

Bettis™ Q-Series Pneumatic Actuator and “Fully Integrated” Controls Your First Choice for a Valve Operating System™



BETTIS™


EMERSON™

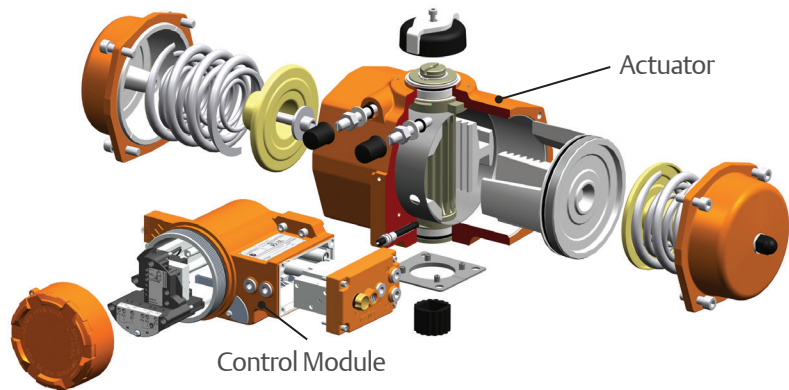
The Industry's Only "Fully Integrated" Pneumatic Valve Operating System™ (VOS)

Bettis™ Q-Series offers a new way of looking at valve automation by combining field-proven rack and pinion pneumatic actuator with the necessary controls in an integrated modular package.

Gone are the non-integrated accessories from multiple vendors, mounting brackets, cumbersome external cabling and tubing that allows you to:

- **Achieve up to 20% reduction** in installation and commissioning time
- **Automate valves with small VOS footprint** offering flexibility for retrofit into existing pipe runs

The bottom line is that with the Bettis Q-Series you can improve installation time, reduce VOS complexity and automate valves in even the tightest of piping configuration.



General Actuator Specifications:

- Proven corrosion protection - 1000-hour accelerated salt spray test per ASTM B117.
- Torque Range – 40 Nm to 1600 Nm in spring-return or double-acting configuration.
- Three nested end cap springs, embedded in a package, offer six different spring torques.
- Valve mounting options in accordance to ISO 5211 offers low-cost and versatile direct mounting to your valve.

General Control Module Specifications:

- **One control module fits all actuators sizes:** No more different switchboxes or solenoids for different sizes of actuators reducing stock levels significantly for spare parts.
- **Built-in Breather function:** The breather function provides corrosion protection of the actuator's spring chambers by preventing dirt or moisture from outside from being sucked into the spring chamber.
- **Manual Control (Override):** Allows local manual operation of the actuator-valve assembly when no control signal is available.
- **Speed Control:** allows to reduce the speed of the opening and closing stroke.
- **Hazardous Area Approvals:** FM, CSA, ATEX and IECEx control module approvals for use in Zone 1, 2, 21 or 22 and Class I Division 2 hazardous areas.

Specifications Control Modules QC41, QC42, QC43

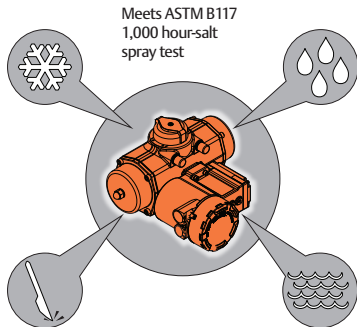
- **A Range of Switch Cartridge Types:** Mechanical, Gold Plated, 2-Wire Proximity (20-250 VAC and 10-300 VDC), 2-Wire NAMUR, 3-Wire Proximity (NPN and PNP).
- **Non-Intrusive Switch Setting:** Screws to set switch points are available on the outside, next to the module cover. Allows switches to be adjusted without removing cover. For explosion proof/flame proof versions it avoids the need for hot-work down time and maintains integrity of explosion proof environment.
- **A Range of Pilot Valve Cartridges:** Pilot valves can be operated with 24VDC (QC41), 115VAC (QC42) or 230VAC (QC43).
- **Pneumatic Amplifier:** Integrated in the control module.
- **Fail in Last Position (FILP) Amplifier:** For double acting actuators to stay in the last commanded position in case of a power or signal failure.

Specifications bus communication Control Modules

- **Fieldbus Foundation™ (QC54):** As part of Emerson's PlantWeb digital plant architecture, Bettis Q-Series uses FOUNDATION™ fieldbus digital communications to provide diagnostic information with PlantWeb and NAMUR alerts. The control module contains process based electronics and includes auto initialization function for easy commissioning.
- **AS-Interface (QC40):** The QC40 Module with ASI bus communication allows up to 62 devices per segment for ASI-2 protocol and comes with easy exchangeable position feedback switch cartridges. Inside LED indicators are available for status, power, open and close information of the module.

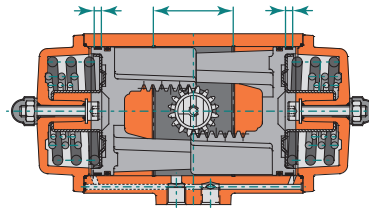


Ensured reliability through innovative product design

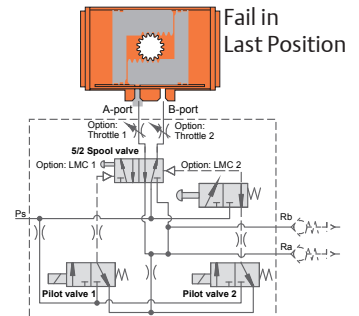


Meets ASTM B117
1,000 hour-salt
spray test

Hard anodized actuator body and module with protective finish protects from corrosive environments.

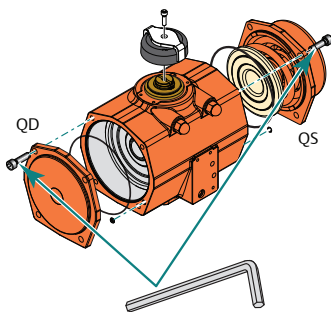


Extended Life - Nylatron® guide band and PTFE piston guide bands provides wear protection between housing and piston for extended service life.

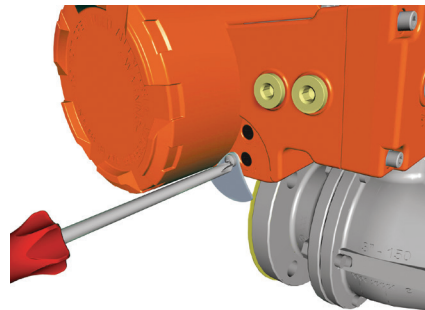


Fail in Last Position (FILP) upon loss of power ensure you hold the last commanded position (for use in double acting actuators).

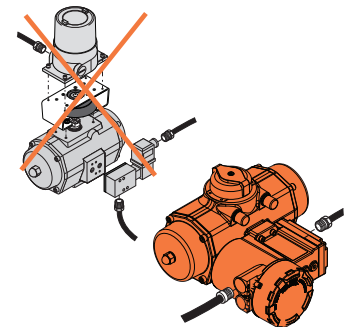
Quick start up benefit from our simplified design



Simple Conversion - With an Allen key wrench, convert double-acting to spring-return configuration.



Non-Intrusive Switch Setting: Avoids the need for hot-work down time and maintains integrity of explosion proof environment.

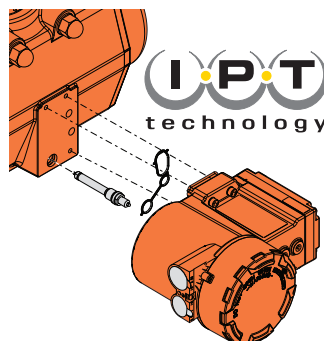


Plug and Play capability reduces the need for mounting brackets, cabling and tubing and adapters.

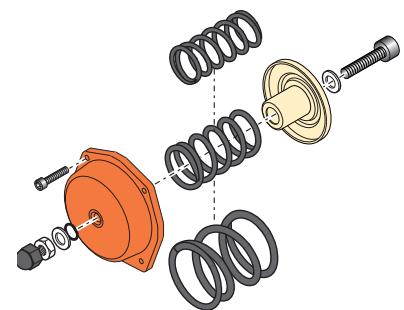
Increased personnel and process safety



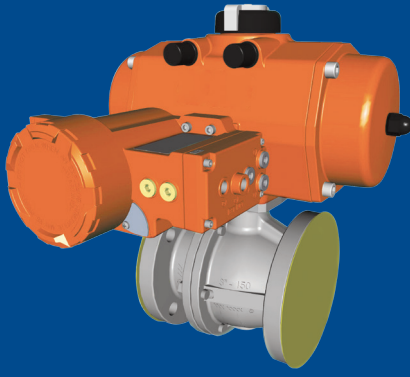
Integrated controls in **explosion proof design module** offers FM, CSA, ATEX, IECEx approvals.



Patented Intelligent Position Tracking allows the integration of controls and feedback into one single product.



Encapsulated spring design provides superior field safety - when removed, springs remain part of the assembly.



The Bettis™ Q-Series Valve Operating System™ (VOS)

stands as a versatile, rugged, and efficient solution. It combines a field-proven rack and pinion pneumatic actuator with controls in an integrated modular package. The Bettis Q-Series solution offers true 'plug and play' capability without mounting brackets, cumbersome external cabling, and tubing.

Patented Intelligent Position Tracking allows the integration of controls and feedback into one single product.

Non-Intrusive Switch Setting: Avoids the need for hot-work down time and maintains integrity of explosion proof environment.



For complete technical and installation documentation scan QR.

www.emerson.com/bettis

This product is only intended for use in large-scale fixed installations excluded from the scope of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 2).

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