

Product data sheet

Sheet No.: 1.601.01 - Rev: B, page 1 of 2

Date: May, 2006

FieldQ

FieldQ Valve Actuator

General Overview

Description

The FieldQ valve actuator consists of three modules, which form an integrated concept for "On/Off" valve automation. These three modules are:

1 Basic actuator

The basic actuator supplies the torque, required to open and close valves and is available in various sizes (rated 47 to 1676Nm at 5.5barg or 413 to 14874 In.lb. at 80psig). Double acting and spring return executions are available. The spring return execution can be equipped with multiple spring sets to cover a pressure range from 2 to 8 barg (30 to 120 psig).

2 Pneumatic Module

The Pneumatic Module is the pneumatic interface between the basic actuator and the Control Module. It contains a booster block which is controlled by a pilot valve in the Control Module. Optionally, the Pneumatic Module can be equipped with integrated Speed Control throttles.

3 Control Module

The Control Modules contain the terminal connections for control and feedback signals, the pilot valve for controlling directly the Pneumatic Module and indirectly the basic actuator.

"Smart" Control Modules have additional electronics and a button board. This button board enables to start the auto-initialization procedure, which automatically sets the feedback switch points.

General specifications:

Construction

Ingress protection rated IP65 / NEMA4X and suitable for indoor and outdoor installation.

Finish

- Housing : Anodized with a polyester non-TGIC based powder coating
- Pistons: Chromitized
- Pinion: Hard anodized

Lubrication

Factory lubricated for the normal life of the actuator.

Temperature

Depends on the utilized Control Module. See applicable data sheets 1.604.xxx.

European Directives:

The basic actuator complies to PED 97/23/EC and to ATEX 94/9/EC and is marked:

II 2 GD c T120°C

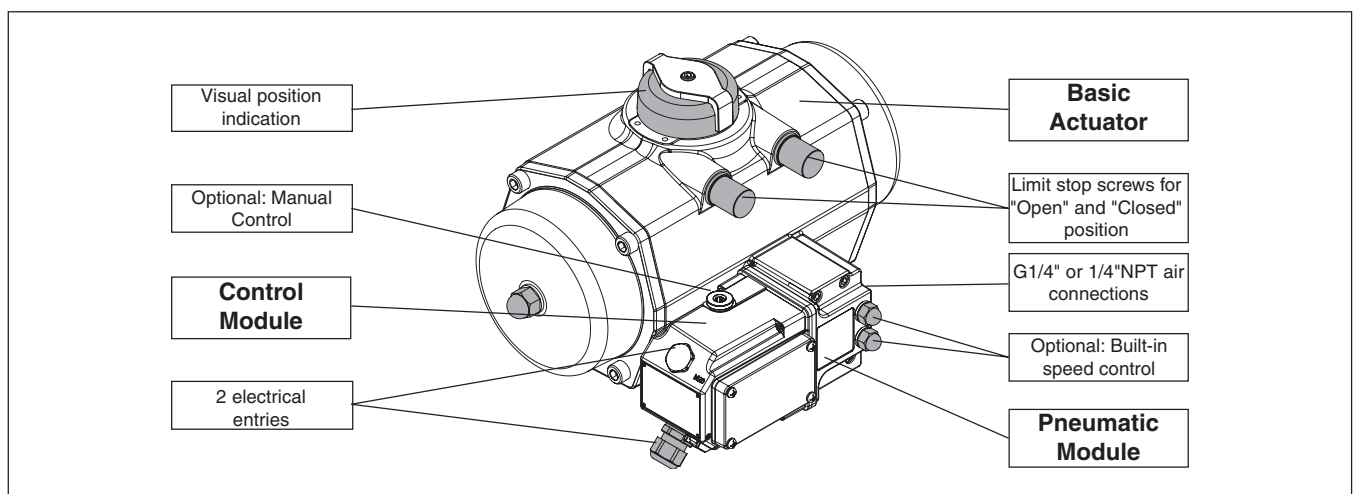
Actuator specifications

Pressure:

- Double acting
 - 2 to 8 barg / 30 to 120 psig
- Spring return
 - with maximum spring set:
 - 6 to 8 barg / 87 to 120psig
 - with reduced spring set:
 - 3 to 8 barg / 43 to 120 psig

Operating media

- Air or inert gasses, filtered at 50 micron. The following Control Modules require air filtered at 5 micron: QC03, QC04 and QC34 (see applicable data sheets 1.604.xx).
- Dew point 10K below operating temperature. For subzero applications take appropriate measures.



www.FieldQ.com

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Product data sheet

Sheet No.: 1.601.01 - Rev: B, page 2 of 2

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General Overview

Torque

- 40 to 1600 Nm. (300 to 11000 In.lb.)
- See sheets 1.602.01, 1.602.02 or 1.602.03.

Rotation

- Factory set at $90^{\circ} \pm 0.5$
Adjustable range: -3° to $+15^{\circ}$ and $+75^{\circ}$ to 93°
- Clockwise fail action, see sheet 1.606.04 for optional fail actions (assembly codes).
- See 1.606.03 for other double acting assembly codes.
- For more info on failure modes see 1.606.02

Cycle life

- 500.000 cycles minimum

Control Modules

Smart modules

- QC01 24VDC,
- QC02 85-254VAC
- QC03 Intrinsically safe
- QC04 Intrinsically safe with NAMUR feedback

Bus communication modules

- QC30 AS-Interface
- QC34 Foundation™ Fieldbus

Options

Manual Control, ATEX, FM or CSA approvals, glands ,plugs and connector plugs

Technical specifications

See sheets 1.604.xx

Pneumatic Modules

Functions :

Double or Single Acting (spring return)

Actuator range :

Suitable for Q40 to Q1600

Enclosure :

IP65 / NEMA4X

Pneumatic connections:

G1/4" or 1/4"NPT

"Breather" function:

Standard for single acting actuators

Options :

Speed control, IP65 / NEMA4X rated exhaust port filters or silencers.

Technical specifications

See sheets 1.605.xx

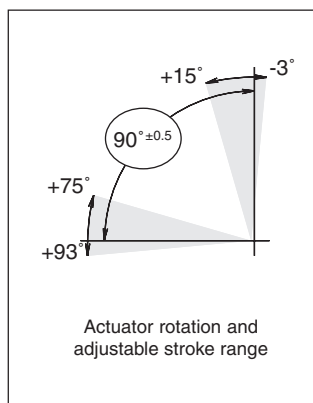
NAMUR plate

The top flange of the FieldQ actuator is standard equipped with a NAMUR (VDE/VDI 3845) drilling pattern.

The addition of a NAMUR plate makes the FieldQ actuator suitable for mounting all kinds of NAMUR compatible control and feedback accessories like solenoids, switch boxes or positioners.

Technical specifications

See sheets 1.605.03



Actuator data		Q40	Q65	Q100	Q150	Q200	Q350	Q600	Q950	Q1600	
Bore	mm.	70	80	91	103	110	145	175	200	230	
	inch	2.76	3.15	3.58	4.06	4.33	5.71	6.89	7.87	9.06	
Stroke	mm.	18.8	22.0	25.1	31.4	37.7	37.7	44.0	50.3	62.8	
	inch	0.74	0.87	0.99	1.24	1.48	1.48	1.73	1.98	2.47	
Weight:	Double acting	kg.	1.8	2.4	3.1	4.5	5.8	10.4	19	26	43
		lb.	4.0	5.3	6.8	9.8	13	23	43	58	94
	Spring return	kg.	2.4	3.6	4.6	6.9	9.1	17	28	39	66
		lb.	5.3	7.9	10	15.1	20	37	61	85	145
Operating time	sec.	0.7	1.1	1.2	1.8	2.3	3.6	4.5	5.4	6.9	
Air consumption per stroke											
at 1 atm (litres)	Central air chamber	0.16	0.33	0.35	0.84	0.8	1.8	2.9	4.7	7.3	
	Endcap air chambers	0.22	0.36	0.49	0.78	1	1.9	3.1	4.9	8.0	
at 1 atm (cu. in.)	Central air chamber	10	20	21	51	49	110	177	287	445	
	Endcap air chambers	13	22	30	48	61	116	189	299	488	



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