



## APOLLO® BUTTERFLY VALVES CONTROLS AND ACCESSORIES



# APOLLO®

## butterfly valves



## Resilient Seated Butterfly Valves From the Name You Know and Trust

Now Conbraco Industries offers you an extensive line of Apollo® butterfly valves and control devices supported by years of field application experience and perpetual research and development. Our primary focus is on continuous product improvement and design performance upgrades to better serve our customers with the latest in valve technology.

Our resilient seated butterfly valves for chemical, sanitary, industrial and utility service applications help simplify the valve buying process. Apollo® butterfly valves provide a bubble-tight shut-off in either direction of flow. Their design isolates valve body and stem from the flowing media and assures gasket-free installation with molded-in seat O-rings, which serve as flange seals.

Primary stem seals are formed by pre-loaded contact between the disc and seat. A secondary seal results from a stem diameter that is greater than the stem hole in the resilient seat. All Apollo butterfly valves feature top plate mounting dimensions that are designed to ISO 5211 standard dimensions allowing for direct mounting of all our manual operators and Apollo® Compactorque™ pneumatic actuators.

### 130/132 Series

#### Sanitary/Chemical Design : 2" to 12"

Our Apollo® sanitary and chemical butterfly valves feature a two-piece (split body) construction with one-piece 316 stainless steel disc/stem. The disc is also available with Teflon, EPDM or Buna-N coatings. Their thin profile disc provides an extremely high Cv, greater pressure recovery, plus superior abrasion and erosion resistance in slurry or dry media applications. The 130 Model is a wafer style valve; 132 Model is a companion lug. Both series are rated at 150 PSI (100 PSI with a Teflon or elastomer molded disc) and provide bubble-tight shut-off between flanges. They are manufactured with a bore diameter for lined pipe or O.D. tubing. The split body design makes seat field replacement simple and fast.





## 130/132 Series

### Pharmaceutical, Food/Beverage Design : 1-1/2" to 12"

The 316 stainless steel bodies (on wafer-style 130 Model and lug-style 132 Model valves) are perfect for applications requiring sanitary compliance or superior corrosion resistance. All 130/132 Series valves are available with 316 stainless steel disc/stems in polished or satin finish (rated 150 PSI bubble-tight shut-off), in a variety of molded disc/stems (molded discs rated at 100 PSI bubble-tight shut-off) and seat materials. The result forms a superior pharmaceutical, food and beverage valve/actuator package.



### 2-Piece Industrial Design : 2" to 12"

Our Apollo® 130 Model all purpose design is the original two-piece (split body), one-piece disc/stem wafer-style valve designed to deliver maximum flow. Its thin profile disc design provides a higher capacity than contour disc designs, while offering the highest flow coefficient (Cv) available from a butterfly valve. The design also provides a valve without pockets and superior abrasion resistance. The 130 Model is a wafer-style valve; 132 Model is a companion lug. Both are rated at 150 PSI bubble-tight shut-off.



## 140/142 Series

### Unibody Industrial Process Design : 2" to 24"

This proven Apollo® general purpose and industrial butterfly valve features a one-piece high strength 17-4 PH stainless steel through-shaft design. The improved 316 stainless steel disc screw contact provides positive leak-proof connections while making disassembly quick and easy. The seat is easily field replaceable. It completely isolates the body from the line fluid. Features include high quality rugged construction plus a wide choice of materials and direct mounted actuators for on/off or throttling control. The 140 Model is a wafer style valve; 142 Model is a companion lug. Both are rated at 150 PSI bubble-tight shut-off between flanges.



## 141/143 Series

### Utility/General Purpose Design : 2" to 24"

Apollo® 141/143 Series valves form a lineup of economical butterfly valves ideal for use in industrial and HVAC/mechanical markets. The 141 Model is a wafer style valve; 143 Model is a companion lug. Both are rated at 200 PSI bubble-tight shut-off between flanges. Our 2"-14" sizes are standard with "Double-D" stem flats and all sizes feature ISO 5211 top plate automation mounting dimensions. These valves are designed for reliable performance in hot and cold water applications, treated or untreated, on-off or throttling, control isolation, flow balance or diversion tasks. They feature an extended neck in order to provide a minimum 2" clearance between valve top plate and pipe flange. The 141/143 Series meets MSS SP-67 and API 609 specifications. They also meet the intent and have passed AWWA C-504-87 Section 5 proof of design tests.



## Actuators and Manual Operators

### Apollo® CompacTorque™ Pneumatic Actuators

Apollo® CompacTorque™ actuators are the most advanced rack and pinion actuators on the market today. From corrosion protection to versatility in application, these actuators offer you the ultimate in design and selection.

Their outstanding design starts with hard anodized aluminum construction, in your choice of polyester powder coatings, 316L stainless steel pigmented polyester electrostatic coating or electroless nickel coating. This range of materials assures you the maximum in corrosion protection at an affordable cost.

Our unique Universal Shaft Adapter (USA) makes direct mounting to your favorite butterfly valve easier than ever. The precision replaceable inserts feature variable internal geometry to meet any custom requirements. The standard insert material is high-strength FLNC-4408. Optional stainless steel inserts are available.

CompacTorque™ actuators are available in spring return or double-acting units which convert easily in the field to a spring return design by simply adding the correct number of pre-loaded springs to the standard housing. Specially designed spring cartridges make our spring return actuators inherently safe.

Other standard features include internal and external travel stop adjustments, high temperature, low coefficient of friction body



bearings to absorb the side thrust of the pistons, internal piston guides and high temperature, low friction piston bearings.

The actuators' internal porting reduces the cost of external tubing which can be easily damaged. All top mounting dimensions for accessory mounting and pneumatic supply ports conform to the latest NAMUR specifications. Actuators can be direct mounted to 1-1/2" to 24" Apollo valves. The standard spring cartridge system is designed to operate on 40, 60, 80, 100 and 120 PSI service.



## Actuators and Manual Operators

### Direct Mounting Of Actuators to Valves

CompacTorque™ actuators mount directly to Apollo® valves without using external linkages. This simplifies installations in the field and reduces the possibility of misalignment.



### Apollo® Electric Actuators

The Apollo® AE Series electric actuators are economical while offering standard features you'd pay extra for competitors' models.

Several standard features offered include: stainless steel push-and -turn manual override shaft; position indicator shaft; and female output. The AC models feature a standard 25% duty cycle below 100°F and the DC voltage models provide a standard 100% duty cycle.

All units are rated for use in ambient temperatures or -40°F (when equipped with heater and thermostat) to 150°F. Available in five output torques between 200 and 1000 inch-pounds, the actuators' heat-treated alloy spur gears provide durability and structural integrity. Their enclosed gear train is permanently lubricated. these actuators can be mounted in any position and include stainless steel captive cover fasteners. A 12-position pre-wired terminal strip and two 1/2" NPT conduit entrances also simplify wiring.



AE Series

Apollo® LB Series actuators are available in several basic designs in an array of configurations, with torques and speeds for specific applications. Rugged and uncomplicated, the LB Series offers a practical and reliable method for turning any mechanism 90°. Torques range from 540 inch-pounds to 54,000 inch-pounds (6.25 to 625 kilogram-meters). Electric actuators are available in 115 VAC-50/60 Hz single phase, 200 VAC-50/60 Hz single phase and 220/440 VAC-50/60 Hz three phase configurations. Versions are available for on-off modulating control.



LB Series

## Apollo® Handle and Notch Plate Kit

For manual operation, on-off and throttling service. This quarter-turn handle features a locking lever. The bolted notch plate provides for a positive disc position indicator for valves from 1-1/2" to 12". Also available: handle locking and infinite position options.



## Actuators and Manual Operators

### Apollo® Heavy Duty Gear Operator with Handwheel

This self-locking design is ideal for heavy duty service; manual operation for on-off and throttling use for valves from 2" to 24". With its heavy duty cast iron housing, this gear operator is completely weatherproof and self-lubricated with position indicator and adjustable travel stops. An optional chainwheel is available.



### Apollo® Manual Override Gear Operators

These gear operators are designed to ease the manual override of pneumatic valve actuators in power and process applications. They mount directly between the valve and actuator, so no mounting brackets are needed. Should loss of power require valve opening or closing, a simple hand turn of the declutchable lever provides a camming action and engages the worm to the worm gear segment. The unit can be disengaged by rotating the lever in the opposite direction. Manual override is available on valves from 2" to 24".

## Accessories

### Valve Position Monitor

Here's the ultimate in valve monitoring: Westlock and Stonel position monitors feature a high visibility, color-coded indicator to display valve position. All Westlock and Stonel monitors are designed to correspond to the latest NAMUR standard for actuator/position monitoring units. Plated steel or stainless steel mounting kits are available to provide a pre-engineered mounting solution for maximizing position monitor performance and direct mounting to actuators. Other brands also available such as Moniteur, pictured here. See our Actuator Catalog for details.





## Accessories

### Solenoids

Apollo® CompacTorque™ actuators can be supplied with solenoids manufactured by either AVC (Automatic Valve Company) or ASCO. Our 3/4 way, field convertible, direct mount (NAMUR pattern) solenoid valves feature a variety of interchangeable integrated molded coils. They're compatible with both spring return and double acting actuators.

Standard configuration has manual override and an integrated coil. Nema 4, 4X models are watertight and dust-tight. Models rated for Nema 4, 4x, 7, 9 are watertight, dust-tight and explosion proof. Speed controls are optional. Solenoid valves are available in 12 and 24 VDC, 120 and 240 VAC as standard.



### Positioners

Apollo® valve positioners are excellent tools for increasing the gain of your valve package, often reducing your actuator size due to your increased ability to accurately control higher air deliveries, and the flexibility to add options and accessories to complete your control package's performance.

Their simple design makes PMV positioners (shown here) easy to understand, calibrate and repair. Rugged construction provides operation in a variety of tough applications. Compact size minimizes space requirements. A complete package means the user can select the right positioner for his application. A bright indicator makes it easy for operators to visually check the valve position. Spool valve design requires very little maintenance. The electro-pneumatic unit eliminates the need for an extra product and additional connections. PMV positioners are proven products recognized for providing years of reliable service. Other brands are also available from your Apollo® distributor.

Apollo® offers both pneumatic and electro-pneumatic positioners as standard. Pneumatic positioners may be used on either double acting or spring return actuators. The anodized aluminum housing provides excellent product integrity and good corrosion resistance. Options include special coatings, stainless steel housings and a variety of accessory items which can help you meet your most demanding control applications. See our Actuator Catalog for complete details.





**Butterfly Valves**

## Conbraco Serves Major Industries Worldwide...

Chemical Processing  
Pulp and Paper  
Petroleum Refining  
Petrochemicals  
Pharmaceuticals  
Food Processing  
Brewing/Distilling  
Transportation

Mining  
Dry Bulk Handling  
General Manufacturing  
Textiles  
Power Generation  
Water Utilities  
Construction (Industrial, Commercial, Residential)  
Marine Products Manufacturing

## ...With An Expanding Portfolio Of Valves And Flow Control Products

Butterfly Valves  
End Entry Ball Valves  
Top Entry Ball Valves  
Process Industry Valves  
Pneumatic And Electric Actuators  
Forged Steel Gate, Globe And Check Valves  
Pipeline Strainers

Ball Cone And Soft Seat In-Line Check Valves  
Backflow Preventers And Accessories  
ASME Safety And Relief Valves  
Liquid Level Gauges  
Bar Stock Valves  
Plumbing And Heating Products

## Warranty & Limitations of Liability

Conbraco Industries, Inc. warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of one year from the date of delivery to you, our initial purchaser.

Should any failure to conform to this warranty appear within one year after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY, WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of

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To learn more about Apollo® Butterfly valves or to place an order, see your local Apollo distributor:



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