

rotork®

Process Controls

Established Leaders in Valve Actuation



Product Overview



Publication J-825 Issue 03/08

PROVIDING WORLDWIDE ACTUATOR SOLUTIONS

With more than 50 years of extensive knowledge and experience, Rotork Process Controls has provided products and services worldwide for virtually every industrial actuator application.

RPC offers four families of electric actuators:

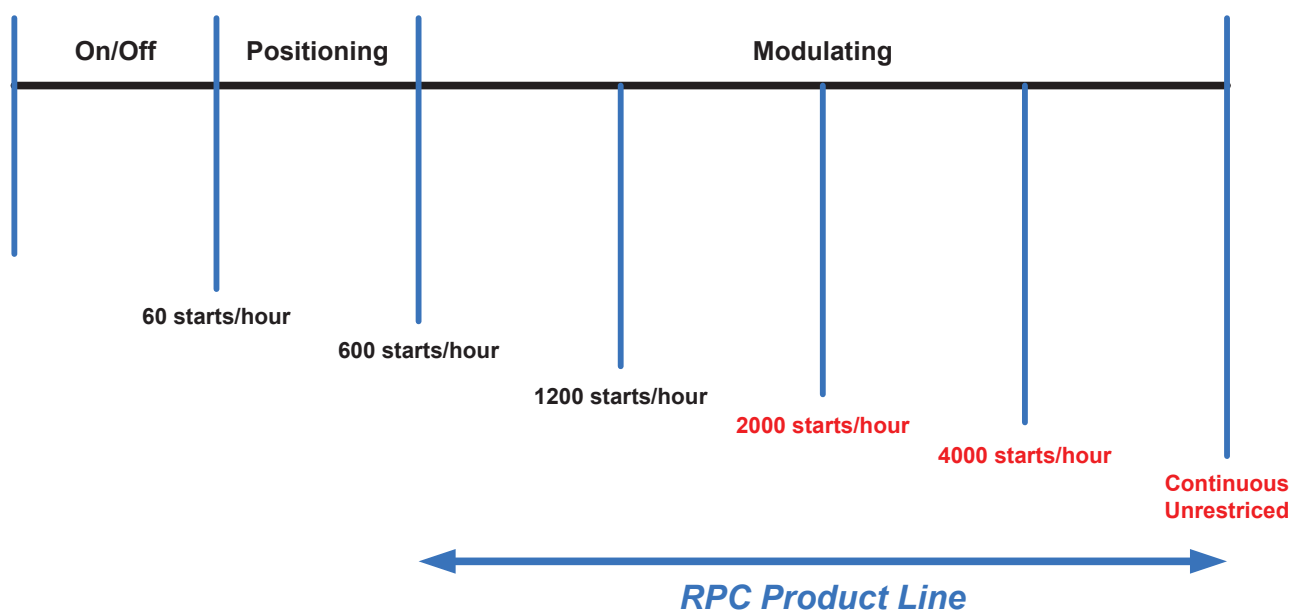
- Rotary Control Valve Actuators
- Linear Control Valve Actuators
- Heavy Duty Rotary Actuators
- Heavy Duty Linear Actuators



MV-1000
Linear Control Valve Actuator



SM-6000
Heavy Duty Rotary Actuator





INDUSTRY-WIDE PROCESS CONTROL ACTUATION

With the unquestionable ruggedness of our actuators, Rotork Process Controls can meet any actuator requirement for any industrial application. Along with this durability comes accuracy and reliability, ensuring the precision necessary for your critical control applications. Our actuators have been used extensively in these industries:

- Cement
- Chemical
- Food & Beverage
- Glass
- Grain
- Mining
- Oil / Gas
- Pharmaceutical
- Power
- Pulp & Paper
- Steel
- Water / Waste Water



SM-1000
Rotary Control Valve Actuator

Control Valves

Flow Control
Level Control
Pressure Control

Dampers

Forced Draft Damper
Induced Fan Damper
Recirculation Damper
Single Over Fired Air Damper

Slide Gates

Solid Material Handling

Custom Actuators

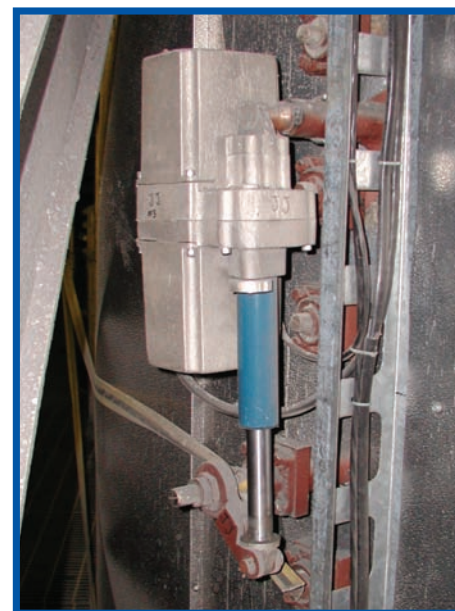
Chemical Dosing
Flow Control



GPSA
"SMART" Linear Control Valve Actuator

Whatever the application, no matter how difficult and demanding the conditions, accuracy and efficiency are essential at all times. With operating temperature up to 225° F (107° C), our actuators are designed and built to perform perfectly under the most exacting requirements.

With a multitude of options, and the ability to tailor solutions to specific requirements, Rotork Process Controls will provide you with the right solution.



LA-2400
Heavy Duty Linear Actuator



LINEAR & ROTARY CONTROL VALVE ACTUATORS

▶ MV-1000 / VA-1000 - Linear

- Thrusts:
MV-1000: Up to 200 lbf. (890 N)
VA-1000: 220 to 900 lbf. (979 to 4003 N)
- Linear Travel:
MV-1000: Up to 1.375 inches (35mm)
VA-1000: Up to 1.5 inches (38.1mm)
- Continuous unrestricted modulating duty
- Manual override standard
- Automatic thrust limiting
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single phase) or DC input power versions
- Temperature range from -40° F to 150° F (-40° C to 65° C)



▶ GPSA™ - Linear

- Thrusts up to 200 lbf. (890 N)
- Up to 1.375 inches (35mm)
- Continuous unrestricted modulating duty
- Integral PI (Proportional & Integral) control
- Adjustable speed
- Output characterization
- Password protection
- Non-intrusive setup and calibration
- Manual override standard
- HART, Profibus & Foundation Fieldbus available
- Automatic thrust limiting
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single phase)
- Temperature range from -4° F to 150° F (-20° C to 65° C)



▶ MV-1500 - Linear

- Thrusts from 300 to 3,000 lbf. (1,334 to 13,345 N)
- Stroke distance from 0.25 to 4 inches (6.4 to 101.6 mm)
- Modulating Duty: 2,000 starts per hour
- Manual override option
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single phase) or DC input power versions
- Temperature range from -40° F to 150° F (-40° C to 65° C)



▶ SM-1100 / SM-1500 - Rotary

- Torques from 3.5 to 400 in. lb. (0.4 to 45.2 Nm)
- Rotation 40 degrees to 60 turns (SM-1100), 72 degrees to 324 turns (SM-1500)
- Modulating Duty: 2,000 starts per hour
- Manual override option
- Self-locking drive system to hold in last position and prevent backdriving up to torque rating
- AC input power (single phase) or DC input power versions
- Temperature range from -40° F to 150° F (-40° C to 65° C)



▶ SM-1000 - Rotary

- Torques up to 350 in. lb. (40 Nm)
- Rotation: 10 degrees to 20 turns
- Continuous unrestricted modulating duty
- Manual override
- Automatic torque limiting
- Self-locking drive system to hold in last position and prevent backdriving up to torque rating
- AC input power (single phase) or DC input power versions
- Temperature range from -40° F to 150° F (-40° C to 65° C)

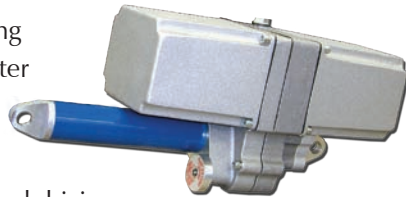




HEAVY DUTY LINEAR & ROTARY ACTUATORS

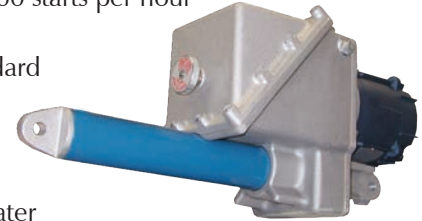
▶ LA-2400 - Linear

- Thrusts from 150 to 1,500 lbf. (667 to 6,672 N)
- Stroke distance from 6 to 24 inches (152 to 610 mm)
- Modulating Duty: 2,000 starts per hour
- Manual override standard
- HART available
- Automatic thrust limiting
- Anti-condensation heater and thermostat
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single and three phase) or DC input power versions
- Temperature range from -40° F to 150° F (-40° C to 65° C)



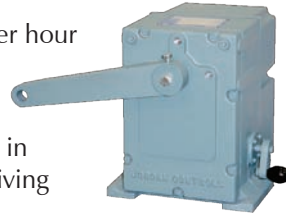
▶ LA-2500 - Linear

- Thrusts from 800 to 1,600 lbf. (3,558 to 7,117 N)
- Stroke distance from 6 to 24 inches (152 to 610 mm)
- Modulating Duty: 2,000 starts per hour indoor/outdoor))
- Manual override standard
- HART available
- Automatic thrust limiting
- Anti-condensation heater and thermostat
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single and three phase)
- Temperature range from -40° F to 150° F (-40° C to 65° C)



▶ SM-1700 - Rotary

- Torques from 50 to 200 ft.lb. (67 to 271 Nm)
- 90 to 120 degrees rotation
- Modulating Duty: 2,000 starts per hour
- Manual override standard
- Automatic torque limiting
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single and three phase) or DC input power versions
- Temperature range from -40° F to 185° F (-40° C to 85° C)



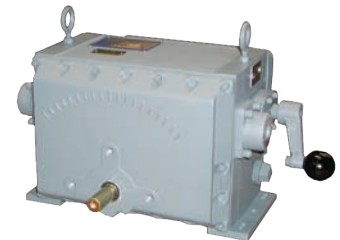
▶ SM-6000 - Rotary

- Torques from 370 to 26,000 ft.lb. (271 to 35,256 Nm)
- 90 to 313 degrees rotation
- Continuous unrestricted modulating duty
- Manual override standard
- HART, Profibus & Foundation Fieldbus available
- Automatic torque limiting
- Self-locking drive system to hold in last position and prevent backdriving up to 125% of torque rating
- AC input power (single and three phase)
- Temperature range from -40° F to 185° F (-40° C to 85° C)



▶ SM-5000 - Rotary

- Torques from 150 to 12,500 ft. lb. (203 to 16950 Nm)
- 33 to 90 degrees rotation
- Modulating Duty: 2,000 starts per hour
- Manual override standard
- Automatic torque limiting
- Self-locking drive system to hold in last position and prevent backdriving up to thrust rating
- AC input power (single and three phase)
- Temperature range from -40° F to 185° F (-40° C to 85° C)





CONTROL VALVE ACTUATORS

LINEAR



Model	Single Phase Voltage	Motor type	DC	Enclosure Certifications	Max. Thrust lbs. (N)	Speed in./sec (mm/sec.) at Maximum	Min. Thrust lbs. (N)	Speed in./sec (mm/sec.) at Minimum	Stroke length inches (mm)	Manual Override	Operating Temp.	Weight lbs. (kg)
MV-1010	120/240	Stepper	Y	IP65 CSA Atex FM	100 (445)	0.05 (1.27)	25 (111)	0.25 (6.35)	1.375 (35)	Yes	-40° F - 150° F -40° C - 65° C	12 (5.44)
MV-1020	120/240	Stepper	Y	IP65 CSA Atex FM	200 (890)	0.13 (3.3)	100 (445)	0.25 (6.35)	1.375 (35)	Yes	-40° F - 150° F -40° C - 65° C	16 (7.25)
GPSA	120/240	Stepper	N	IP65 Atex (Pending) FM(Pending)	200 (890)	0.13 (3.3)	100 (445)	0.25 (6.35)	1.375 (35)	Yes	-4° F - 150° F -20° C - 65° C	16 (7.25)
VA-1020	120/240	stepper	Y	IP65 CSA Atex FM	900 (4003)	0.014 (.35)	220 (978)	0.034 (.86)	1.5 (38.1)	Yes	-40° F - 150° F -40° C - 65° C	24 (10.8)
MV-1500	120/240	1 phase or DC	Special	IP65 CSA	3000 (13345)	0.03 (.76)	300 (1334)	0.09 (2.2)	4 (102)	Option	-40° F - 150° F -40° C - 65° C	40 (18.1)

CSA - Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; CSA Enclosure 4

FM - Class I, Division 1, Groups C & D; Class II/III, Division 1, Groups E, F & G; NEMA Type 4

ATEX - II 2 GD, EEx d IIB T4 (Tamb -40° C to +85° C)

ROTARY



Model	Single Phase Voltage	Motor type	DC	Enclosure Certifications	Max Torque in. lb. (Nm)	Speed RPM at Maximum	Min Torque in. lb. (Nm)	Speed RPM at min torque	Total turns available	Manual Override	Operating Temp.	Weight lbs. (kg)
SM-1100	120/240	Single phase	Y	IP65 CSA	100 (11.3)	1.2	3.5 (0.4)	40	40 deg. to 60 turns	No	-40° F - 150° F -40° C - 65° C	14 (6.35)
SM-1015	120/240	Stepper	Y	IP65 CSA Atex FM	45 (5)	1	15 (1.69)	12.5	10 deg. to 20 turns	Yes	-40° F - 150° F -40° C - 65° C	12 (5.44)
SM-1020	120/240	Stepper (w/gearbox)	Y	IP65 CSA Atex FM	350 (40)	0.7	20 (2.25)	10	10 deg. to 20 turns	Yes	-40° F - 150° F -40° C - 65° C	16 (7.25)
SM-1500	120/240	Single phase & DC brushed	Y	IP65 CSA	400 (45)	15	40 (4.5)	73	72 deg. to 324 turns	Option	-40° F - 150° F -40° C - 65° C	20 (9.07)
SM-1600	120/240	Single phase & DC brushed	Y	IP65 CSA	1000 (113)	2.5	500 (56.5)	5	72 deg. to 324 turns	Option	-40° F - 150° F -40° C - 65° C	22 (9.97)

CSA - Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; CSA Enclosure 4

FM - Class I, Division 1, Groups C & D; Class II/III, Division 1, Groups E, F & G; NEMA Type 4

ATEX - II 2 GD, EEx d IIB T4 (Tamb -40° C to +85° C)





HEAVY DUTY ACTUATORS

LINEAR



Model	Enclosure Certifications	Max Thrust lbs. (N)	Speed inches/sec. (mm/sec.) at Max Thrust	Min Thrust lbs. (N)	Speed inches/sec. (mm/sec.) at Min Thrust	Max. Stroke in. (mm)	Manual Override	Weight lb. (kg)
LA-2410 LA-2415 LA-2450	IP65 CSA	800 (3558)	0.2 (5)	200 (890)	0.7 (17.8)	24 (610)	Yes	40 (18.1)
LA-2420 LA-2490	IP65 CSA	1500 (6672)	0.2 (5)	450 (2002)	0.7 (17.8)	24 (610)	Yes	40 (18.1)
LA-2500	IP65 CSA	1600 (7117)	0.9 (22.8)	800 (3558)	0.9 (22.8)	24 (610)	Yes	105 (47.6)

CSA - Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; CSA Enclosure 4

ROTARY



Model	Enclosure Certifications	Max Torque ft. lbs. (Nm)	Seconds for quarter turn at max. torque	Min Torque ft. lbs. (Nm)	Seconds for quarter turn at min. torque	Max. Rotation Degrees	Manual Override	Weight lb. (kg)
SM-1700	IP65 CSA	200 (271)	60	50 (67)	12	120	Yes	40 (18)
SM-5100	IP65 CSA	300 (406)	29	150 (203)	16	90	Yes	80 (36)
SM-5200	IP65	1000 (1355)	28	600 (813)	28	90	Yes	210 (95)
SM-5300	IP65	3200 (4338)	47	1600 (2169)	23	90	Yes	350 (158)
SM-5400	IP65	12500 (16950)	70	5000 (6779)	40	90	Yes	565 (256)
SM-6000	IP65	370 (501)	10	NA	NA	120	Yes	186 (84)
	IP65	550 (745)	10	NA	NA	120		186 (84)
	IP65	800 (1084)	10	NA	NA	120		204 (92)
	IP65	1400 (1898)	10	NA	NA	120		254 (115)
	IP65	2500 (3390)	10	NA	NA	120		403 (182)
	IP65	4400 (5965)	10	NA	NA	120		613 (278)
	IP65	6200 (8406)	10	NA	NA	120		956 (433)
	IP65	8000 (10846)	12	NA	NA	120		1589 (720)
	IP65	11000 (14914)	18	NA	NA	120		1589 (720)
	IP65	16500 (22371)	26	NA	NA	120		2196 (996)
	IP65	26000 (35251)	42	NA	NA	120		3453 (1566)

CSA - Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; CSA Enclosure 4





Controls

Electric Actuators and Control Systems

Fluid Systems

Fluid Power Actuators and Control Systems

Gears

Gearboxes and Gear Operators

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