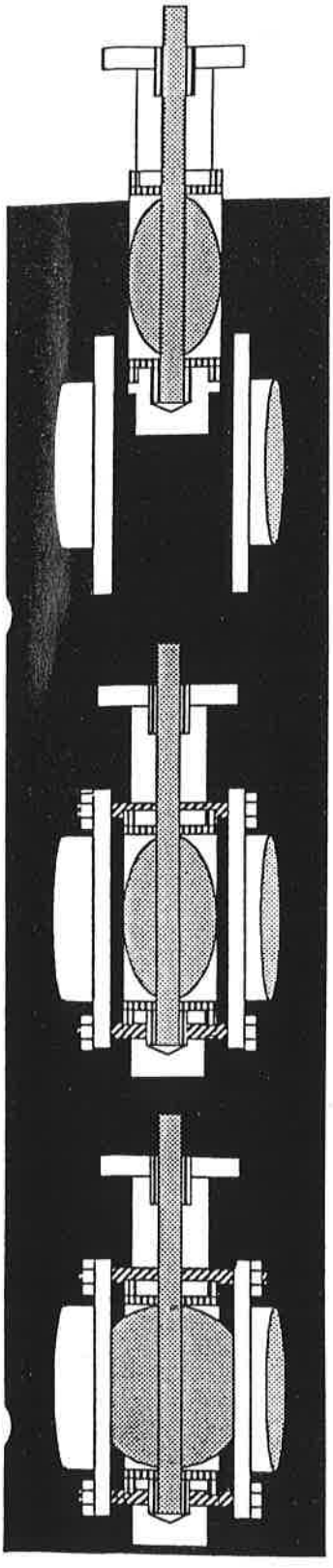
B.T.I. BULK TANK, INC.

400 PARKWAY DRIVE
PARK HILLS, MO 63601
www.bulktankinc.com

573-518-0600
1-800-841-5524



Correct

Open pipework flanges to allow entry of valve without rubbing against seat. Rotate valve handle or actuator to position disc about 1/4" from the outside edge of the seat (as shown). This will protect disc edge from bumping pipework, and reduce seat interference and initial torque build-up.

Incorrect

DO NOT try to install valve with pipework flanges spread insufficiently. This will damage the valve seat and prevent the valve from operating properly. DO NOT install valve with disc in open position (as shown), or disc will impact pipework flanges and damage polished sealing edge of disc.

Correct

Position the valve between pipework flanges and assemble the valve housing to the flanges, using all required flange bolts. DO NOT USE ANY TYPE OF FLANGE GASKETS. The O - ring sealing section of the Sure Seal Butterfly Valve Seat provides a positive seal to all popular flanges.

Incorrect

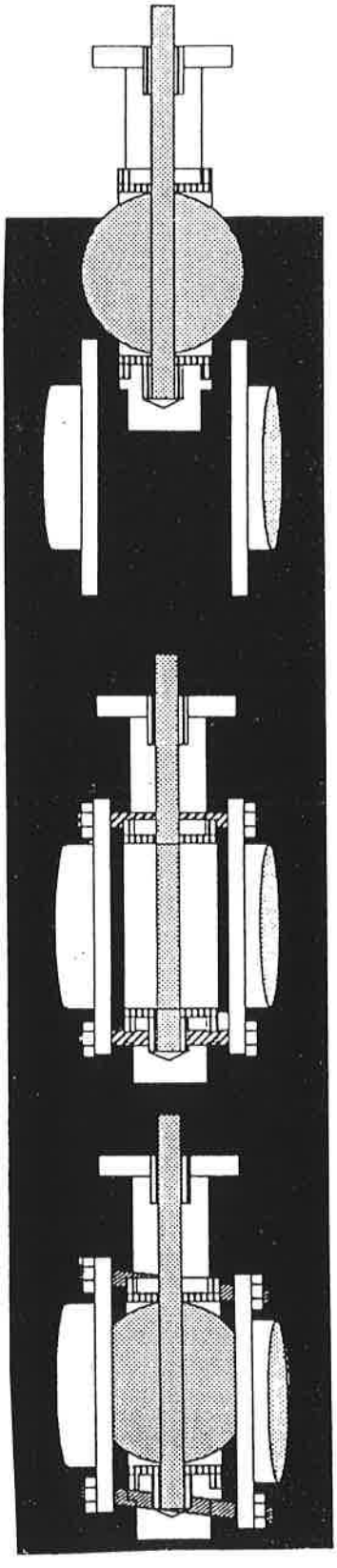
DO NOT try to install the valve with the disc fully closed. Remove actuator if necessary, to allow slight opening of disc. Installation with disc fully closed will cause seat distortion because of seat rubber trying to close around disc edge (as shown). This installation will cause excessive torque in initial operation.

Correct

Turn the valve disc to the full open position. Center the valve housing in the flanges, and hand-tighten bolts. Slowly close the valve to check for clearance between valve disc and pipe or Flange I.D. If valve disc hits, reposition valve as necessary. Re-open valve disc to full open position and cross-tighten all bolts to proper torque specification.

Incorrect

DO NOT misalign valve housing or pipework (as shown). Misalignment may cause interference between disc edge and flange face. This will result in leakage, excessive torque and possible damage to disc and seat. Operation of valve in misaligned flanges may also create a pocket where flowing media may become entrapped.



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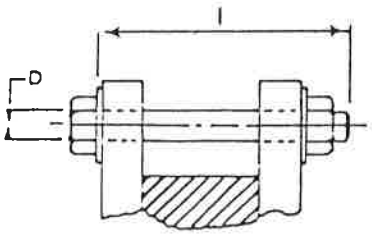
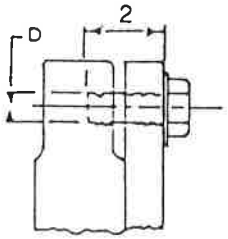
Stud and Bolt Specification

Flange Bolts & Screws Required for
Sure Seal Valves between 150# ANSI Flanges

	HEAVY HEX BOLTS & NUTS			REGULAR HEX HEAD CAP SCREWS WITH N-C THREADS		
VALVE SIZE	DIAMETER "D"	LENGTH "1"	NUMBER REQUIRED	DIAMETER "D"	LENGTH "2"	NUMBER REQUIRED
2"	5/8"	4"	4	5/8"	1 1/2"	8
3"	5/8"	4 1/2"	4	5/8"	1 3/4"	8
4"	5/8"	5"	8	5/8"	1 3/4"	16
5"	3/4"	5"	8	3/4"	1 3/4"	16
6"	3/4"	5"	8	3/4"	2"	16
8"	3/4"	6"	8	3/4"	2 1/4"	16
10"	7/8"	6"	12	7/8"	2 1/4"	24
12"	7/8"	6 1/2"	12	7/8"	2 1/2"	24



Wafer Type Butterfly Valve
using Cross Bolting



Full Lug Type Butterfly Valve
with Tapped Holes

Standard Conversions

To Change	To	Multiply By
Inches	Feet	0.0833
Inches	Millimeters	25.4
Square Inches	Square feet	0.00694
Square feet	Square inches	144
Cubic inches	Cubic feet	0.00058
Cubic feet	Cubic inches	1728
Cubic inches	Gallons	0.00433
Cubic feet	Gallons	7.48
Gallons	Cubic inches	231
Gallons	Cubic feet	0.1337
Gallons	Pounds of water	8.33
Pounds of water	Gallons	0.12004
Ounces	Pounds	0.0625
Inches of water	Pounds per sq. inch	0.0361
Inches of water	Inches of mercury	0.0735
Inches of water	Ounces per sq. inch	0.578

Standard Conversions

To Change	To	Multiply By
Inches of water	Pounds per sq. foot	5.2
Inches of mercury	Inches of water	13.6
Inches of mercury	Feet of water	1.1333
Inches of mercury	Pounds per sq. inch	0.4914
Ounces per sq. inch	Inches of mercury	0.127
Ounces per sq. inch	Inches of water	1.733
Pounds per sq. inch	Inches of water	27.72
Pounds per sq. inch	Feet of water	2.310
Pounds per sq. inch	Inches of mercury	2.04
Pounds per sq. inch	Atmospheres	0.0681
Feet of water	Pounds per sq. inch	0.434
Feet of water	Pounds per sq. foot	62.5
Feet of water	Inches of mercury	0.8824
Atmospheres	Pounds per sq. inch	14.696
Atmospheres	Inches of mercury	29.92
Atmospheres	Feet of water	34