

# BI-TORQ<sup>®</sup>

ACTUATORS & VALVE AUTOMATION PACKAGES



Your Single  
Source for  
Valve Automation

## AUTOMATED BALL VALVES



the BI-TORQ  
**INSTRUPAK**  
AUTOMATED BALL VALVES

## BUTTERFLY VALVES



## VALVE ACTUATORS



## MANUAL VALVES



## GEAR OPERATORS



## FIRE SAFE FUSIBLE LINK ASSEMBLIES



## AUTOMATION ACCESSORIES



**BI-TORQ**  
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anything's  
possible.  
just ask.













# VALVE AUTOMATION PRODUCT OVERVIEW

# AUTOMATED BALL VALVES

the **BI-TORG**  
**INSTRUPAK**  
AUTOMATED BALL VALVES

STAINLESS STEEL • BRASS  
PVC/CPVC • MULTI-PORT  
SANITARY • FLANGED  
SPECIAL SERVICE VALVES

**PNEUMATIC & ELECTRICALLY ACTUATED BALL VALVES**  
Valve styles include 2-piece and 3-piece stainless steel, brass, 150# ANSI flanged, sanitary clamp end, PVC/CPVC/polypropylene, and multi-port valves in brass, PVC/CPVC and stainless steel. Most InstruPak automated units are direct actuator mount for low profile, cost-efficient operations.

<p><b>STAINLESS STEEL 2-PIECE</b></p>  <p><a href="http://bitorq.com/instrupak_is_series.html">bitorq.com/instrupak_is_series.html</a></p>	<p><b>STAINLESS STEEL 3-PIECE</b></p>  <p><a href="http://bitorq.com/instrupak_is_3pt_series.html">bitorq.com/instrupak_is_3pt_series.html</a></p>
<p><b>SANITARY CLAMP END</b></p>  <p><a href="http://bitorq.com/instrupak_is_3tc_series.html">bitorq.com/instrupak_is_3tc_series.html</a></p>	<p><b>STAINLESS STEEL FLANGED</b></p>  <p><a href="http://bitorq.com/instrupak_is_2pf_series.html">bitorq.com/instrupak_is_2pf_series.html</a></p>
<p><b>STAINLESS 3-WAY NPT</b></p>  <p><a href="http://bitorq.com/instrupak_is_3w_series.html">bitorq.com/instrupak_is_3w_series.html</a></p>	<p><b>STAINLESS 3-WAY FLANGED</b></p>  <p><a href="http://bitorq.com/instrupak_is_3wf_series.html">bitorq.com/instrupak_is_3wf_series.html</a></p>
<p><b>BRONZE 2-WAY</b></p>  <p><a href="http://bitorq.com/instrupak_iz_series.html">bitorq.com/instrupak_iz_series.html</a></p>	<p><b>BRONZE 3-WAY</b></p>  <p><a href="http://bitorq.com/instrupak_iz_3w_series.html">bitorq.com/instrupak_iz_3w_series.html</a></p>
<p><b>BRASS 2-PIECE</b></p>  <p><a href="http://bitorq.com/instrupak_ip_series.html">bitorq.com/instrupak_ip_series.html</a></p>	<p><b>BRASS 3-WAY</b></p>  <p><a href="http://bitorq.com/instrupak_ip_3w_series.html">bitorq.com/instrupak_ip_3w_series.html</a></p>
<p><b>PVC/CPVC TRUE UNION</b></p>  <p><a href="http://bitorq.com/instrupak_ic_series.html">bitorq.com/instrupak_ic_series.html</a></p>	<p><b>PVC/CPVC 3-WAY</b></p>  <p><a href="http://bitorq.com/instrupak_ic_3way_series.html">bitorq.com/instrupak_ic_3way_series.html</a></p>



# AUTOMATED BUTTERFLY VALVES

**BI-TORQ®**  
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AUTOMATED BUTTERFLY VALVES

LUG AND WAFER STYLE  
EPDM, BUNA-N OR VITON  
CAST IRON, PVC  
POLYPROPYLENE  
METAL BFVS HAVE  
STANDARD SS DISC/STEM

**PNEUMATIC & ELECTRICALLY ACTUATED BUTTERFLY VALVES**  
Our cast iron lug and wafer style butterfly valves all have stainless steel discs as a standard. EPDM, BUNA-N and Viton® liners are available on all sizes. BI-TORQ® also offers PVC, CPVC, polypropylene, stainless steel and sanitary clamp end butterfly valves for corrosive or sanitary applications.



CAST IRON  
w/SS DISC

[www.bitorq.com/butterfly\\_valve.html](http://www.bitorq.com/butterfly_valve.html)

- CAST IRON BODY WITH STANDARD STAINLESS STEEL DISC
- LUG AND WAFER DESIGN
- STANDARD VALVES 2" THROUGH 12"; ADDITIONAL MODELS AVAILABLE THROUGH 24"
- EPDM, BUNA-N OR VITON® LINERS AVAILABLE
- PNEUMATIC, ELECTRIC OR GEAR OPERATORS

WORKING PRESSURE: 225PSI TO 8"; 150PSI 10", 12"  
WORKING TEMPERATURE: EPDM: -30F to +275F  
BUNA-N: +10F to +180F



PVC, CPVC  
POLYPROPYLENE



[www.bitorq.com/butterfly\\_valve\\_pvc\\_automated.html](http://www.bitorq.com/butterfly_valve_pvc_automated.html)

- PVC, CPVC AND POLYPROPYLENE VALVE BODIES AND DISCS
- LUG AND WAFER DESIGN
- STANDARD VALVES 2" THROUGH 12"; ADDITIONAL SIZES AVAILABLE UPON REQUEST
- EPDM, BUNA-N OR VITON® LINERS AVAILABLE
- PNEUMATIC, ELECTRIC OR GEAR OPERATORS

WORKING PRESSURE: 150PSI TO 12"  
WORKING TEMPERATURE: 73F TO 150PSI

## PNEUMATIC ACTUATORS



[www.bitorq.com/pneumatic\\_actuator\\_aluminum.html](http://www.bitorq.com/pneumatic_actuator_aluminum.html)

RACK AND PINION  
ACTUATORS



SPRING RETURN  
DOUBLE ACTING  
ISO/NAMUR MOUNT  
RACK & PINION  
ANODIZED ALUMINUM  
DUAL LIMIT STOPS

BI-TORQ offers a full range of pneumatic valve actuators from 40 to 27,000 inch pounds output torque in both double acting and spring return/fail safe design. The star shaped female output shaft and ISO mounting allows for direct mounting a variety of ISO style valves. Our anodized aluminum actuators also offer true ISO and NAMUR accessory mounting for limit switches, solenoids and positioners. All stainless steel or epoxy coated actuators are available for highly corrosive atmospheres. Scotch yoke and linear actuators are also available.

STAINLESS STEEL  
ACTUATORS

**CORROSION RESISTANT ACTUATORS**  
Made from all stainless steel, our SS-PN pneumatic series offers corrosion resistant actuation for sanitary, food and chemical operations. A stream-lined design reduces the areas where dust and dirt can accumulate.



VANE STYLE  
ACTUATORS



**KINETROL VANE STYLE ACTUATORS AND SPRING PACKS**  
Vane style actuators provide high torque output in relatively small size, making them ideal for applications where supply air pressure is low or space is a concern. Kinetrol's wide range of vane actuators and spring packs are suitable for 1/4 turn valves and dampers. A single moving mechanism ensures long-lasting, consistent performance.

# ELECTRIC ACTUATORS



[www.bitorq.com/electric\\_actuator.html](http://www.bitorq.com/electric_actuator.html)

120, 220 AND 24 VAC  
12 AND 24 VDC  
ON-OFF AND MODULATING  
NEMA 4, 4X AND 7  
ACCESSORY OPTIONS

## HEAVY DUTY INDUSTRIAL ACTUATORS

Our economic, durable electric actuators feature voltages in 115VAC, 220VAC, 12VDC, 24VDC and 24VAC, with torque outputs to 3800 inch pounds. True ISO bottom mounting allows for direct mounting to ISO valves. A permanently lubricated gear train, integral thermal overload protection and a reversing type motor ensure long-lasting operation and consistent torque output. All BI-TORQ electric actuators have a range of optional accessories, including modulating positioner boards, temperature controls, speed controls, timers, brakes and explosion proof enclosures.

## HVAC/DAMPER ACTUATORS

[www.bitorq.com/hvac.html](http://www.bitorq.com/hvac.html)

### HVAC ACTUATORS FOR DAMPER STYLE VALVES

These actuators are designed for low torque damper and HVAC applications. Economically priced, durable and versatile, this product line is suitable for on-off and spring return operations. Limit switches and other options can be added for a complete automated package. Universal mounting allows AVK Carbo-Bond to retrofit the HVAC series to a wide variety of damper valve styles.



# AUTOMATION ACCESSORIES

## PNEUMATIC VALVE POSITIONERS



4-20mA OR 3-15PSI  
PNEUMATIC POSITIONERS  
NEMA 4X OR INTRINSICALLY SAFE  
FACTORY MOUNTED AND TESTED

[www.bitorq.com/positioners.html](http://www.bitorq.com/positioners.html)

### PNEUMATIC AND ELECTRO-PNEUMATIC POSITIONERS

Our line of positioners include 3-15PSI pneumatically operated or 4-20mA electro-pneumatic models for a wide variety of control applications. Enclosures are rated for NEMA 4/4X or intrinsically safe with an optional high visibility dome indicator. Other options include integrated limit switches, feedback potentiometers, transmitters and flow control modules. Mounting, piping and testing are done on all complete packages.

## NAMUR MOUNT SOLENOID VALVES

BI-TORQ offers a full range of NAMUR mount solenoid valves with voltages in 115VAC, 220VAC, 24VAC, 12VDC and 24VDC with cV factors to 1.8 for high flow applications. These solenoids come with NEMA 4, NEMA 7 or intrinsically safe options. The standard connector is a DIN plug with options for a variety of different coil connections. One unit easily can be converted in the field for 3/2 way (spring return) or 5/2 way (double acting) operations. Dual coils also are available for all NAMUR mount solenoids.

120, 220 AND 24 VAC  
12 AND 24 VDC  
NEMA 4, 4X, 7 OR 9  
FIELD CONVERTIBLE 3/2 OR 5/2 WAY  
DIN CONNECTORS OR FLYING LEADS

[www.bitorq.com/solenoids.htm](http://www.bitorq.com/solenoids.htm)

## NAMUR MOUNT SOLENOIDS



## LIMIT SWITCHES



MECHANICAL OR PROXIMITY SWITCHES  
NEMA 4, 4X, 7 OR 9  
STANDARD DOME INDICATOR  
ALL SWITCHES INCLUDE SS BRACKET  
FACTORY MOUNTED AND TESTED

[www.bitorq.com/switches.htm](http://www.bitorq.com/switches.htm)

### ROTARY AND LINEAR LIMIT SWITCHES

BI-TORQ is proud to represent ControlLink's line of switches and transmitters, which represent the most innovative technology available in the industry. We offer a full array of switch boxes for quarter-turn actuators in NEMA 4, 4X, 7 and 9 enclosures with intrinsically safe options. The standard switch has 2 SPDT mechanical switches with options for proximity or reed type. All switch boxes for BI-TORQ actuators come standard with a SS mounting bracket. We also offer a superior line of proximity switches for linear and multi-turn applications.

# SPECIALTY SAFETY DEVICES

## FUSIBLE LINK ASSEMBLIES



NOW WITH REMOTE FIRING DEVICES AND INDICATION



[www.bitorq.com/fusible.htm](http://www.bitorq.com/fusible.htm)

### FUSIBLE LINK ASSEMBLIES FOR FIRE SAFE VALVES

Our fusible link assemblies are designed for fail safe situations where high temperature heat from a fire results in a main valve springing close when the fusible link breaks. This specially designed system incorporates an API607 fire rated valve, a spring loaded operator, a fusible link and customized mounting assembly. We can supply the assembly on a customer owned valve or mount a complete assembly on our own line of API607 fire safe ball or butterfly valves.

- API607 fire rated ball and butterfly valves
- heavy duty spring packs and arming devices
- the same valve can be used as BOTH an armed fusible link and a manual valve
- ball valves to 8", butterfly valves to 24"

### SPRING RETURN DEADMAN SAFETY HANDLES

Spring return deadman handles help to meet OSHA requirements or plant safety specifications where a valve must return to the closed position automatically after operation. Unlike a standard lever handle or gear operator that will stay in the last position, deadman handles will always return to a pre-designated position. This device can be mounted on a variety of 1/4 turn valve models.

*automatically closes the valve when the operator releases the handle*

AUTOMATIC CLOSING SAFETY HANDLE  
FAIL OPEN OR CLOSED  
TORQUE OUTPUTS TO 800 INCH POUNDS  
CUSTOM MOUNTING

[www.bitorq.com/deadman.htm](http://www.bitorq.com/deadman.htm)

## DEADMAN HANDLES



# MORE QUALITY VALVE PRODUCTS



[www.bitorq.com/manual\\_valve.html](http://www.bitorq.com/manual_valve.html)

BALL VALVES TO 6"  
BFVs TO 12"  
ADDITIONAL SIZES  
AVAILABLE  
SPECIAL SERVICE  
VALVES



## MANUALLY OPERATED BALL & BUTTERFLY VALVES

### BALL, BUTTERFLY, GATE AND SPECIALTY VALVES

Our BI-TORQ division offers a full range of manually operated valves in addition to our wide variety of automated packages. Stainless steel, brass and carbon steel valves with a variety of seats/seals can handle a range of applications, including steam service, high pressure and fire safe requirements. Heat extension, deadman and custom made handles are available for most models.

### GEAR OPERATORS

Mastergear aluminum gear operators, cast iron gear operators and manual override de clutchable gears have been part of our product line for over 15 years. Thanks to our machining capabilities with AVK Carbo-Bond, we can customize drive bushings and bases to fit a variety of valves. We also feature Babbitt chainwheels in addition to standard tubular steel handwheels.

[www.bitorq.com/gears.htm](http://www.bitorq.com/gears.htm)

CAST IRON, ALUMINUM OR SS BODIES  
CUSTOMIZED DRIVE BUSHINGS AND MOUNTING  
TO FIT A VARIETY OF VALVES  
DECLUTCHABLE MANUAL OVERRIDES  
HANDWHEELS, CHAINWHEELS AND TBARS

## GEAR OPERATORS



## AUTOMATED KNIFE GATE VALVES



SPRING RETURN  
DOUBLE ACTING  
ISO/NAMUR MOUNT  
BACK & PINION  
ANODIZED ALUMINUM  
DUAL LIMIT STOPS

### HEAVY DUTY INDUSTRIAL KNIFE GATE VALVES

Our line of knife gate valves are ideal for tough applications that demand high performance and sure closing. Knife gate valves are suitable for slurries, solids and other thick media such as those found in the pulp and paper industry. We also offer a full array of hydraulic and pneumatic cylinders to create a complete automated package.

[www.bitorq.com/knife\\_gate.html](http://www.bitorq.com/knife_gate.html)



# MOUNTING AND TESTING SERVICES

**MOUNTING &  
TESTING**

**EMERGENCY  
SERVICE**

MOUNTING &  
TESTING SERVICES:  
ACTUATORS  
CYLINDERS  
POSITIONERS  
DECLUTCHABLE  
GEARS  
SWITCHES  
AND MUCH MORE



## 48-HOUR EMERGENCY SERVICE AND MOUNTING & TESTING

We understand that in a plant shutdown situation, time is of the essence. That is why AVK Carbo-Bond/BI-TORQ offers unique emergency service options to get your line up and running quickly. Most BI-TORQ products can ship on the same day of order, while AVK Carbo-Bond's customized product can ship within 48 hours upon request. We also offer a one week expediting service for your convenience.

In addition, our factory-trained personnel can mount and test complete assemblies for you. This means that we can directly ship a ready to put in line assembly to your customer, saving time and ensuring that the product will function perfectly when it gets to the job site. Whether you require a basic actuator to valve assembly or a complete package with positioners, switches, solenoids and/or gear operators, let us assemble and test the units for you.

# CUSTOMIZED MOUNTING HARDWARE



**CARBO-BOND, INC.**  
AUTOMATED VALVE MOUNTING KITS



For the past two decades, AVK Carbo-Bond has engineered complete bracket, coupler and mounting hardware assemblies to mount any ball, butterfly, plug, gate or damper valve to any make or model of actuator. Our wide range of AutoCad® engineered drawings ensures that we can link virtually any automated valve assembly, whether the valve has been in line for 20 years or needs to be installed by the end of the week. Carbon steel, stainless steel and epoxy-coated options are available for most mounting kits. We also offer a full range of mounting kits for limit switches and positioners to actuators or manual valves.

**MOUNTING  
HARDWARE**

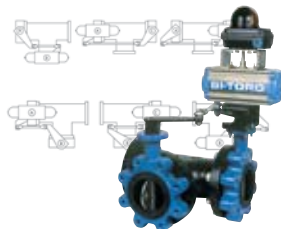


**CUSTOM  
BROACHING**



**LOCK-OUT  
DEVICES**

**THREE-WAY  
TEE LINKAGES**



**SPECIALTY  
VALVE  
EXTENSIONS**

**BI-TORQ**  
ACTUATORS & VALVE AUTOMATION PACKAGES



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