

R-Series | **Automate Anything**
valve actuators



Needle valve
U16 series | 1"



Metering valve
NL series | 1/4"

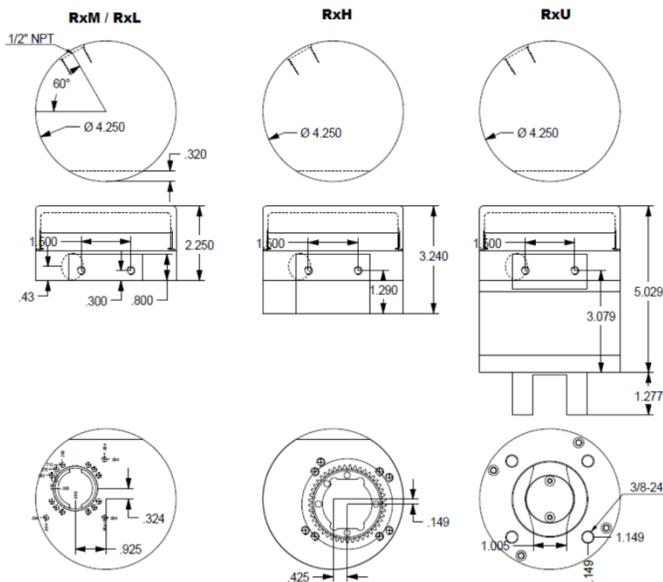


Angle needle valve
V4 series | 1/4"



Medium pressure needle valve
10SM series | 9/16"

Main Dimensions



General Description:

Type Rxx electric / electronic actuator are used to precisely position small valves and devices

Gears: Rxx actuators use sintered, greased for life metal gearing only

Housing: all housing parts are aluminum die cast and are protected by an electrophoresis paint

Bearings: oiled for life porous bronze bearings

External Fasteners: Stainless Steel

Manual Override: optional, mounted directly on the output shaft

Rxx actuators offer a full range of control options:

- Multiturn Analog, Partial Turn Analog
- 1/4 - 1/2 turn TTL

External Gear Stages: Metal Gears for additional reduction:

- RxH 3.75 additional gear ratio
- RxU 15 additional gear ratio

General Specifications:

Rating: NEMA 6 / IP67
IP68 40PSI / 40 deg cel

Enclosure Rex Model: Class I, Div 1 Groups B, C, D / T6
Class II Groups E, F, G / T6 (85 deg cel.)

Temperature range: 0 .. 70 deg Cel (derate duty cycle at high temp.)

Extended temp. range: -40 .. 85 deg Cel [w. Heater option on cold side]

Finish: Anodized white, Stainless

Stall protection: by electronic position and motion detection

Feedback: TTL, 4.20mA

Life Expectance: 250,000 cycles or equivalent under specified conditions

Motor: BLDC brushless DC motor.

Voltages: 12-24 VDC

Positioning precision: +/- 3 deg for 1/4 - 1/2 turn models

+/- 0.25 deg for multi turn

Positioning resolution: +/- 0.15 deg max. adjusting to electronic signal resolution of 12 bit additional signal filters available

Range setting: dip switches inside enclosure

Speed setting: dip switches inside enclosure

End of travel detection: for needle valve closing, by motion detection

Power setting: adjustable to protect delicate needle valves on closing operation

Position detection: Hall detectors

Motor control: Electronic, full computer control

Mechanical shock: 1 m drop test no damage to function Random SAE J1211, Chassis, Exterior

Mechanical vibration: Random SAE J1211, Chassis, Exterior

Thermal Shock: -20 deg cel to + 70 deg cel 10 min

Failsafe spring return: Available for specific internal propane valves and other selected applications

Failsafe battery: LiPo rechargeable battery, will position the actuator, including multi turn versions to predetermined open or closed or any other desired position. This is an emergency failsafe function only. DO NOT USE to position valve by design.

Performance: Rxx Multi-turn models:

Model	Torque Range [in-lbs]	Speed range [time for 1 turn]
RCJ	2 .. 20	1 .. 5 sec
RCL	18.. 60	1 .. 5 sec
RCM	44 .. 132	3 .. 9 sec
RCH	88.5 .. 400	15.. 60 sec

Performance: Rxx 1/4 and 1/2 turn models:

Model	Torque Range [in-lbs]	Speed range [time for 1/4 turn]
RDM	44 .. 132	0.75 .. 2.5 sec
RDH	88.5.. 400	3 .. 9 sec
RDU	110 .. 1200	11 .. 38 sec

Note: the speed and torque depend on the settings by dip switch of the actuator, selectable by user. Consult user manuals of individual units.

* De-rate the duty cycle to 25% for the highest torque values

Other Specifications Multi-turn Models:

Isolated Signals: optical isolation 1000V min.
[AI and AF models only]

Feedback 4..20mA: for sensing resistor of max. 250 ohms. Floats
[AF model only] +6VDC / -2VDC from power Gnd

Position on power loss: - Standard, "remembers" the position it was in before shut n down.
- will reseat the valve based on torque setting when the signal is between 3 and 4 mA

Other Specifications 1/4 and 1/2 turn Models:

TTL Signals in: internal pull up, <1mA required to pull down

TTL signals out (Feedback): will drive max 2.5mA