

The complete solution



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.**



LABEL



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More than 50 agents and distributors worldwide. Contact details on www.bernardcontrols.com

///// Invest in Confidence /////



Explosionproof
Multi-turn Actuators
SOX RANGE

CAT02-09-ETC-GRP_rev01
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> SQX range

The complete solution

for quarter-turn explosionproof electric actuators



SQX SWITCH



SQX INTELLI+®

Product benefits

HEAVY DUTY DESIGN SECURITY AT ALL LEVELS

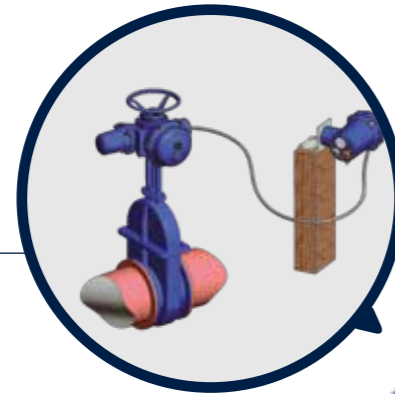
• Trouble-free operation

- > Gearing is self-locking at all speeds
- > Continuous gear drive between motor and valve
- > Main mechanical parts unaffected by vibration
- > No preventative maintenance required Gearing is lubricated for lifetime
- > High efficiency gearing reduce wear
- > Easy to remove motors with sealed ball bearings fitted at front and rear

• Power to Spare

- > S4 Service Duty
- > Asynchronous motor with high starting torque
- > Excellent starting torque / nominal torque ratio: actuators can operate in any difficult case and can also support repetitive starts

Separated control box



Dec clutch-free handwheel

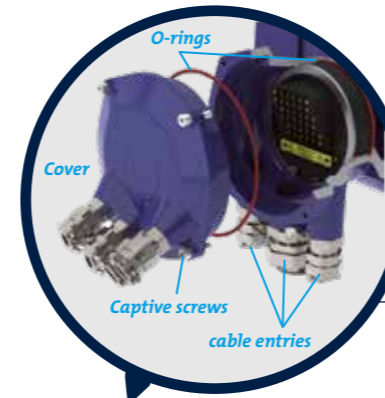
- > with motor priority

Large LCD display

- > For user-friendly commissioning and local commands
- > Clear status, no abbreviations

User-friendly local commands

- > Through 2 buttons
- > Can be inhibited remotely



Double-sealing principle

- > Two barriers fitted with O-rings insure an optimum protection against water ingress



Absolute sensors

- > Absolute position sensors & torque mechanically linked to the output shaft

Product specifications

- 180 to 800 Nm (direct) & up to 1,000,000 Nm on request
- Compliance with international explosionproof standards : ATEX, INMETRO, IEC-Ex, EAC-Ex, NEMA 7 & 9...
- Type of Controls :
 - > Integrated INTELLI+ as standard
 - > Electromechanical SWITCH on request*
- BC Duty & Modulating Classification :
 - > On-Off: Class A+
 - > Inching/Positioning: Class B+
 - > Modulating: Class III
- Environment :
 - > IP 68 / C3 up to C5-M /
 - > T: -20°C...+70°C (option low T: -60°C)
- Special configurations : Corrosion protection, Fire proofing, Extreme temperatures

*All electronic features and specifications on this brochure refer to INTELLI+(R) version



Product benefits

SECURITY AT ALL LEVELS

• Actuator & valve protection

- > Thanks to ABSOLUTE SENSORS , which constantly measure the position & torque of your valve INTELLI+ gets precise and reliable information.
- > **INTELLI+ Phase monitoring** (automatic phase correction device)
- > **Protection of change in direction**
- > **Signaling continuity** (option)
- > **Fire protection** (option) : a fire jacket or an intumescent coating allow the actuator to operate for 30 min. in fire temperature over 1000°C (tested to UL1709 criteria)
- > **Motor thermal protection**
- > **SIL2** (option)
- > **Self-locking at all speeds**

• Protection of your installation

- > **Partial Stroking** to check the availability of the connected MOVs. Starting position as well as partial stroke amplitude are programmable.
- > **Fieldbus lighting protection**
- > **Fault monitoring relay**
- > **Protection by password**
- > **Alarms indication** : INTELLI+® continuously monitors the actuator performances. Up to 17 different types of faults and alarm scan be reported.
- > **Emergency shutdown (ESD)** : Depending upon the valve operation, ESD can be configured as an Open, Close or Stop command.
- > **Programmable Timer** : to increase in operating time of the actuator, to avoid water-hammer effect in a pipe.

EASY SITE MANAGEMENT

• During the actuator on valve setting procedure, the user is guided step by step by INTELLI+®

- > Choice of closing (on torque or on position)
- > Choice of direction to close
- > Drive the actuator to the closed and the open position and validate the position
- > The setting can be done automatically or manually by choosing the closed or open positions.

• Diagnostic & preventative maintenance

Thanks to its absolute sensors and its microprocessor technology, INTELLI+® continuously monitors its components as well as the actuator status and measures some important valve parameters. INTELLI+® provides users with a great deal of information to help with system diagnostic and aid in scheduling their valves preventative maintenance. INTELLI+® helps maximise process availability by reducing maintenance downtime.

• Detachable thrust unit (for rising stem valves)

The A form is bolted on both actuator and valve flanges. This offers a lot of flexibility and safety at the installation phase as well as for maintenance operations.

• Dec clutch-free handwheel with electric command priority

• Bus continuity

BERNARD CONTROLS actuators can host a special Profibus connexion board which, ensures continuity of signal throughout the line even when the actuator is removed from the field.



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