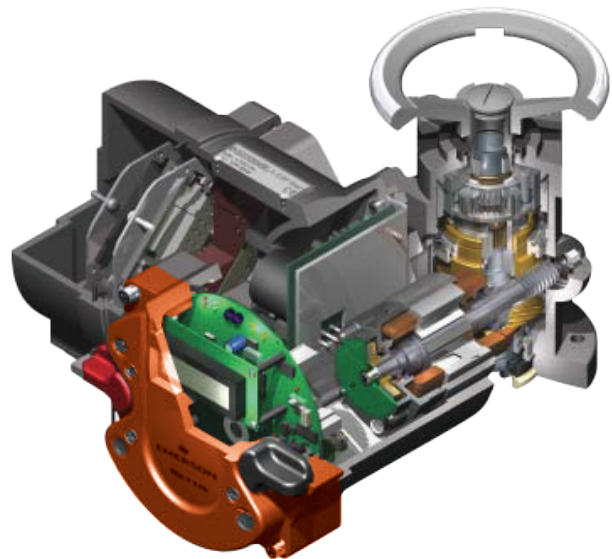
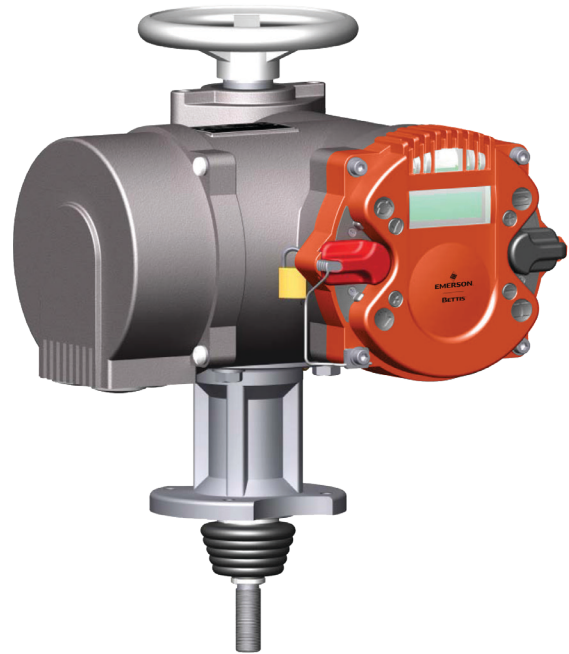


Bettis™ RTS CL Series

Smart Compact Linear Actuator

Main Features

- Compact Linear Series, suitable for actuation of linear valves
- Light weight and delivers torque in a small envelope
- Non-intrusive setup
- On/Off and continuous modulating duty
- Adjustable Speed (0.17 sec – 4.7 sec)
- Independently adjustable soft starts / stops
- Torque measurement for protection and diagnostics
- DC, single phase, three phase power supply options
- Clutchless design handwheel
- Local User Interface with wireless bluetooth control capability for configuration, monitoring, and diagnostics of key parameters
- Data Logger for diagnostics
- User Application available for Android devices
- Process Control via optional onboard PID Controller
- Multilingual user interface



TYPE		CL-05	CL-15	CL-25
Max Thrust (Adjustable)	lbs. (kN)	3327 (15)	3327 (15)	5620 (25)
Max Modulating Force	lbs. (kN)	1798 (8)	1798 (8)	3327 (15)
Adjustable Positioning Speed	mm / sec	0.17 - 4.7	0.17 - 4.7	0.17 - 4.7
Max Stroke Length	inch (mm)	1.96 (50)	3.93 (100)	3.93 (100)
Operation Mode	On/Off duty	S2		
	Modulating duty	S9		
Manual Operation	Automatic declutch for manual operation			
VALVE-MOUNTING				
Flange	F10 (ISO 5210)			
Stem Thread	M16 x 1.5			
Rotation	Stem of linear unit extends with clockwise handwheel rotation			
OPERATING CONDITIONS				
Ingress Protection	IP66, IP67			
Ambient Temperature	-40°C to + 60°C			
HOUSING				
Material	Aluminum			
Enclosure	Weather-proof / Explosion-proof (optional)			
Certification	1ph, 24VD – CSA NEC 500 / NEC505, ATEX, IECEx, LVD 3ph - ATEX		1ph, 24VD – CSA NEC505, ATEX	
Coating	High quality two component polyurethane paint system-C3 ISO12944-5			
Approximate Weight	lbs. (kg)	27.5 (12.5)	36.3 (16.5)	44 (20)
MOTOR				
Isolation Class	Brushless DC Motor			
Power Supply	V	24 - 230 VDC *, Single Phase 115V - 230V +/-10%, Three Phase 380V - 480V +/-10% (*restrictions apply)		
Current Consumption	A	2.25		
Power	W	250		
ACTUATOR CONTROL				
Technology	Integrated processor control unit with frequency-technology for variable speed control			
Control Unit				
Control Elements	<ul style="list-style-type: none"> · Selector switch LOCAL - OFF- REMOTE (lockable) · Control switch OPEN - STOP - CLOSE contact less sensor technology · Language independent symbols 			
Control Functions	<ul style="list-style-type: none"> · Full stroke test · Partial stroke test 			
Local Display	Backlit LCD display, can be rotated in 90 degree increments			
LEDs	Programmable LED's for operation, readiness, warning and error messages			
Communication	Infrared & Bluetooth communication interface for programming and saving operation data			
Control				
Inputs	<ul style="list-style-type: none"> · 5 configurable binary (discrete) control inputs: OPEN - STOP - CLOSE - EMERGENCY OPEN - EMERGENCY CLOSE · Power supply: 24VDC (max 30VDC) - current consumption with 24VDC: typical 5mA · Optically isolated inputs · Analog control 4-20 mA (2 wire) 			
Status Indication				
Outputs	<ul style="list-style-type: none"> · 8 configurable binary output relays for status: READY - OPEN - CLOSE - RUNNING OPEN - RUNNING CLOSE - TORQUE - LOCAL - REMOTE · Power supply 24VDC +/- 6V (per actuator or through control system) · Max allowed current per output: 50mA (short-circuit-proof) · Max allowed current for all outputs with power supplied by actuator: 150mA · Max allowed current for all outputs with power supplied by control system: 250mA · All outputs are optical isolated if power is supplied by control system 			
Voltage Input and Output				
Power Supply - External	<ul style="list-style-type: none"> · Input power range: 20-30VDC max current consumption 320mA or 100mA in current save mode · Status indication also in case of a main power supply failure 			
Power Supply - By Actuator	<ul style="list-style-type: none"> · Output voltage: typical 22V max output current 150mA · Reference ground is the common ground of the control unit and of the analog inputs and outputs 			
Functions				
Standard	<ul style="list-style-type: none"> · Switch-off mode adjustable: travel or torque dependent to valve type · Torque/Force adjustable: 25-100% of max torque/force · 4 intermediate positions between 0 and 100% in both directions parametrizable · Variable Speed operation with adjustable speed profiles independent of direction. Configurable profiles for Local – Remote – ESD scenarios. · PID positioner for 2 input signals 0/4-20mA (setpoint, external actual value) · Writing and reading protection via password · Multilingual display indication: German, English, Czech, Russia and Danish · Status indication of binary inputs and outputs including analog signal values on LCD display · Data logging for analysis and service 			
Electrical Connections				
Cable Entries	3 metric threaded holes for cable glands: Weather-proof 1xM40, 1xM32, 1xM25 / Explosion-proof 1xM40 + 2xM20			
OPTIONS				
Digital Communications	Modbus RTU, ProfiBus, ProfiNet, Foundation FieldBus HART Platforms			
Relay Board	250 VAC, 2A with 4 outputs			
Analog Position Transmitter	0/4-20mA (2-wire)			
Coating	4 layer with Epoxy under coat for increased corrosion protection – C5-I, C5-M ISO12944-5			