rotork®

Process Controls

GPSA™ Range - Process Control Actuators

The GPSA Range provides a radically enriched control actuator, with extensive Human Machine Interface (HMI) capabilities, while providing an explosionproof package.

To date process systems have needed additional control panels, cabling and extensive installation to provide a complete system.

With GPSA it is all provided in one, integral package. A two line, 16-character display and non-intrusive rotary switches comprise the actuator's HMI. This provides a user access for viewing and modifying parameters and data feedback.

A feedback signal is provided via a 4-20 mA transmitter. Additional IO is also available in the standard package.

- High reliability for peace of mind and low cost of ownership
- Mountable in any position to adapt to environment without additional costs
- Diagnostics for trouble free performance
- Rugged construction for lasting reliability in the toughest conditions

Features

- Manual & electrical local controls
- Non-intrusive setup
- Integral process controller
- Local position and diagnostics display

HART COMMUNICATION PROTOCOL

FOUNDATION™

PROFIBUS PROCESS FIELD BUS

GPSA Range

GPSA Range - Process Control Actuators

Redefining Flow Control

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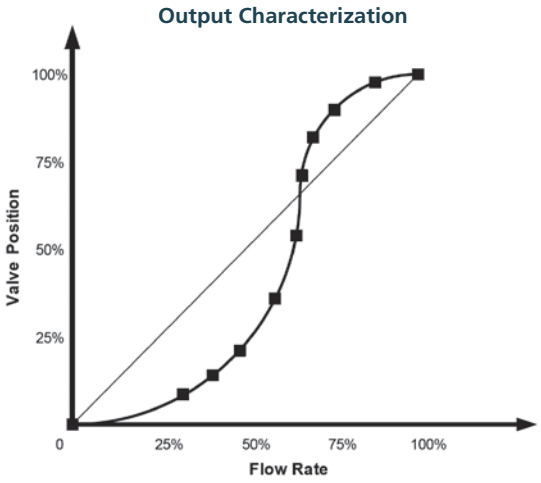
Process Controls

Cost Saving by Elimination

By integrating the local controls and process controller into the body of the GPSA, Rotork has eliminated two major cost items as well as reducing conduit, wire, termination and labour costs.

Programable output characterization to compensate for valve characteristics.



Significant Cost Savings

- Eliminate pushbutton station HMI
- Eliminate PLC
- Eliminate housings
- Reduce terminations and conduit
- Reduce space envelope
- Improve installation, start-up time and cost
- Enhanced maintenance and diagnostics

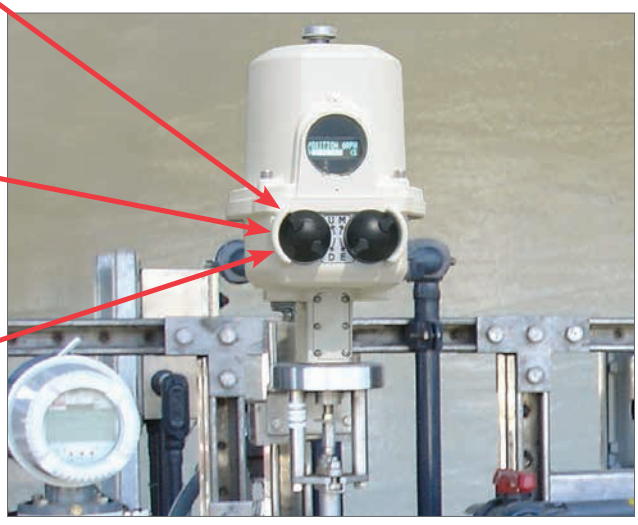
Specifications

- **Linear:** Stroke distance up to 1.375" (35 mm)
- **Linear:** Thrust range up to 200 lbf (890 N)
- **Rotary:** Torque range up to 350 lbf.in (40 Nm)
- 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 torque and thrust limiting
- Self-locking drive system to hold in last position and prevent backdriving up to thrust or torque rating
- AC input power (120/240 Single-Phase)
- Temperature range from -4 to 150 °F (-20 to 65 °C)

Manual pushbutton station

Actuator

Process controller



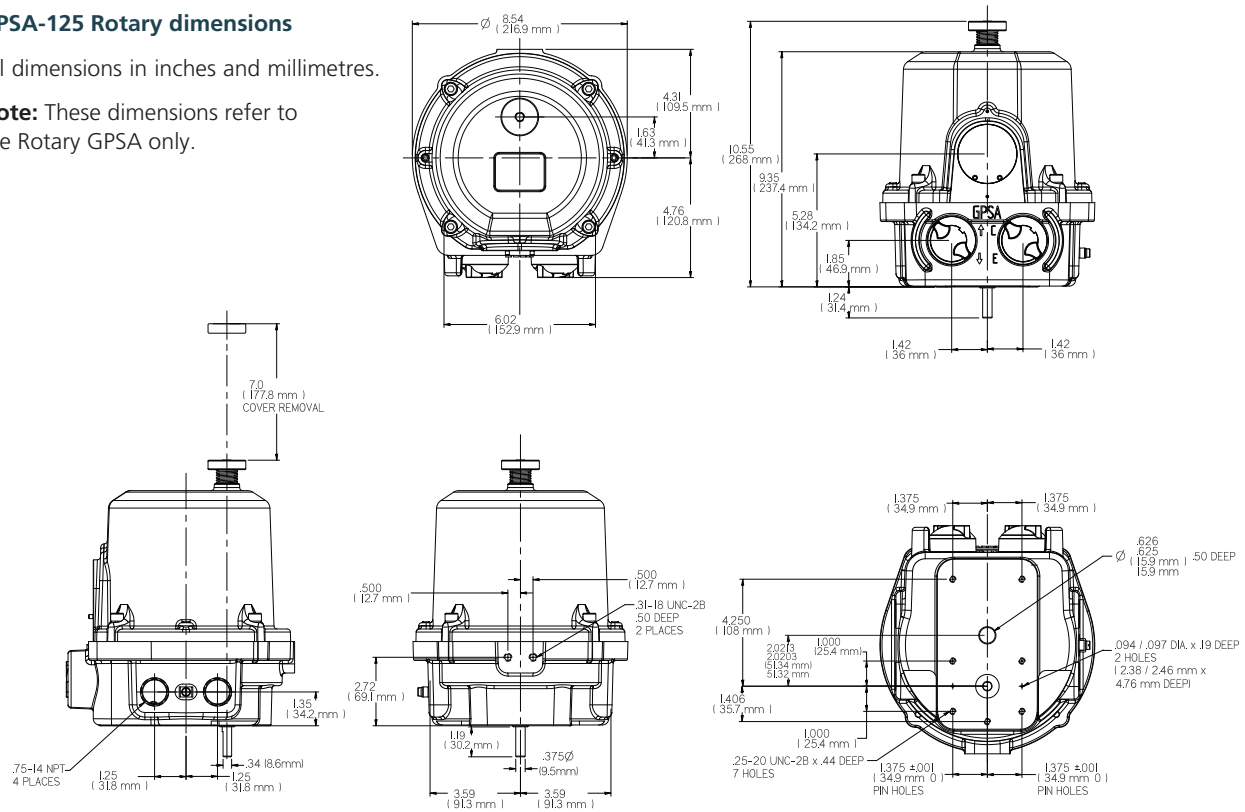
GPSA actuator

Redefining Flow Control

GPSA-125 Rotary dimensions

All dimensions in inches and millimetres.

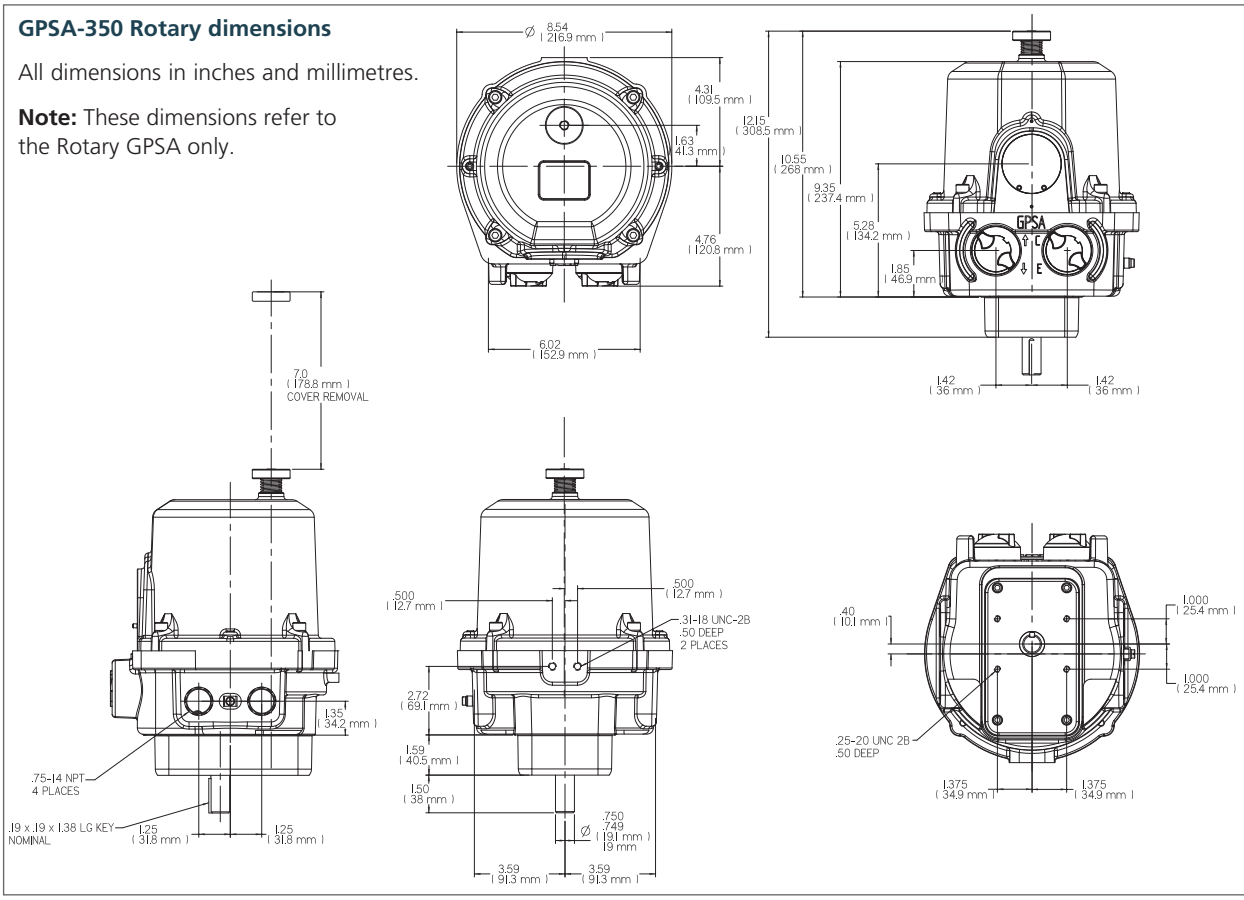
Note: These dimensions refer to the Rotary GPSA only.



GPSA-350 Rotary dimensions

All dimensions in inches and millimetres.

Note: These dimensions refer to the Rotary GPSA only.



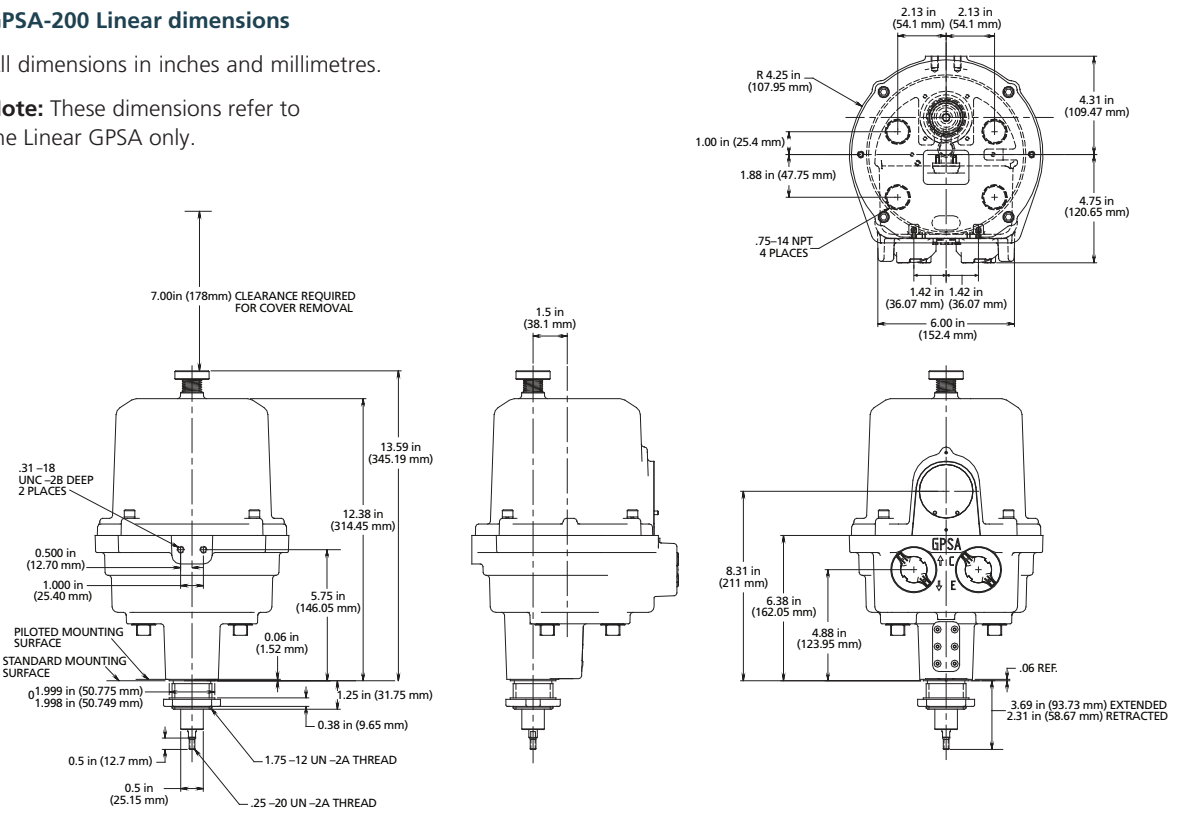
GPSA Range

GPSA Range - Process Control Actuators

GPSA-200 Linear dimensions

All dimensions in inches and millimetres.

Note: These dimensions refer to the Linear GPSA only.



These dimensions are subject to change without notice and should not be used for preparation of drawings or fabrication of installation mounting. For current installation manuals and other product information, see www.rotork.com

Specifications

Model	Single Phase Voltage	Motor Type	DC	Enclosure Certification	Max Force/ Torque	Min Force/ Torque	Speed	Stroke Length/ Rotation	Manual Override	Operating Temp.	Weight
GPSA-125 Rotary	120/240	Stepper	Y	IP65; ATEX; FM	125 lbf.in (14.1 Nm)	85 lbf.in (10 Nm)	3 RPM	20 turns	Yes	-4 to 150 °F (-20 to 65 °C)	16 lbs. (7.25 kg)
GPSA-350 Rotary	120/240	Stepper	Y	IP65; ATEX; FM	350 lbf.in (40 Nm)	85 lbf.in (10 Nm)	0.6 RPM	4.25 turns	Yes	-4 to 150 °F (-20 to 65 °C)	16 lbs. (7.25 kg)

Model	Single Phase Voltage	Motor Type	DC	Enclosure Certification	Max Force/ Torque	Min Force/ Torque	Speed	Stroke Length/ Rotation	Manual Override	Operating Temp.	Weight
GPSA-200 Linear	120/240	Stepper	Y	IP65; ATEX; FM	200 lbf. (890 N)	100 lbf. (445 N)	0.25"/sec (6.35 mm/sec)	1.375" (35 mm)	Yes	-4 to 150 °F (-20 to 65 °C)	16 lbs. (7.25 kg)

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GPSA Description

The GPSA actuator range provides integrated actuation control all in one, compact package. A two line, 16-character VFD display and non-intrusive rotary switches comprise the actuator's HMI. This provides a user access for viewing and modifying parameters and data feedback. The actuator is simple to install, requiring no additional control panels or cabling, all in the safety of an explosionproof enclosure.

A feedback signal is provided via a 4-20 mA transmitter. Additional IO is also available in the standard package.

- High reliability for peace of mind and low cost of ownership
- Mountable in any position to adapt to environment without additional costs
- Diagnostics for trouble free performance
- Rugged construction for lasting reliability in the toughest conditions

Features

- Non-intrusive setup and calibration
- Integral process controller
- Manual & electrical local controls
- Local position & diagnostics display
- Local controls
- Manaul override
- Diagnostics
- Continuous modulation
- Output characterization
- Input signal dampening
- Configuration storage
- Configurable set point source
- Explosionproof
- Single-phase
- Configurable output relays
- Alarms
- Input contacts
- Password protection
- Multiple language support

HART® COMMUNICATION PROTOCOL

FOUNDATION™

PROFI® PROCESS FIELD BUS BUS

Enriched Process Control

The linear and rotary GPSA series are high precision process control actuators.

The linear GPSA actuator is capable of producing 200 lbs of force over its 1.38 inch stroke length at a speed of up to 0.13 inches per second. At a speed of 0.25 inches per second the unit is capable of producing 100 pounds of thrust.

The rotary GPSA actuator is capable of upto 350 in.lbs. of torque at 0.7 rpm. At a torque of 85 in.lbs. the unit operates at a speed of 3.15 rpm. The units can be set from 10 degrees to 20 turns.

It can utilise up to three input signals, independently configurable as either current (4-20 mA) or voltage (1-5 V) for control. Two dry contact inputs are available and may be configured to operate as Normally Open (NO) or Normally Closed (NC). The actuator provides three output relays which are configurable as to their trigger and to act as NO or NC. A position feedback signal is provided via a 4-20 mA transmitter.

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GPSA Range

GPSA Range - Process Control Actuators

Rotork is a global leader in valve actuation technology. We provide a comprehensive range of valve actuators, controls and associated equipment, as well as a variety of valve actuator services including commissioning, preventive maintenance and retrofit solutions. Rotork Process Controls specializes in the design, production and support of process control actuators. We are committed to providing the marketplace with the latest technology, consistently high quality, innovative designs, outstanding reliability and superior performance.

Rotork Process Controls a dedicated engineering group for applications, product improvements and new product development. This enables the benefits of Rotork's actuation technology to be applied to the most challenging process control problems.

The Process Controls group is able to meet the specialized control needs of our customers in all industrial areas and for all applications. Our actuators are used in chemical, power, municipal water and wastewater plants as well as on oil and gas upstream and downstream applications.

With over fifty years of engineering and manufacturing expertise, we have tens of thousands of successful valve actuator installations throughout the world.

A full listing of our worldwide sales and service network is available on our website.

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Controls
Electric Actuators and Control Systems

Fluid Systems
Fluid Power Actuators and Control Systems

Gears
Gearboxes and Gear Operators

Instruments
Precision Control Instruments

Site Services
Projects, Services and Retrofit

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