



**Rodney Hunt**  
*A GA Industries Company*  
Rectangular  
Butterfly Valves

**Rectangular  
Butterfly**

**Valves**



## Butterfly Valves:

Versatile, Reliable, Economical

### Versatility

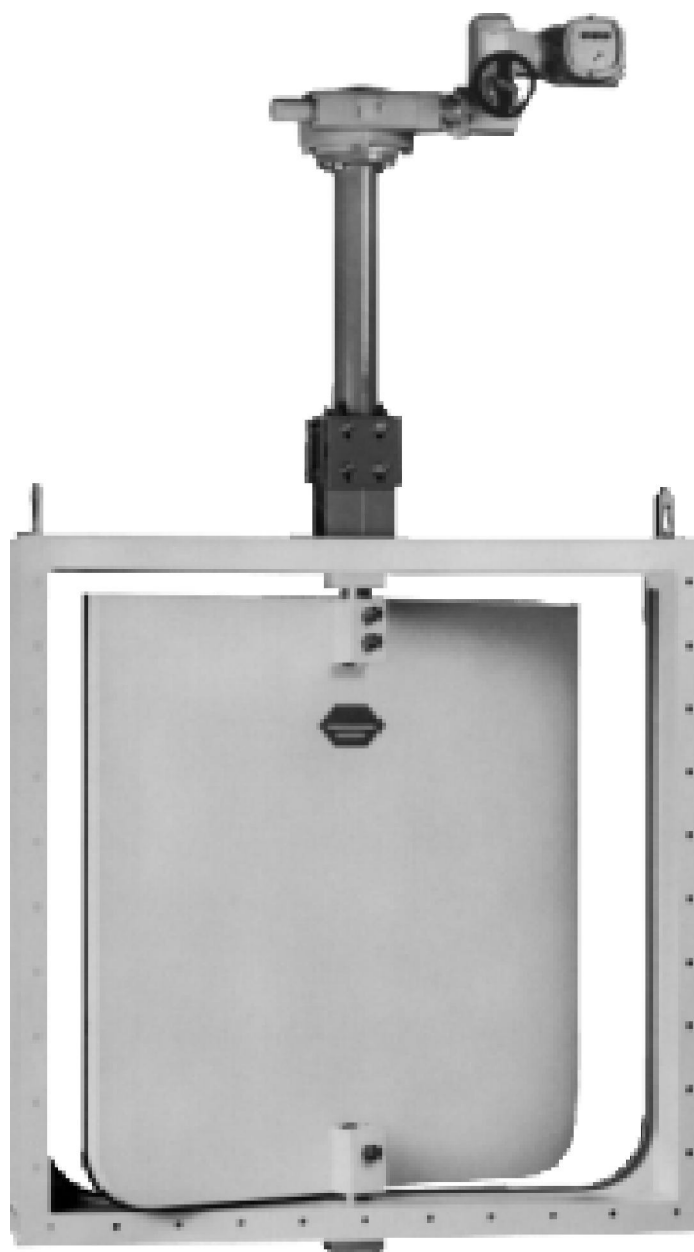
- Standard sizes, or custom designed for your application
- Manual, electric, pneumatic, or hydraulic actuation
- Three or four-sided seating
- Alternative materials available for corrosive service
- Total in-house control: design, fabricate, machine, assemble and actuate... at one location

### Reliability

- Bubble-tight shutoff Stainless to resilient seating
- Permanently self-lubricated bushings
- Bronze two-way adjustable thrust bearing

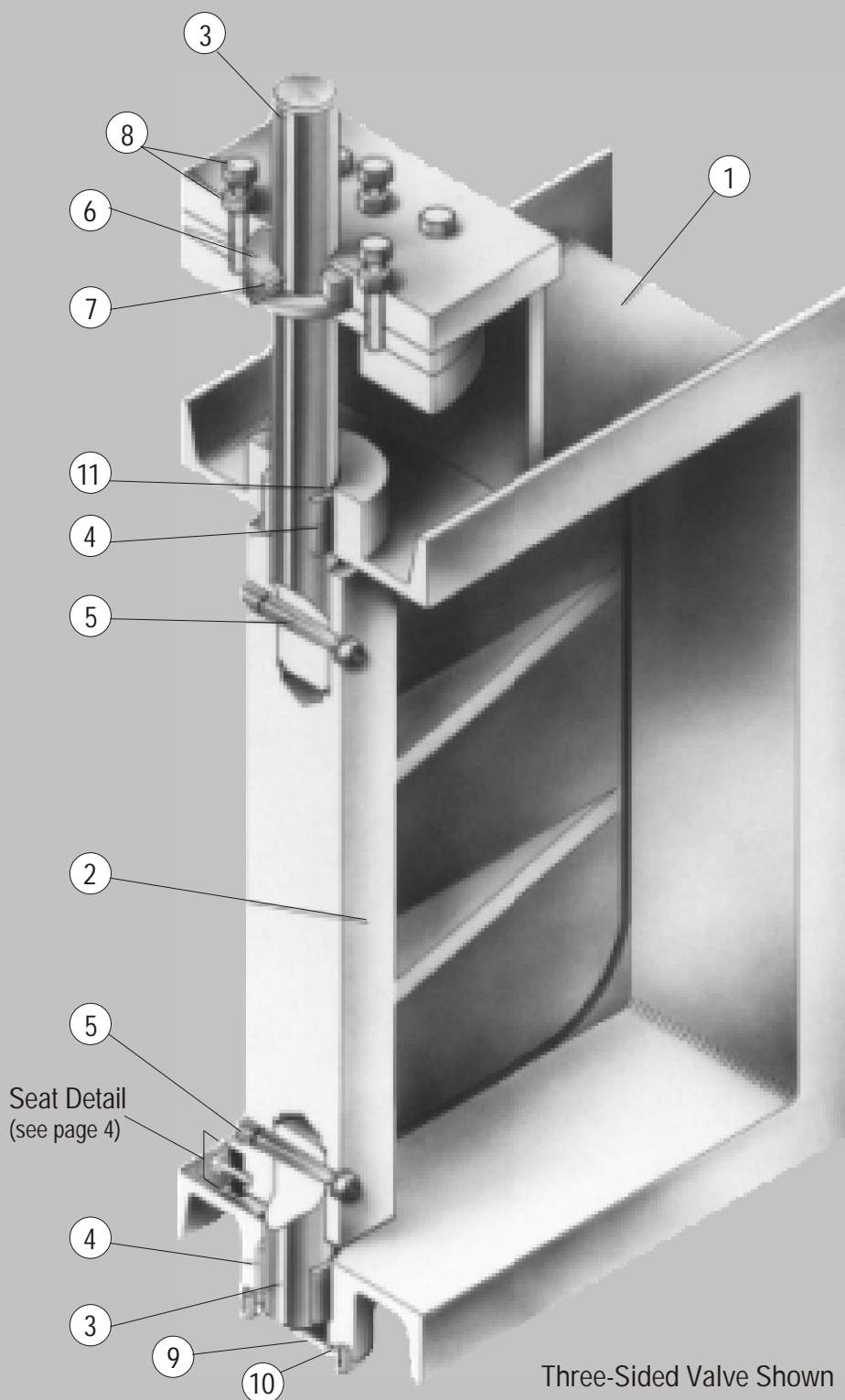
### Economy

- Ease of installation and operation  
Seat adjustable in either direction, without special tools
- Specially designed vane reduces turbulence, strengthens assembly
- Quarter turn operation
- Low maintenance



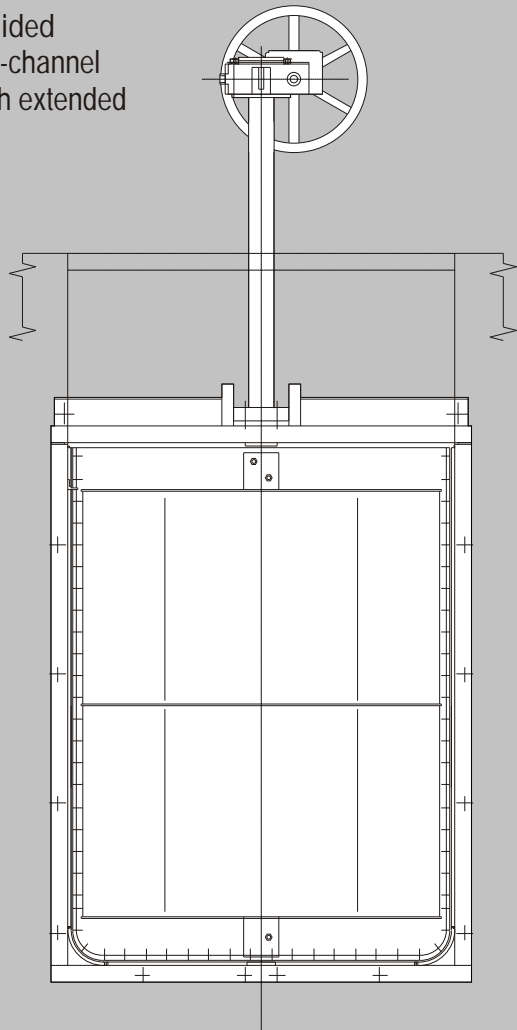
## Design Features

1. Valve Body - ASTM A36 fabricated steel
2. Valve Disc - ASTM A36 fabricated steel
3. Shafts - Stainless steel Type 304. Type 316 stainless steel and other materials available.
4. Shaft Bearings - Corrosion resistant, self-lubricated, sleeve type.
5. Taper Pins - Tangential pins of stainless steel Type 416 securely fasten disc to stub shafts. Pins held in place by stainless steel jam nuts and washers.
6. Thrust Collar - Bronze thrust collar securely pinned to the upper shaft accurately positions the disc in the center of the valve body.
7. Pin - Type 416 stainless steel, Pins shaft to thrust collar, accurately and permanently centering the disc in the body.
8. Jack Bolt and Hex Nut - Stainless steel Type 304 jack bolt and hex nut allow for accurate thrust plate adjustment and locking.
9. End Cover - ASTM A36 fabricated steel with O-ring seal.
10. O-ring Seal
11. Shaft Seal Location - Bronze packing gland with square TFE impregnated teflon packing. Used only in upper trunnion on four-sided valves.

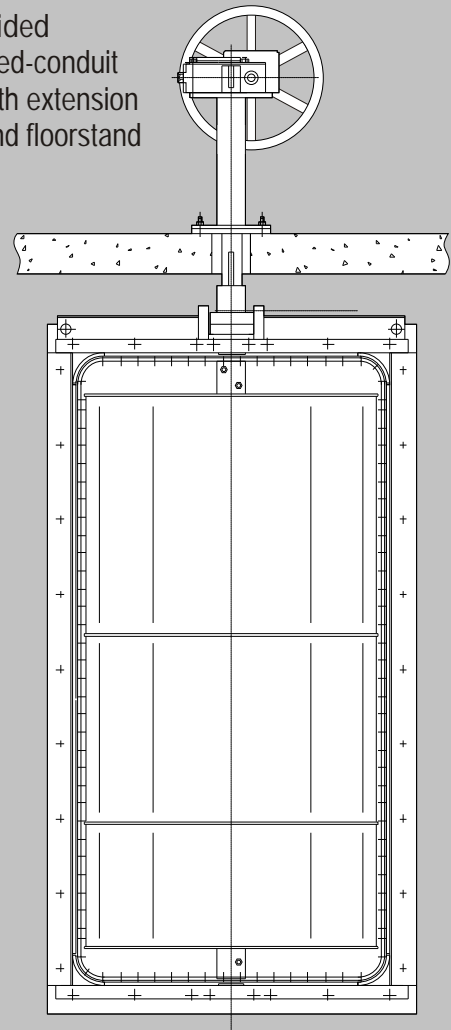


Three-Sided Valve Shown

Three-Sided  
for open-channel  
flow, with extended  
bonnet

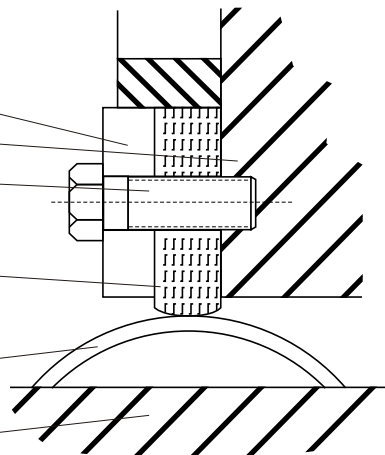


Four-Sided  
for closed-conduit  
flow, with extension  
shaft and floorstand



**SEAT DETAIL**

- Retaining Ring  
Stainless Steel Type 304
- Valve Disc
- Cap Screws  
Stainless Steel
- Resilient Seat  
Neoprene, other  
materials available
- Stainless Steel mating  
surface -- Type 304
- Valve Body



# Rectangular Butterfly Valve Sample Specifications



Rectangular butterfly valves shall be resilient seated, tight closing, Streamseal valves as manufactured by Rodney Hunt Company.

The butterfly valve bodies shall be ASTM A36 fabricated steel. They shall have integral hubs for housing shaft bearings.

The body shall be suitably designed to be field fastened to a wall thimble, angle supports anchored to the concrete channel, or direct grouted into the concrete channel.

Butterfly valve discs shall be of the "offset" design to provide a full uninterrupted seating surface. Discs shall be ASTM A36 fabricated steel with no external ribs transverse to the flow. The resilient seats shall be synthetic rubber designed to provide tight shut-off at the specified pressure. Seats shall be incorporated on the valve disc edge and shall be mechanically retained by means of a corrosion resistant retainer and stainless steel screws.

The resilient seat must be capable of mechanical adjustment in each direction without the use of special tools. It must also be capable of being replaced in the field without chipping, grinding, or burning out of the old seat, moving the valve disc along the shaft access or removing the valve from the line.

The mating seat surface shall be integral with the valve body and shall be stainless steel Type 304. Sprayed or plated mating seat surfaces are not acceptable. The corner radii shall not exceed 6".

Valve shafts shall be of the two-piece type extending into the valve disc hubs for a

distance of at least 1 1/2 shaft diameters. They shall be of stainless steel Type 304.

Valve shafts shall be securely attached to the valve disc by means of taper pins located tangentially to the valve shafts. Taper pins shall be mechanically secured and shall be of corrosion resistant material.

Shaft bearings shall be contained in the integral hubs of the valve body. They shall be of the self-lubricated sleeve type.

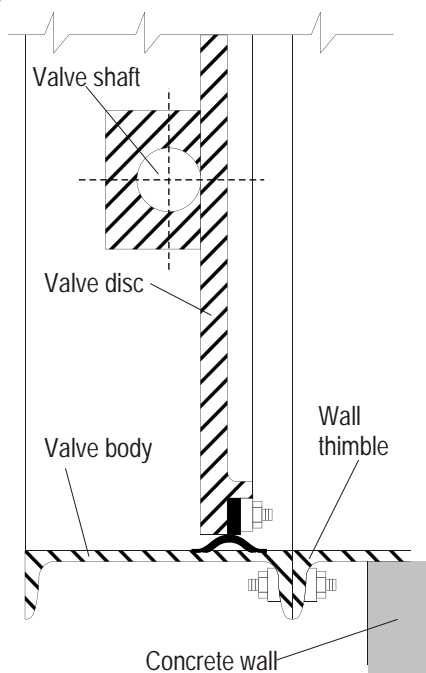
The valve assembly shall be furnished with a factory set, two-way thrust bearing, which is field adjustable.

When four-sided seating is required, a shaft seal shall be provided where the valve shaft projects through the body for the actuator connection. The seal shall be of a type utilizing a stuffing box and packing gland, so that the packing can be adjusted or completely replaced without disturbing any part of the valve or actuator assembly. Packing shall be the square type.

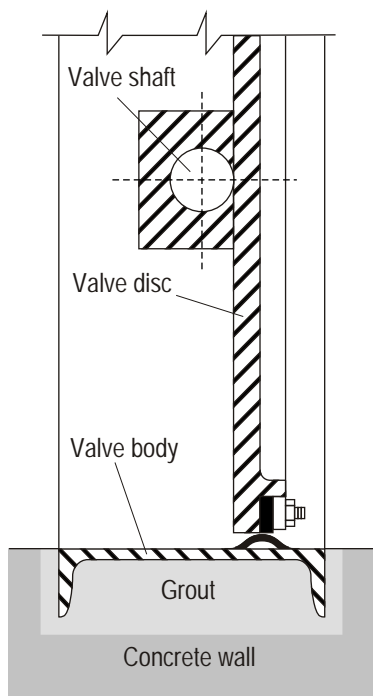
Actuator shall be sized to operate the valve from full open to full closed at rated pressure with a maximum of 80 ft. lbs. of input torque on a manual actuator. The valve manufacturer shall be responsible for sizing electric or cylinder actuators based on flow and pressure conditions.

Coating of interior and exterior shall be two layers, 5 mils minimum each coat. Each coat shall be high solids, high build epoxy, or approved equivalent.

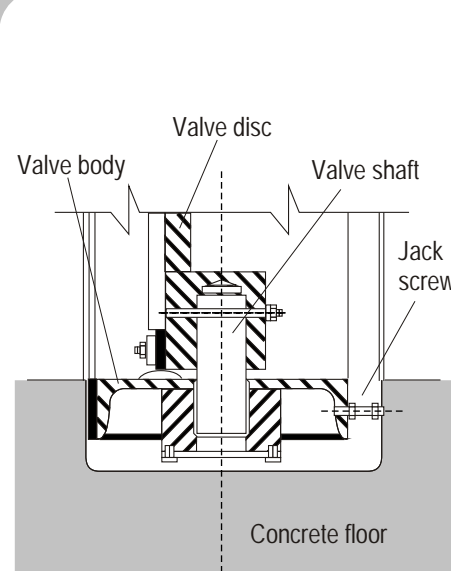
# Methods of Installation



Mounting to Conduit Flange or Wall Thimble (Plan View)



Set in Preformed Recess in Bottom and Sides of Channel (Plan View)



Set in Preformed Recess in Bottom and Sides of Channel w/Jack Screw (Sectional View)

## Manual or Power Actuation

**Manual Actuation:** In accordance with AWWA C504 Standard.

Handwheel, crank, or nut input. Adjustable travel stops, and self-locking feature.

**Electric Motor:** Available for open-close or throttling service, complete with limit switches and torque switch as required. Manual override is standard. Also available for modulating service with position feedback for continuously adjustable automatic controls. Complete accessories are available and include indicator lights, integral reversing starters, push buttons, potentiometers, space

heaters, sensors, transmitters, transducers, and other control features.

**Cylinder Actuation:** Pneumatic or hydraulic; suitable for plant air, water, or oil operating media. Controls available for adjustable closure rates. Complete hydraulic power units are available. Control systems can be supplied for automatic failsafe closure and valve positioning. Position sensors can also be provided.

## Accessories

**Extension Bonnet and Shaft:** For locating actuator away from valve for easy access. Actuator (manual

or power) is mounted on end of extension bonnet and coupled to the extended valve shaft.

**Extended Valve Sham:** Vertical valve shaft may be extended with couplings or universal joints and connected to a floorstand-mounted manual, electric or cylinder actuator.

Also available:

- Floorstands
- Wall Brackets
- Torque Tube
- Integral Disc Position Indicator
- Rodney Hunt Epoxy Coating
- Special Paint Requirements