

**CLOW**  
VALVE CO.

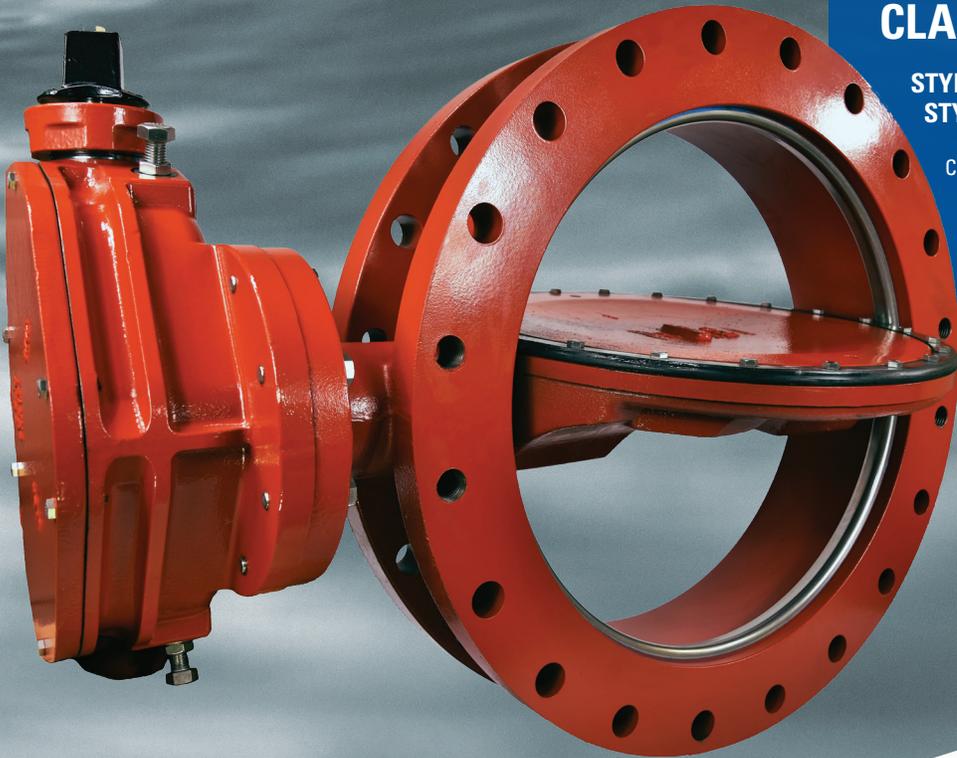
ClowValve.com

# BUTTERFLY VALVES

**AWWA C504  
CLASS 150B & 250B**

STYLE 4500 3"-24"  
STYLE 1450 30"-54"

CONSULT CLOW FOR SIZES  
LARGER THAN 54 INCHES.



Clow Valve, A Division of McWane, Inc.

**For Generations**

# ENGINEERING FEATURES

## STYLE 4500

### SIZES 3"–12"

#### ACTUATOR MOUNTING PAD

Clow Valve Style 4500 Butterfly Valves come standard with an integrally cast actuator mounting pad, machined and drilled in accordance with ISO-5211 and MSS SP-101. This allows for direct mounting of manual and automated actuators without the need of additional pieces or adapters, providing a more compact and rigid arrangement.

#### VALVE BODY

Clow Valve Style 4500 Butterfly Valve Bodies consist of heavy duty ASTM A536 Ductile Iron that are designed to meet or exceed the latest revision of AWWA C504.

#### SEALING SYSTEM

EPDM rubber is vulcanized to a 304 stainless steel ring and attached to the vane utilizing self-locking, stainless steel cap screws. The body ring seat is composed of 316 stainless steel, forming an uninterrupted 360-degree seal. The Clow Valve Style 4500 Butterfly Valve vane rubber seat ring is easily field replaceable.

#### DUCTILE IRON HOUSING

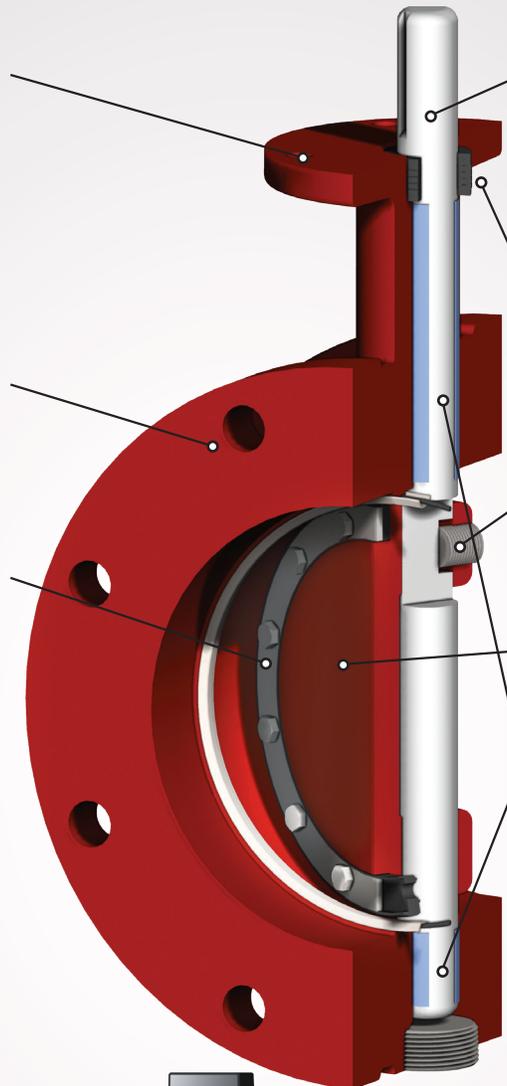
Includes a four bolt ISO-5211 & MSS-101 compliant connection.

#### LEVER & TRAVELING NUT

Ductile Iron construction, precision machined to transmit torque seamlessly. Contains multiple keyways to change the opening direction.

#### POSITION STOP NUTS

Factory preset internal adjusters prevent the actuator from going beyond the open and closed positions of the valve.



#### STAINLESS STEEL SHAFT

One-piece shaft of stainless steel meets or exceeds AWWA C504: Class 150B – 304 stainless steel Class 250B – 316 stainless steel. Other options are available.

#### SELF-ADJUSTING PERMANENT PACKING

Self-adjusting chevron-type seal that increases the sealing force with the increase in line pressure. Accessible without dismantling the valve, per AWWA C504.

#### TORQUE PLUG

Full metal-to-metal contact, vane to shaft connection utilizing a stainless steel torque plug.

#### OFFSET VANE DESIGN

Heavy duty A536 Ductile Iron meets or exceeds AWWA C504.

#### LIFETIME BEARINGS

Nylon bearings are sized to meet or exceed the AWWA C504 specification for axial pressure loads. The bearings are self-lubricating and require no maintenance.

#### OVERLOAD PROTECTION

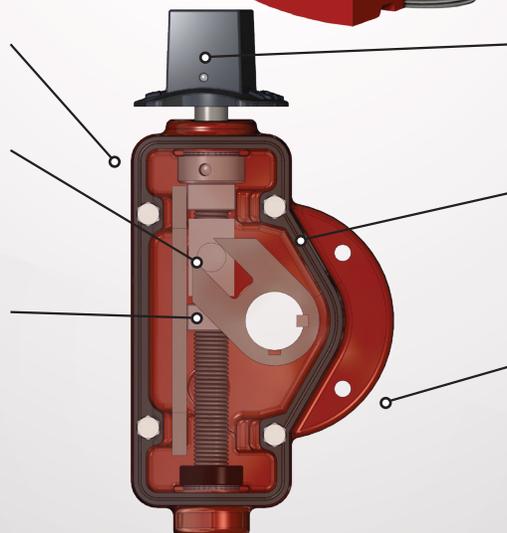
Up to 450 ft-lbs of input torque protection to prevent damage to the valve and actuator.

#### SEALS

Actuator is fully greased and utilizes a reusable rubber gasket to seal the housing cover and O-rings to seal the input shaft.

#### 360° ROTATION

Actuator can be mounted in 90-degree increments for easy installation and operation without the need of adapter plates and additional parts.



MODEL 450 TRAVELING NUT ACTUATOR (SIZES 3"–12")

# ENGINEERING FEATURES

## STYLE 4500

### SIZES 14"–24"



#### ACTUATOR MOUNTING PAD

Clow Valve Style 4500 Butterfly Valves come standard with an integrally cast actuator mounting pad, machined and drilled in accordance with ISO-5211 and MSS SP-101. This allows for direct mounting of manual and automated actuators without the need of additional pieces or adapters, providing a more compact and rigid arrangement.

#### VALVE BODY

Clow Valve Style 4500 Butterfly Valve Bodies consist of heavy duty ASTM A536 Ductile Iron that are designed to meet or exceed the latest revision of AWWA C504.

#### OFFSET VANE DESIGN

Heavy duty A536 Ductile Iron meets or exceeds AWWA C504.

#### SEALING SYSTEM

EPDM rubber is vulcanized to a 304 stainless steel ring and attached to the vane utilizing self-locking, stainless steel cap screws. The body ring seat is composed of 316 stainless steel, forming an uninterrupted 360-degree seal. The Clow Valve Style 4500 Butterfly Valve vane rubber seat ring is easily field replaceable.

#### STAINLESS STEEL SHAFT

Two-piece shaft of stainless steel meets or exceeds AWWA C504: Class 150B – 304 stainless steel Class 250B – 630 stainless steel. Other options are available.

#### SELF-ADJUSTING PERMANENT PACKING

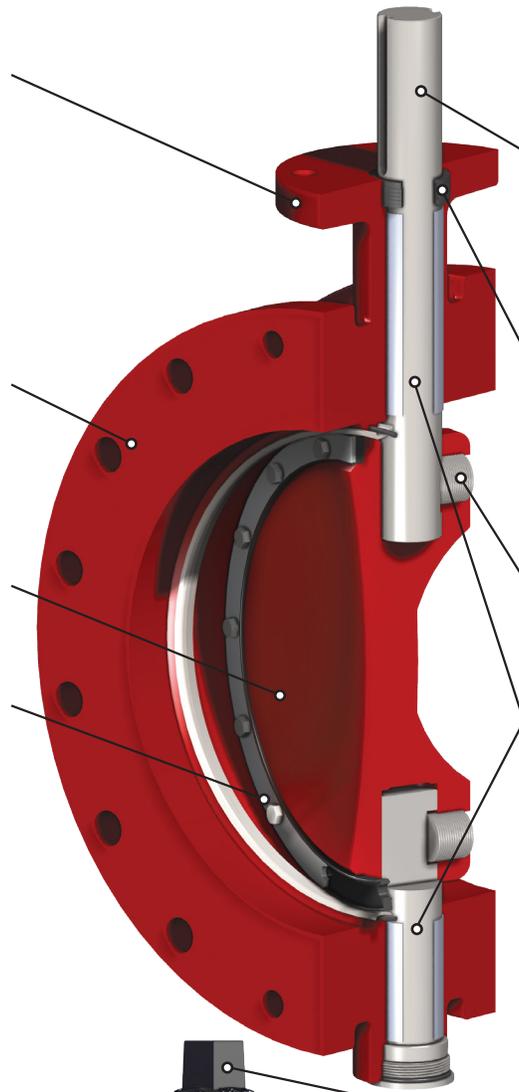
Self-adjusting chevron-type seal that increases the sealing force with the increase in line pressure. Accessible without dismantling the valve, per AWWA C504.

#### TORQUE PLUG

Full metal-to-metal contact, vane to shaft connection utilizing a stainless steel torque plug.

#### LIFETIME BEARINGS

PTFE-filled fiber bearings are sized to meet or exceed the AWWA C504 specification for axial pressure loads. The bearings are self-lubricating and require no maintenance.



#### LEVER

Ductile Iron construction, precision machined to transmit torque seamlessly. Contains multiple keyways to change the opening direction.

#### SEAL

Permanently lubricated and sealed to protect from the elements and groundwater.

#### DUCTILE IRON HOUSING

Includes a four bolt (14"–20") or eight bolt (24") ISO-5211 & MSS-101 compliant connection.

#### OVERLOAD PROTECTION

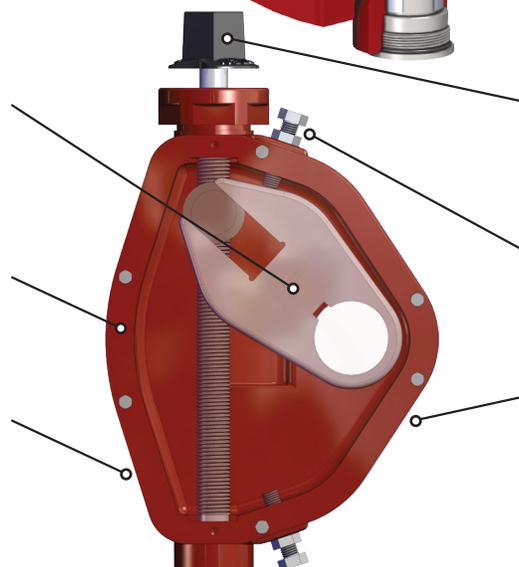
Up to 450 ft-lbs of input torque against the stops (open/close) to prevent damage to the valve and actuator.

#### POSITION STOP

Factory preset prevents the actuator from going beyond the open and closed positions of the valve.

#### 360° ROTATION

Actuator can be mounted in 90-degree increments for easy installation and operation without the need of adapter plates and additional parts.



### MODEL 1250 TRAVELING NUT ACTUATOR (SIZES 14"–24")

# ENGINEERING FEATURES

## STYLE 1450

### SIZES 30"–54"

#### BEARINGS

Generously sized, stainless steel backed, Teflon bearings provided on operator and thrust ends are self-lubricated, providing low friction support for the life of the valve. No maintenance is required.

#### OFFSET VANE DESIGN

Newly engineered vane provides large free flow area without sacrificing vane strength. Vane construction is of A536 Ductile Iron to meet or exceed AWWA standard C504.

#### VALVE BODY

Heavy duty ASTM A536 Ductile Iron body designed and manufactured to meet or exceed AWWA standard C504.

#### SEALING SYSTEM

EPDM rubber is vulcanized to a 304 stainless steel ring and attached to the vane utilizing self-locking, stainless steel cap screws. The body ring seat is composed of 316 stainless steel, forming an uninterrupted 360-degree seal.

The Clow Valve Style 4500 Butterfly Valve vane rubber seat ring is easily replaced in the field.

#### OVERLOAD PROTECTION

Up to 450 ft-lbs of input torque against the stops (open/close) to prevent damage to the valve and actuator.

#### DUCTILE IRON HOUSING

Proven strength, permanently lubricated and sealed to protect from the elements and groundwater.

#### STAINLESS STEEL SHAFT

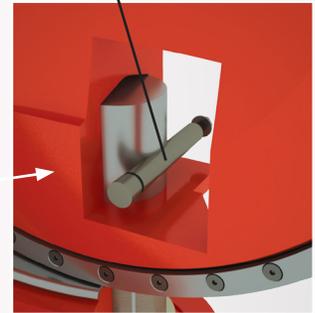
Two-piece shaft of stainless steel meets or exceeds AWWA C504: Class 150B – 304 stainless steel Class 250B – 630 stainless steel. Other options are available.

#### O-RING CARTRIDGE

Maximum shaft sealing efficiency with a non-adjustable bronze O-ring cartridge.

#### TAPER PINS

Full metal-to-metal contact, vane to shaft connection is accomplished by stainless steel taper pins secured with stainless steel lock bolts.



#### ADJUSTABLE THRUST BEARING

Bronze thrust bearing accurately centers vane in valve body. Accurate alignment is held in installation position. Factory adjusted for the life of the valve.

#### POSITION STOP

Factory preset external adjusters prevent the actuator from going beyond the open and closed positions of the valve.

#### LEVER

Ductile Iron construction, precision machined to transmit torque seamlessly. Contains multiple keyways to change the opening direction.

MODEL 2200 (30"–36") AND MODEL 4350 (42") TRAVELING NUT ACTUATOR

# RECOMMENDED SPECIFICATIONS

## AWWA CLASS 150B AND 250B BUTTERFLY VALVES

### STYLE 4500 SIZES 3"–12" • STYLE 1450 SIZES 30"–54"

(Consult Clow Valve for sizes larger than 54 inches.)

1. All butterfly valves shall be of the rubber-seated, tight-closing type. They shall meet or exceed AWWA standard C504, latest edition, Class 150 or Class 250. All valves shall be Clow Valve 4500/1450 butterfly valves, or approved equal.
2. Both ends shall be AWWA C111 mechanical joint or per flanged ASME B16.1 (or as otherwise noted on plans and specs).
3. Valve shafts shall be ASTM A276 Type 304 stainless steel for C1150 or ASTM A564 Type 630 stainless steel for C1250. Each valve shaft shall be of a one-piece design for valves 12 inches and smaller and a two-piece design for valves 14 inches and larger. Valve shafts shall have a minimum diameter extending through the valve bearings and into the valve disc as specified in AWWA C504. All valve shafts must meet or exceed the minimum connection torque requirement set forth in AWWA C504.
4. Valve body and vane shall be high-strength Ductile Iron to ASTM A536 with ASTM A276 Type 316 stainless steel body seats.
5. Rubber valve seats shall be a full-circle, 360-degree seat not penetrated by the valve shaft. Valve seat shall be EPDM.
6. The valve seat will be attached to the valve vane by Type 304 stainless steel self-locking fasteners. The valve seat must be easily field adjustable and replaceable without any special tools or lengthy curing time.
7. Valve shaft seals shall be of the chevron-type for 3"–24" and O-ring type for 30 inches and larger utilizing the same elastomer as specified for the valve seats and the intended service. All valve shaft seals must be easily field replaceable.
8. Valve actuator shall be of the traveling nut type, sealed and lubricated for underground or in-plant service. Operator shall be capable of withstanding an overload input torque of 450 ft.-lbs. at full-open or full-closed position without damage to the valve operator. Operators for valves 14 inches and larger must have a 304 stainless steel external stop limiting device and travel adjustment. The travel adjustments must be able to be operated without removing the valve from the line. All valve actuators must be sized per AWWA C504. Certification of proof of design and torque requirements shall be submitted to the owner upon request.
9. Handcrank, handwheel or chainwheel – All manual operators for service other than underground shall have a position indicator and shall be totally enclosed and permanently lubricated. Actuators shall be designed to produce the required operating torque with a maximum rim pull of 80 lb. on handwheel or chainwheel and a maximum input of 150 ft. lb. on operating nuts.
10. Cylinder – Cylinder operator shall be of the base mounted configuration. Cylinder barrel shall be of molybdenum disulfide-lined glass fiber reinforced epoxy tubing, to provide a corrosion-free, self-lubricated high-strength barrel. Rod seal shall be of urethane, molybdenum disulfide filled to provide a self-lubricated, long life seal.
11. The valve interior and exterior surfaces shall be coated in accordance with the latest revisions of AWWA C504 and must be NSF 61 Certified.



# ACCESSORIES / OPTIONS



**FLOOR STANDS**  
**F5500** N.R.S.  
**F5505** N.R.S. Indicating



**MOTOR OPERATOR**



**FLOOR BOX**  
**F5695** Bushed to meet stem  
 Diameter Spec  
 Max. Length 12"  
 Max. Stem Diameter 2 1/4"



**CYLINDER OPERATOR**



**STEM GUIDES**  
**F5660**

SIZE	MIN. LENGTH*	MAX. LENGTH*
#1	2 1/2"	17"
#2	15"	24"
#3	24"	35"

\*Distance from wall



**T-HANDLE VALVE  
 WRENCHES**  
**F2550** Rigid Wrench



**EXTENSION STEMS**  
 Up to 2 1/4" diameter any  
 length

## COMMITTED TO ENVIRONMENTAL RESPONSIBILITY

Clow Valve Company is committed to protecting our natural resources through environmentally responsible manufacturing practices, including the use of 80+% recycled content in our hydrants and valves.



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**POCKET ENGINEER**  
 Available for iOS + Android  
 or online at [pe.mcwane.com](http://pe.mcwane.com).



REVISION A-2018

[ClowValve.com](http://ClowValve.com)