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ASC Engineered Solutions

Installation, Operation, and Maintenance Manual

Lug & Wafer Style Butterfly Valves

BFV–A/BFV–C/BFV–D QVA

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Quadrant Valve & Actuator Engineering Specification

Number: IOM- 8

Date: 12/26/2002

Title: BFV-IOM, for:

BFV-A, BFV-C, and BFV-D

I. Initial Inspection

A. Remove valve from packaging.
B. Inspect body lugs, stem area and the protruding rubber seat surface on each side of butterfly valve for any damage caused in shipment or handling.
C. Confirm Valve Size is correct for installation.
D. Confirm that Disc and Seat materials are correct for application.
NOTE: EPDM seat material valves have a RED nameplate- these are ***NOT*** to be used on ***ANY PETROLEUM APPLICATION***, and are not to be lubricated with any ***PETROLEUM-BASED GREASE***.

II. Installation

A. NO FLANGE GASKETS ARE TO BE USED IN THIS INSTALLATION!
B. Confirm that flanges to be used on each side of Wafer-Style and on either side of Lug-Style butterfly valves have an ***Inside Diameter*** at the butterfly valve seat contact surface that is larger than the "Chord" diameter of disc in the open position- see dimension chart for Quadrant butterfly valves on Literature
C. Confirm that the ***Inside Diameter*** of adjoining flanges is at least 1.0" smaller than ***Outside Diameter*** of seat cartridge.
D. Confirm that flange sealing surfaces are smooth and undamaged.
E. Place Disc in the partially open position, but keep Disc "edges" inside of the butterfly valve end-to-end width.
F. Apply a small amount of ***COMPATIBLE*** grease on seat surfaces that will contact mating flange seating surfaces.
G. On existing piping systems, expand the opening between flanges to allow the butterfly valve to "slide" between flange mating surfaces.
NOTE: Failure to allow adequate installation space can result in damage to butterfly valve's seat surface, causing leakage at flange joint.

H. On Wafer-style butterfly valves, the bolts that connect the two adjoining flanges will also “center” the butterfly valve body with adjoining flanges. Check to insure that wafer valve is “centered” with adjoining flanges.
I. After successful installation of butterfly valve between flanges on existing applications, or assembly of piping & flanges to butterfly valve on new installations, ***HAND-TIGHTEN*** flange bolts and nuts.
J. Torque flange bolts using a series of “Alternating Across Valve” torque sequences, applying increasing torque after each full torque sequence.
K. At the conclusion of flange bolt tightening, both flanges will be in metal-to-metal contact with each side of butterfly valve body.
L. Caution is required to limit bolt torque to the minimum required to establish metal-to-metal contact between flanges and butterfly valve body- any additional torque can damage butterfly valve lugs.
M. After installation, operate the handle or gear operator from partially open position to full open position, then to closed position. **NOTE:** any interference while operating valve from partially open to full open position indicates disc-to-flange or disc-to-pipe interference- disassemble and correct.

III. Operation:

A. After Installation, confirm handle has adequate clearance by rotating 90 degrees from open to closed position and back to open.
B. Although Quadrant Butterfly Valves are equipped with 10-Position handles (2”-12” sizes) and can be used in “throttling” applications, “throttling” on fluids with high solid content or dry fluids will severely reduce sealing life.
C. All Quadrant Butterfly Valves are equipped with a lubrication fitting in the upper “neck” area of butterfly valve body. This fitting allows grease to be injected between stem bore and valve stem to reduce or eliminate corrosion caused by water entering this area. We recommend that this fitting be lubricated upon installation, especially on outdoor and offshore applications.

IV. Initial Pressurization of System

A. Upon initial pressurization of piping system, check all connections for leaks and correct if required.

V. Maintenance

A. Quadrant Butterfly Valves require no maintenance.
B. Upper Stem bore can be re-lubricated if desired.

VI. Repair

A. Quadrant’s BFV-D Series is not field reparable.
B. Quadrant’s BFV-A and BFV-C Series butterfly valves are field reparable.
C. Please contact factory for BFV-A and BFV-C Field Repair Instructions.

About ASC Engineered Solutions

ASC Engineered Solutions is defined by quality—in its products, services and support. With more than 1,400 employees, the company's portfolio of precision-engineered piping support, valves and connections provides products to more than 4,000 customers across industries, such as mechanical, industrial, fire protection, oil and gas, and commercial and residential construction. Its portfolio of leading brands includes ABZ Valve®, AFCON®, Anvil®, Anvil EPS, Anvil Services, Basic-PSA, Beck®, Catawissa, Cooplet®, FlexHead®, FPPI®, Gruvlok®, J.B. Smith, Merit®, North Alabama Pipe, Quadrant®, SCI®, Sharpe®, SlideLOK®, SPF® and SprinkFLEX®. With headquarters in Commerce, CA, and Exeter, NH, ASC also has ISO 9001:2015 certified production facilities in PA, TN, IL, TX, AL, LA, KS, and RI.

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