

# BUTTERFLY VALVES – Resilient Seated

## Options

The following options are available factory installed on any of the LD or WD Series Apollo Butterfly Valves.

The LC149 series are available either with the standard 10-position handle or with the optional gear operator on sizes 8" and larger. The other options may be purchased in kit form and installed by the user or distributor.

### BARE STEM (MODEL CODE SUFFIX 0)

Select this suffix to specify a butterfly valve without a handle, gear operator or actuator.

### TEN (10) POSITION HANDLE (SUFFIX 1)

The 10 position handle is the most common manual operator for valves 8" and smaller. (It can be specified on valves through 12" size.) The 10 position handle allows the valve to be set in any one of ten positions between fully open and fully closed (approximately 10 degree increments).



### GEAR OPERATOR (SUFFIX 2)

Although the option is available for any size of valve, it is commonly used on valves larger than 6", and is the only manual option offered for valves 14" and larger. All gear operators feature a self-locking design preventing back driving of the gear and drifting in the disc's position. All gear operators are weather resistant and permanently lubricated. They are equipped with position indicators and adjustable travel stops.

### INFINITE POSITION HANDLE (SUFFIX 3)

This option allows the valve to be set at any degree of open and is available for valves 2" through 12".

### LOCKING HANDLE WITH 10 POSITION PLATE (SUFFIX 4)

The option adds a locking device to "suffix 1".



### GEAR OPERATOR W/ CHAINWHEEL (SUFFIX 5)

A manual gear with chainwheel allows an overhead valve to be opened or closed from a location lower than the valve.

### LOCKING GEAR OPERATOR (SUFFIX 7)

A manual gear with lock-out option allows the manual gear to be locked with a padlock.

### LOCKING GEAR OPERATOR W/ CHAINWHEEL (SUFFIX 8)

Combination of both chainwheel operator (suffix 5) and the locking device (suffix 7) are also available to work in conjunction with the gear operators described under "suffix 2".

### SELF LOCKING GEAR OPERATORS

Self locking manual gear operators are available for all Apollo® WD and LD Series butterfly valves for heavy duty ON/OFF and throttling service. Gear operators are completely weatherproof and self-lubricating; they're equipped with position indicators and adjustable travel stops. Chainwheel operators are available. **All units feature 12" handwheels** with gearing for each size to keep rim pull at 50# or less.

### HANDLE AND NOTCH PLATE KITS

Handle and notch plate kits are supplied for manual operation, ON/OFF and throttling service. Kit provides positive disc position indication for 2" to 12" WD and LD Series butterfly valves. Locking handle and infinite position handle are also available.

### APOLLO® ACTUATORS

Apollo® Actuators are available as double acting or as spring return and come with a wide variety of corrosion resistant coatings for use in most any application. Standard features include external travel stop adjustments, high temperature, low friction bearings and seals. Mounting kits are available for ease of installation.

Butterfly valves require pneumatic actuators with dual (open & close) limit stops.

