 2”. 2½” and larger hoses shall be stainless steel braid over stainless steel tube. Hoses constructed with thermoplastics or EPTF is not acceptable.
2. Hoses shall be designed for a minimum 400 PSIG working pressure for sizes ½” – 1” and 300 PSIG working pressure sizes 1¼” – 2”; and 5 to 248 degrees F. operating temperature. 2½”



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hoses shall be designed for a minimum 300 PSIG work pressure at 500 degrees F. Minimum burst pressure shall be four times the working pressure.

3. Hoses shall meet or exceed ASTM E 84-00 fire rating for building materials (NFPA 255, ANSI/UL 723 & UBC 8-1). Hoses rated UL 94 V-O for plastics used in manufacturing of consumer electronic products is not acceptable.
4. Hoses shall be of double swivel design for sizes 1/2", 3/4" and 1"; and MNPT x swivel for sizes 1 1/4", 1 1/2" and 2". Sizes 2 1/2" and larger shall be a MNPT x MNPT connection type.
5. End fittings 1/2" through 2" shall be made of brass. Sizes 2 1/2" and larger shall be made of schedule 40 carbon steel. Swivel connections are to be sealed with an EPDM washer or FKM o-ring. Metal to metal seals or fiber gasket seals are not acceptable.
6. Hose adapters shall be provided where necessary. Hose adapters shall be brass with MNPT threads pre-coated with Loctite 516 thread sealant, Copper Sweat or Push.
7. Ferrules shall be stainless steel for sizes 1/2" through 2". Sizes 2 1/2" and larger shall be stainless steel bellows design clad.
8. Hoses shall be permanently marked so that the manufacturer of the hose is easily identified. Hoses shall also be permanently marked with pressure rating, temperature rating and date of manufacture.
1. Hoses shall carry a 5-year product warranty.

Approved Manufacturers:

1. Nexus Valve, Inc.