

The complete  
solution

LABEL



The BC PREMIUM label guarantees "The complete solution", with many options and possible configurations to fit at best very specific needs. Decades of return on experience from very demanding applications such as nuclear qualified valves actuation have shaped our technical orientations and our commitment to quality and safety.

The BC PREMIUM label reflects this long-lasting experience and in-depth expertise, working with the most demanding markets, where the ability to design customized solutions has always been decisive. It is the guarantee of quality and security for installations' actuation in the case of **severe environment, demanding operational constraints and critical applications.**

Failsafe actuators are to be used in case of critical processes, safety issues or all other kind of applications where the risks are such that, driving the device to its safety position must be possible at any time, even in the absence of power supply. **BERNARD CONTROLS FQ range actuators ensure automatic opening or closing even without any power supply.**



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Failsafe  
Electric Actuators  
FQ RANGE

CAT02-05-ETC-GRP\_rev08D  
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# > FQ range

## The complete solution for failsafe electric actuation



FQ04 - FQ08



FQ12 - FQ18



FQ12 - FQ18

### Product overview

FOR ALL QUARTER-TURN APPLICATIONS, SPRING RETURN FQ RANGE ACTUATORS ENSURE AUTOMATIC OPENING OR CLOSING EVEN WITHOUT ANY POWER SUPPLY.

#### Spring

With solenoid brake

#### Lockable handwheel clutch

#### Handwheel

### Operating principle

When energized, the actuator operates the valve normally and at the same time compresses the spring which is held in the loaded position by a solenoid brake.

In case of power failure to the solenoid, the spring will drive the actuator and valve to the safety position either open or closed. The associated dashpot speed controls the spring action and allows a safe and shock free operation of the valve.

When the power supply is restored (no resetting if the spring is required), the actuator is immediately available for operates clockwise when viewed from the top. The electric part is equipped with an asynchronous three-phase motor. Other versions are available in single phase and direct current phase.

### Mechanical position indicator

- > Standard
- > Check the position of your valve at a glance

### Application fields

All applications where the loss of power supply requires automatically to put the driven device in a safety position. All applications where the risks are such, that driving the device to its safety position must be possible at any time even in the absence of power supply.

#### Dashpot

For shock free operation

#### Cable entries

### Product specifications

- **Adaptation to all quarter-turn valves**
  - > 40 - 500 Nm
- **Type of Controls:**
  - > Electromechanical SWITCH
  - > Integrated with INTEGRAL / POSIGAM control box
- **BC Duty & Modulating Classification**
  - > On-Off: Class A
  - > Inching/Positioning: Class B
  - > Modulating: Class III
- **Environment:**
  - > IP67
  - > T: -20°C...+70°C (-40°C as an option)
- **Explosion proof versions available (ATEX, NEMA)**

### Product benefits

#### FAST SPRING RETURN ELECTRIC ACTUATORS : YOUR INSTALLATION IS UNDER CONTROL

##### • Special mechanical design

- > Specially designed to fail safe applications and with self-locking gears
- > Fast and **shock-free** operation of the valve during emergency closing/opening, **several speeds** available

##### • Easy to use, maintenance free

- > No periodic maintenance required
- > Trouble free operation for years (FQ system is not battery technology based)
- > Spring efficiency guaranteed over the full 90° travel
- > **Travel limit switches easy to set** with a simple screw driver and **unaffected by mechanical vibrations effects**
- > Easy access to electrical connections via a **terminal strip**

##### • Top level of reliability

- > No need for external power supply: the FQ works with an **automatic spring-return**
- > **No resetting of the spring** required after emergency operation: failsafe function is continuously available
- > **Full electrical priority** even in case of manual operation: a lever for manual operation stops the failsafe function of the actuator but not the actuator operation
- > Manual operation can be inhibited with padlock

##### • Modular design adaptable to specific applications

- > **Explosion proof** versions according to international standards (ATEX, NEMA)
- > **Low temperature version:** up to -40°C
- > **Separated control box** available for advanced integrated control functions and fieldbus communication
- > Suitable for **Modulating applications** (BC Class III complying with EN15714-2 Class C)



Full range description, product specifications and technical data on BERNARD CONTROLS' website.