

Type-21a Flow Control Ball Valves

1.0 Scope:

All requirements are for PVC Type-21a ball valves and accessories.

2.0 Materials:

U-PVC – Conforming to ASTM D1784 Cell Classification 12454 A

FKM – Viton® Fluorocarbon Rubber

EPDM – Ethylene Propylene Diene Terpolymer Rubber

PTFE – Teflon® Polytetrafluoroethylene

3.0 Type-21a Ball Valves:

All SST Flow Control Type-21a ball valves sized ½” – 2” shall be of True-Union design with 2-way blocking capability. Specialized PTFE seats shall have elastomeric backing cushions to provide smooth even stem torque and to compensate for wear. Valve ball shall be machined with SST (Seat Support Technology) detail on downstream side of ball. Upstream side of ball shall be full bore opening. Valves shall feature molded ISO mounting top flange for actuation installation. Manual valve shall be equipped with AES (acrylonitrile ethylene styrene) position indication plate with 0% - 100% legend agreeing with white indication line on valve handle. Valve shall require directional installation and be equipped with flow direction arrow label. A panel mount feature on bottom of valve is provided and shall accept SS inserts to provide M5 (1/2” – 1”) or M6 (1-1/2” – 2”) threads for securing to panel, bracket or skid structure. The handle shall double as the spanner wrench for maintenance and carrier adjustment.

3.1 Operators:

Type-21a 1/2” – 2” (Lever Type standard)

Lever Handle to be Asahi Standard valve handle Red color.

3.2 Approved Manufacturer

Type-21/21a Ball Valves shall be provided by Asahi/America, Inc. of Lawrence, MA with no approved equals. Manufacturer must be ISO-9001 certified.

3.3 Working Temperature:

Valves shall have a pressure rating of:

230 psi at 70° F sizes 1/2” – 2”
PVC (Socket, Thread)
150 psi at 70° F sizes 1/2” – 2”
PVC (Flanged)

4.0 Accessories:

4.1 Stem Extensions

Stem extensions where required should be designed, built and provided by the Asahi/America, Inc., and be 1 of 3 styles:

Style: BV-A Two piece extension with outer housing 100% sealed either free standing or supported design.

Style: BV-B Single piece extension either free standing or supported design

Style: T21 Stem Extension Ends Kit. These are factory machined kits that permit the installer to fabricate PVC stem extensions using Schedule 40 or 80 PVC pipe. Max length 6 feet.

4.2 Actuation

Actuation where required should be designed, built and provided by Asahi/America, Inc., and be either pneumatic (Series 79P) or electric Series 19 SAV Smartpak type equipped with 4-20mA

input positioner with 4-20 mA output signal. All actuation accessories to be provided and installed by Asahi/America, Inc. in accordance with manufacturer's requirements.

4.3 Locking Devices

Where required locking devices can be installed over the valve handle to prevent unauthorized operation of the valve. Note: Type-21 locking handle cannot be used with this valve.

4.4 Operating Nuts

Where required 2" square operating nuts can be installed in place of valve handle. Materials of construction – Anodized Aluminum.

5.0 Certifications:

None at this time

6.0 Installation Procedures:

All valve joints shall be prepared using the preferred joining method for the valve material and installation type in accordance with all requirements put forth in the Type-21a Flow control ball Valve Operation & Maintenance manual. All accessories should be installed in accordance with the manufacturers requirements as well as any facility requirements.