NEXUS

SPECIFICATION
HOSE PAK - MANUAL FLOW CONTROL VALVE – MULTI-TURN

Document: HPM07011402-7
Effective Date: October 7, 2022

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 manual flow control valve flexible hose piping packages at all locations as specified in the construction documents.

Hose Pak – Manual 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 UltraMB™ combination manual 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.

Manual Flow Control Valves - Multi-Turn:

1. Manual Flow Control devices shall be Multi-Turn balancing type accurate to at least ±5%.

2. MFCV 1½" and smaller shall be forged DZR brass Y-pattern globe style and valves 2" – 2½" shall be a cast DZR brass Y-pattern globe style with integrated ball valve and union, (2) pressure/temperature test ports, visual turns indicator, locking handle tag, blowout proof stem with dual FKM o-ring seals, interchangeable union end with FKM o-ring seal, hard chrome plated 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 UltraMB™ (Model MB.) Optional solid stainless steel ball and stainless steel valve stem shall be available.

3. Valve shall carry a 5-year product warranty.

Y Strainers:

aalberts

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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. Interchangable 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 staineless steel ball and stainless steel valve stem shall be availble.
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" 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 ½", ¾" and 1"; and MNPT x swivel for sizes 1¼", 1½" and 2". Sizes 2½" and larger shall be a MNPT x MNPT connection type.

5. End fittings ½" through 2" shall be made of brass. Sizes 2½" 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 ½" through 2". Sizes 2½" 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.

9. Hoses shall carry a 5-year product warranty.

Approved Manufacturers:

1. Nexus Valve, Inc.

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