

# VALMATIC®



**Double Offset  
High Performance  
Waterworks  
Butterfly Valve**



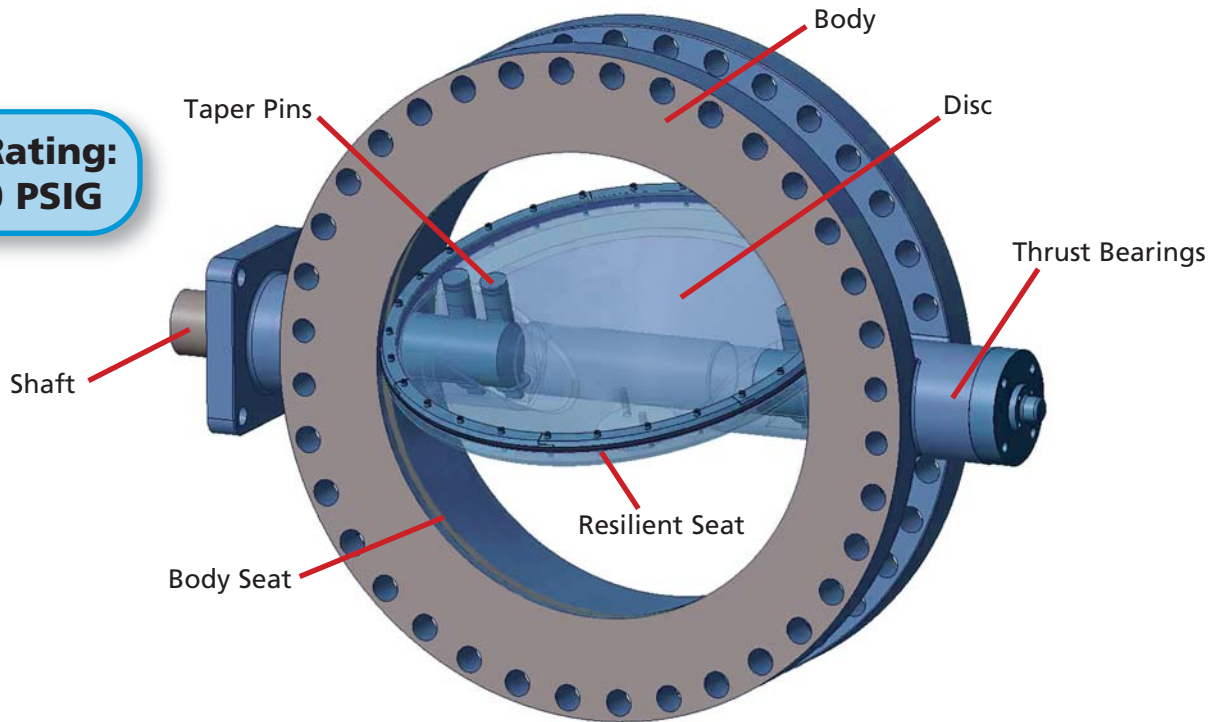
[www.valmatic.com](http://www.valmatic.com)

# High Performance

## Proven Design

Ductile Iron Construction • 17-4 Stainless Steel Shaft • Double Offset Design

**Pressure Rating:  
up to 300 PSIG**



## Preferred Features

### **Size and End Connections**

Available in flanged and MJ end connections through 48in. Contact factory for larger sizes.

### **Pressure Class**

Meets or exceeds AWWA Class 275C for bi-directional service to line velocities of 24 ft./sec.

### **Shaft**

High strength 17-4 PH stainless steel shafts positively retained to prevent ejection.

### **Thrust Bearings**

Factory-set bronze thrust bearing assures proper centering of valve disc.

### **Shaft Seal**

Self-adjusting/wear compensating V-Type packing with mechanically retained packing gland.

### **Body Seat**

High integrity precision welded nickel seat.

### **Reinforced Resilient Seat on Disc**

Specially formulated elastomers that are reinforced and capable of handling localized velocities of over 200 ft./sec.

### **Actuation**

AWWA traveling nut design provides characterized closure. Worm gear, electric motor, or cylinder actuation available.

### **Shaft Bearings**

Self-lubricated teflon-lined, fiberglass-backed bearings provide low friction service without grease lubrication.

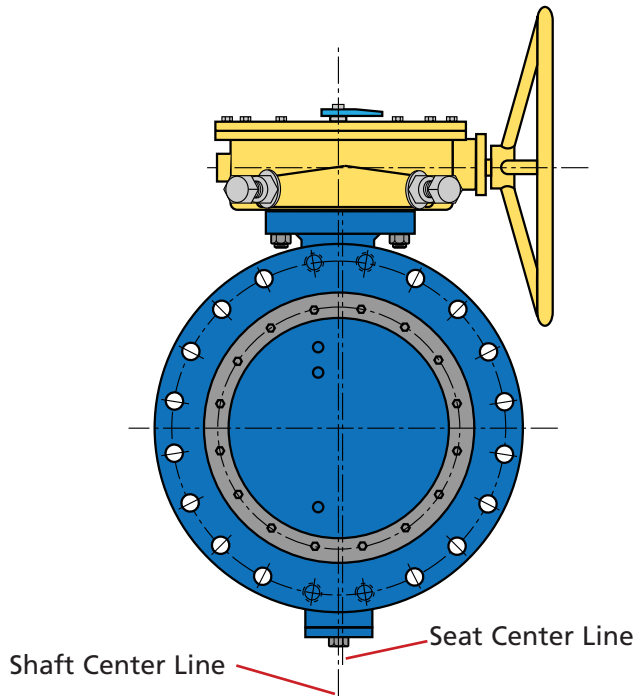
### **Tangential Taper Pins**

Stainless Steel Taper Pins with lock nut and o-ring seal utilize tangential forces of the taper pin and lock nut to provide the most secure method available of locking the disc to the shaft.

### **Coating**

Fusion Bonded Epoxy (FBE) is the standard on the interior and exterior of the valve. The FBE is NSF/ANSI 61 certified.

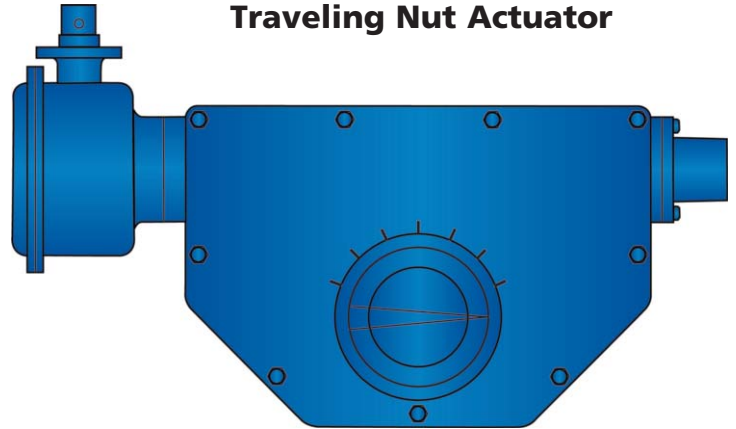
## Advanced Technology



**Double Offset Design** - "Cam-action" from the additional offset allows the seat to compress only when the disc is fully rotated into the valve body. The additional offset prevents compression set of the seat, reduces seat strain and is ideal for applications where the valve is normally left open.

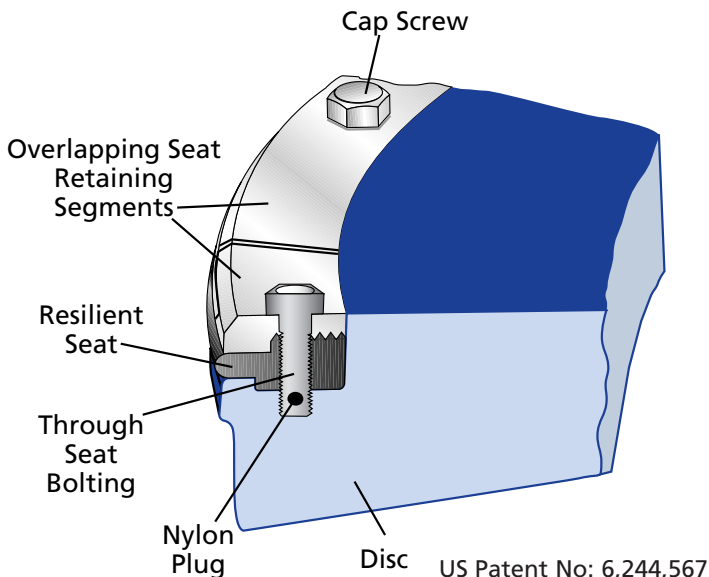
**Precision Welded Body Seat** - High alloy corrosion resistant and micro polished seating surface provides corrosion free mating surface; precision welded body seat design adds durability for high pressure applications and ensures a long lasting seal.

### Traveling Nut Actuator



**Traveling Nut Actuation** - The traveling nut actuator provides characterized closure which allows the valve to slowly close during the last half of travel to reduce pipeline surges. These actuators also have the exclusive feature of externally adjustable stops.

## Tri-Loc™ Seat



The Tri-Loc™ seat retention system provides reliable sealing and positive mechanical retention of the valve seat while allowing easy adjustment or replacement in the field. The Tri-Loc™ overlapping seat segments provide for easy replacement and prevent scalloping of the resilient seat surface.

The seat is secured by three methods: 1) clamp force, 2) through the seat bolting and 3) opposing machined registers in the disc and seat retaining ring. Clamp force is provided by tightening the self-locking cap screws. Tightening the screws applies pressure to the serrated seat retaining ring which in turn creates a "clamp force" on the resilient molded seat. These same cap screws provide through-bolting seat retention by passing through precision molded holes in the resilient seat. Finally, molded shoulders in the resilient seat are captured by machined registers in the disc and retention ring preventing outward movement of the seat.

# Specifications

## Scope

This specification covers the design, manufacture, and testing of flanged and mechanical joint 4 in. (100 mm) through 48 in. (1200 mm) high performance, double-offset, resilient-seated butterfly valves suitable for water or raw water service with pressures up to 300 psig (2068 kPa).

## Standards, Approvals and Verification

- 1.1 The valves shall be designed, manufactured and tested in accordance with American Water Works Association Standards.
- 1.2 The valves used in potable water service shall be certified to NSF/ANSI 61, Drinking Water System Components - Health Effects, and certified to be Lead-Free in accordance with NSF/ANSI 372.
- 1.3 Manufacturer shall have a quality management system that is certified to ISO 9001 by an accredited, certifying body.

## Connections

- 2.1 Flanged end connections shall have flange drilling in accordance with ANSI B16.42 for Class 300 or 150 iron flanges, or AWWA C207 Class F.
- 2.2 Mechanical Joint end connections shall fully conform with ANSI/AWWA C111/A21.11.

## Design

- 3.1 The valve shall be of double offset design and provide seat clearance when fully open.
- 3.2 Resilient seats shall be located on the valve disc and shall be mechanically retained with overlapping investment cast stainless steel segments and stainless steel Nylok® cap screws which shall pass through the resilient seat. Resilient seats shall be field adjustable and replaceable and shall not require epoxy, syringes, needles or pressure vessels to replace or adjust.
- 3.3 Body seat shall be a welded corrosion resistant nickel alloy.
- 3.4 The shafts shall be rigidly secured to the disc with tangential tapered pins and nuts.
- 3.5 Sleeve bearings shall be provided in the valve body hubs and shall be self-lubricated, teflon-lined, and fiberglass-backed.
- 3.6 Shaft seals shall be of the V-type secured with a bolted gland plate to allow actuator servicing.

## Materials

- 4.1 Valve body and disc shall be cast ASTM A536 Grade 65-45-12 ductile iron.
- 4.2 Shafts shall be turned and polished ASTM A564, 17-4 PH Stainless Steel.
- 4.3 Resilient seats shall be reinforced Buna-N.
- 4.4 All seat retaining hardware shall be Type 316 stainless steel.
- 4.5 The valve shall be coated internally and externally with fusion bonded epoxy.

## Actuation

- 5.1 Manual, electric or cylinder actuation shall be provided as specified.
- 5.2 Manual actuators shall be of the traveling nut design with characterized closure per AWWA C504 and equipped with externally adjustable closed position stops capable of withstanding 450 ft-lbs.

## Options

- 6.1 When specified, the valve seats shall be welded type 316 stainless steel.
- 6.2 When specified, the valve shall be baked glass or HVOF stainless-steel lined.

## Manufacture

- 7.1 Valve shall be Val-Matic Series 2000HP or pre-approved equal.



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