

VAC

VALVE ACCESSORIES & CONTROLS



V100
POSITIONER

VAC V100 SERIES POSITIONER
SIMPLE • DURABLE • RELIABLE

WWW.VACACCESSORIES.COM
205-678-0507

The V100 Positioner



FLEXIBILITY

One housing for pneumatic or electropneumatic.

Standard F05 mounting with interchangeable spindle drives.

Multiple mounting capability

Standard indicator allows for air to open or air to close operation—raised indicator available

THE MODULARITY OF THE V100 POSITIONER

The V100 incorporates the flexibility of converting from a pneumatic unit to several versions of an electropneumatic unit in a matter of minutes, without removing the unit from the mounted valve package. You can add gauges, a feedback module, or a raised indicator, at any time....in just a matter of minutes. Of course, you can also order them configured in any of these models and then change or remove components in the field as needed. Maximum modularity equals maximum flexibility. And with a simple design and quality components, the performance is maximum as well.



Unique electrical compartment, fitted with an o-ring, is pressure sealed by the cover

V100 OPTIONS



V100E



V100E-0/10 Volt Unit



V100EX Explosion Proof Unit



V100EX-GA Gas Approved Unit



V100 Nickel Coated



V100 Tuftram® Coated

V100 BENEFITS

- Compact Design
- Quality components = rugged and accurate performance
- Screw driver slots in the span and zero ferrules, along with external zero adjustment, helps make calibrating the positioner simple
- Easily maintain all key components
- Clear, visible indicator with arrow indicator standard-beacon optional
- Field changeable to any I/P option



V100EX with Third Party EX Switch

Technical Specifications:

	Pneumatic V100P	Electropneumatic V100E & IS	EX ABB V100EX	Fairchild V100E-0/10V
Input Signal	3-15 PSI	4-20mA	4-20mA	0-10 VDC
Supply Pressure	145 PSI	145 PSI	145 PSI	120 PSI
Linearity error	<0.7%f.s.	<1.0%f.s.	<1.0%f.s.	<1.0%f.s.
Hysteresis	<0.4%f.s.	<0.6%f.s.	<0.6%f.s.	<0.6%f.s.
Repeatability	<0.3%f.s.	<0.5%f.s.	<0.5%f.s.	<0.5%f.s.
Temperature range	-40° to 185°F (-40° to 85°C)	-40° to 185°F (-40° to 85°C)	-40° to 180°F (-40 to 82°C)	-40° to 160°F (-40° to 71°C)
Weight	3.5 lbs	3.8 lbs.	4.9 lbs	4.6 lbs

Above based on Standard Gain pilot

Spool/Pilot Valves	Low Bleed/Low Gain	Standard	High Gain
Air Delivery @87 (600kPa)	25.5 scfm	28.3 scfm	28.3 scfm
Bleed Rate @87PSI (600kPa)	.4 scfm	.53 scfm	.70 scfm
Pressure Gain	300:1	750:1	1000:1

Air connections	¼" NPT	¼" NPT	¼" NPT	¼" NPT
Gauges	1/8" NPT	1/8" NPT	1/8" NPT	1/8" NPT
Cable Entry	½" NPT	½" NPT	½" NPT	½" NPT
Ingress & corrosion protection	NEMA 4X / IP66	NEMA 4X / IP66	NEMA 4X / IP65	NEMA 4X / IP65
Standard coating	Polyester (Standard)			
Optional coating	Tufram®	Nickel		

Feedback (not rated for EX or IS)

General Purpose

Mechanical Switches:

Type:	SPDT-Co Form C, (V3)
Load:	Resistive (Inductive)
	max 10 A (3) 125/250 VAC
	max 0.25 A (0.04) 230 VDC
	max 0.5A (0.1) 115 VDC
	max 6 A (4) 30 VDC
	max 8.5 A(5) 14 VDC
	max 11 A (6) 8 VDC

Reed Switches:

Type:	SPDT-CO Form C, Form C
Contact rating:	max 5W or 5VA @ 30 VDC/VAC 0.16 A
Voltage:	Switching max 175 VDC
	Breakdown min 200 VDC
	Current Switching max 0.25 A
	Carry max 1.5 A
Contact resistance:	0.2 Ohms
Contact capacitance:	0.3 pF
Mechanical and electrical life:	over 100 million operations

4/20 mA Position Feedback:

Voltage supply:	10-30 VDC
Output	4-20 mA, 2 wire
Loop Impedance:	700 ohms.
Max linearity error:	<1.5%
Hysteresis	<0.3%
Temp. sensitivity	< 0.1%/10°F (5.5°C)

Approvals—I/p Only

Ratings for hazardous locations:

Explosion Proof CL I, II Div 1 Grp B-G

Non Incendive

FM CL I Div 2 Grp A-C

Intrinsically Safe

FM CL I-II-III Div 1 Grp A-G

CSA CL II Div 1&2 Grp E-G

CL III

ATEX-explosion protection

1487X, intrinsically safe EEx ia

IIC T4/T5/T6 E121X, flameproof

EEx d IIC T4/T5/T6

Temperature Class

Short circuit

Current-max Ambient Temp max

T6 50 mA 140 °F (60 °C)

T5 60 mA 158 °F (70 °C)

T4 60 mA 185 °F (85 °C)

V100-IS (Intrinsically Safe)

ATEX

EEx ia IIC T4/T6

FM

CL I Div 1 Grp A B C D

CSA

EX ia CL I Grp A B C D

EX ia CL I Div 2 Grp A B C D



Ordering Codes

Positioner Ordering Codes

Pneumatic	V100P
Electropneumatic	V100E
Explosion Proof	V100EX
Intrinsically Safe	V100E-IS
Fail Freeze	V100E-FF

Spindle: D1 Namur (standard)

For additional spindle options, please contact VAC or visit our website at www.vacaccessories.com

Front Cover:

90 degree rotation	90
60 degree rotation	60
45 degree rotation	45
30 degree rotation	30
Blank scale	00
90 ° Reverse Cover	90R

Indicator Arrow:

Standard Beacon/Raised (Black/Yellow)	A
Optional Beacon/Raised (Red/Green)	BRG

Cam: C1 90° standard

For additional cam options, please contact VAC or visit our website at www.vacaccessories.com

Spool Valve Options:

Standard	SG	shipped as standard
Low Gain	LG	
High Gain	HG	

Options:

0/10 Volt I/P (V100E only)	0/10V
Gas Approved Positioner	GA
ATEX Approved Positioner	ATEX
Tufram® Coating (V100 P and E only)	TUF
Nickel Coating (V100 P and E only)	NIC
24 PSI Spring	6-30

Example:

V100E-D1-90-B-C1

Electropneumatic with namur spindle, 90 degree cover, raised indicator, 90 degree cam

Feedback Products Ordering Codes

R100 Series (Not Rated for EX or IS)

R100	Mounts directly to positioner
R300	Mounts directly to actuator; called "stand alone"

Switches

2 SPDT mechanical	M
2 SPDT reed/proximity	R

Feedback transmitters

4/20 mA	mA
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Front Cover (R300 only)

90 degree rotation	90
60 degree rotation	60
45 degree rotation	45
30 degree rotation	30
Blank scale	00

Indicator (R300 only)

Arrow	A
Standard Beacon/Raised (Black & Yellow)	B
Optional Beacon/Raised (Red & Green)	BRG

Spindle (R300 only)

See spindle section/dimensional drawing	DX
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Examples: R100-M-mA	Feedback with mechanical switches and 4-20mA transmitter
R300-mA-90-B-D1	Stand alone feedback with 4-20 transmitter, raised indicator and namur spindle.

V100 Options/Features



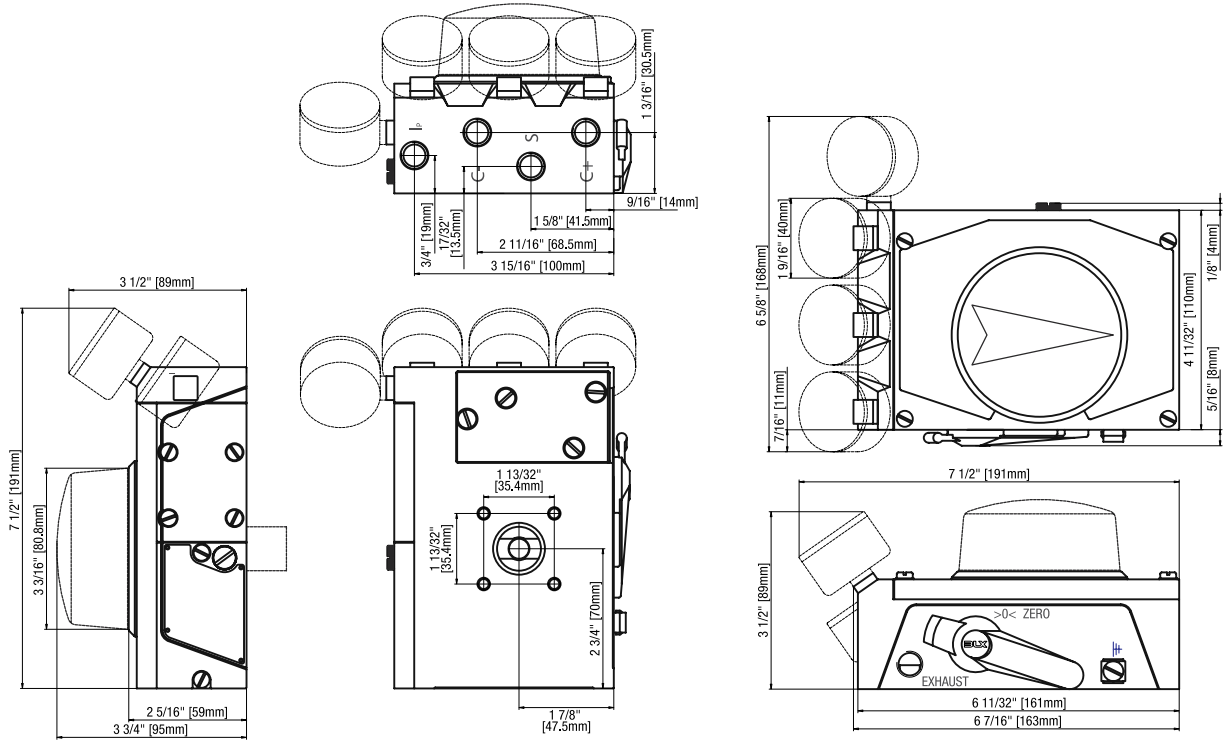
Options

Special cams, range springs, various NEMA ratings, and feedback capability are components of the V100 positioner package.

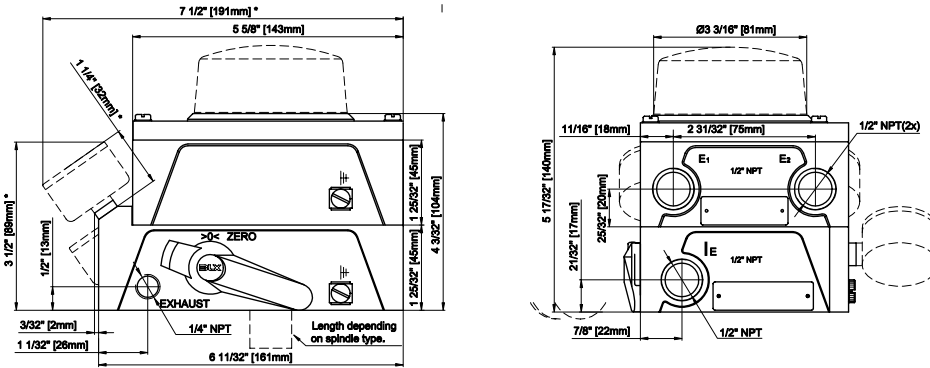
Simple Calibration

With the less interactive span and zero adjustment, and the external zero adjustment, calibration is simple and time saving.

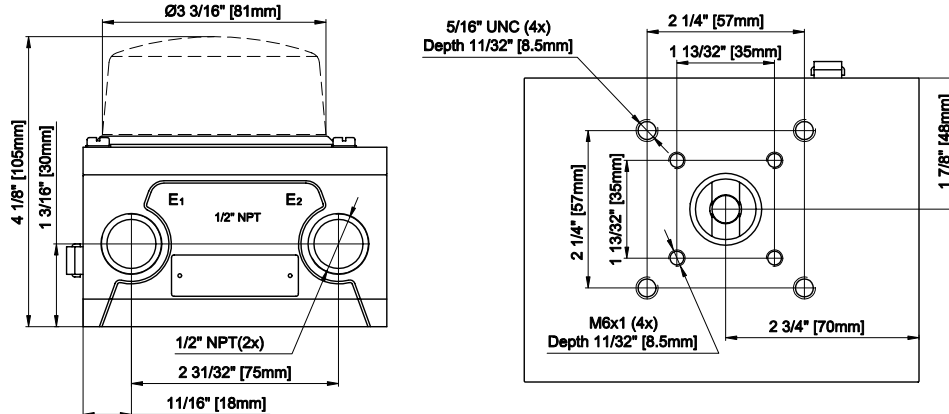
V100 P, E, IS, NIC, and TUF



R100

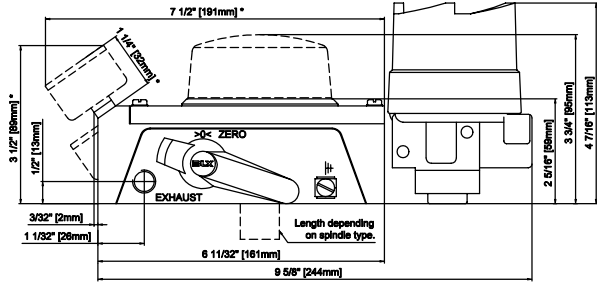
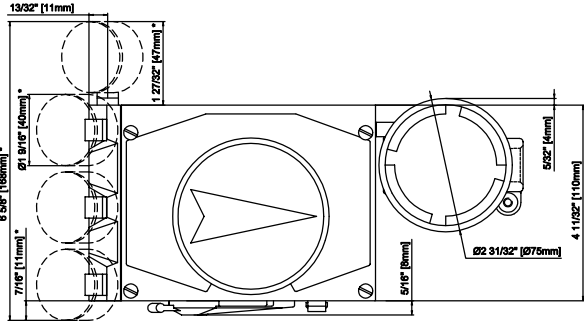


R300

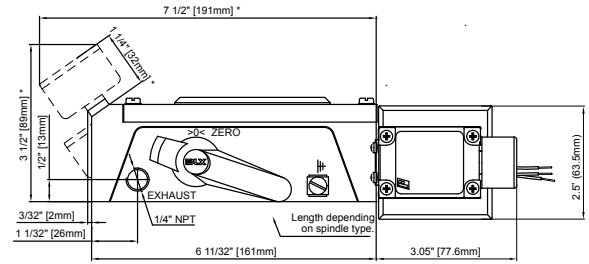
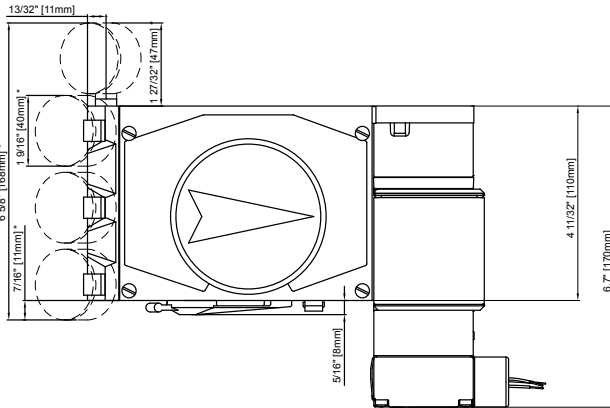


NOTE: mm appear in parentheses

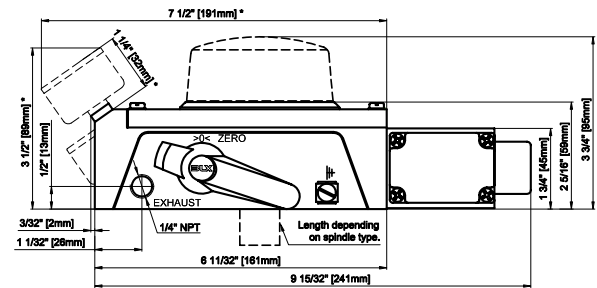
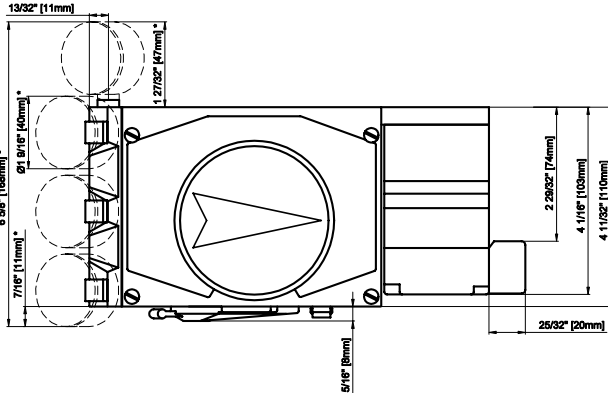
V100EX



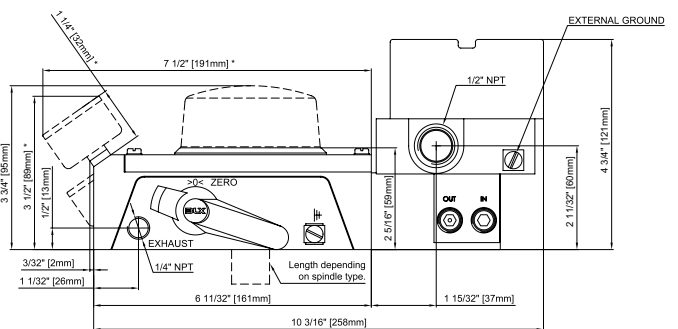
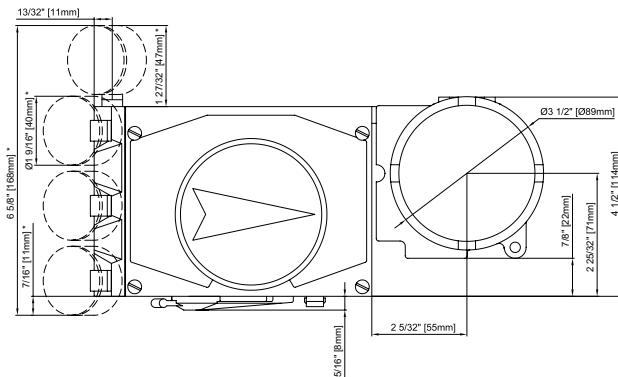
V100E-FF



V100E 0-10V



V100EX-GA



NOTE: mm appear in parentheses



Marketed by VAC (Valve Accessories & Controls), the V100 positioner line is supported by a knowledgeable and professional staff. Customer service is a key component to the VAC package. Local inventories and technical assistance are just a phone call away.

The V100 package of products is a complete line of pneumatic and electropneumatic positioners with a variety of I/P modules and coatings to meet a wide range of product applications. The stackable feedback module (R100) makes adding position feedback very simple. The die cast aluminum housing is rugged and the quality components make this product suitable for both accurate rotary control and linear applications.



VAC Positioner Accessories

These and many other accessories are available from stock and help provide improved product performance and product visibility.



Mounting Kits

VAC offers mounting kits (from stock) for a variety of actuators, making standardization through retrofitting existing packages with the V100 positioner simple. If we don't have the kit in stock, we will make every effort to service the application with special mounting.



Gauges

VAC gauges (in stock) are frequently used to help calibrate, monitor, or troubleshoot a field performance issue.



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