

# Actuator Assembly

## Type PA35 Multi-Spring Pneumatic Actuator

### DESCRIPTION

The PA35 actuator is a 35 square-inch pneumatic, multi-spring diaphragm actuator designed specifically to fit the RCV product line. The actuator can be used with a wide range of valve solutions from larger process valves to high pressure applications. The actuator is field reversible (without additional parts) allowing flexibility within the field. This actuator is available air-to-open or air-to-close. The actuator comes with either 3 springs for a 3...15 psi signal range or 6 springs for a 6...30 psi signal range. Both ranges are adjustable to match bench loading with the requirements for your application. The yoke and the actuator housings are made of carbon steel and coated with epoxy for corrosion resistance.

### FUNCTION

The PA35 actuator normally operates in response to a 3...15 psi change in instrument signal, or a 12 psi range. The 3...15 psi spring set is adjustable to 8...20 psi and the 6...30 psi spring set is adjustable to 16...40 psi to allow the user a wide range for shut off capability. This signal range causes the valve to stroke a distance of approximately 9/16...1 inch, depending on the associated RCV valve.

### SPECIFICATIONS

<b>Effective Area</b>	35 in. <sup>2</sup> (225 sq cm)
<b>Stroke</b>	9/16", 3/4", 1"
<b>Spring (Bench) Loading</b>	Adjustable (select ranges available)
<b>Action</b>	ATO or ATC (reversible without additional parts)
<b>Accessory Mounting</b>	IEC534 (Namur)
<b>Max. Operating Pressure</b>	60 psig @ 70° F (4 bar @ 21° C)
<b>Max. Diaphragm Pressure</b>	90 psig @ 70° F (6 bar @ 21° C)
<b>Upper Ambient Temperature Limit</b>	160° F (71° C) @ 30 psig
<b>Lower Ambient Temperature Limit</b>	-20° F (-29° C) @ 30 psig
<b>Signal Range</b>	Standard 3...15 psig (Others available)

### MATERIALS

<b>Pressure Cases and Yoke</b>	Steel/powder coated
<b>Diaphragm Material</b>	Nitrile/polyester
<b>Spring Material</b>	17-7Ph SST
<b>Stem Seal</b>	ELF Buna O-ring
<b>Stem Guide Bushings</b>	Filled composite bearing material
<b>Hardware Material</b>	300 SST
<b>Travel Indication</b>	Adjustable, nylon safety pointer



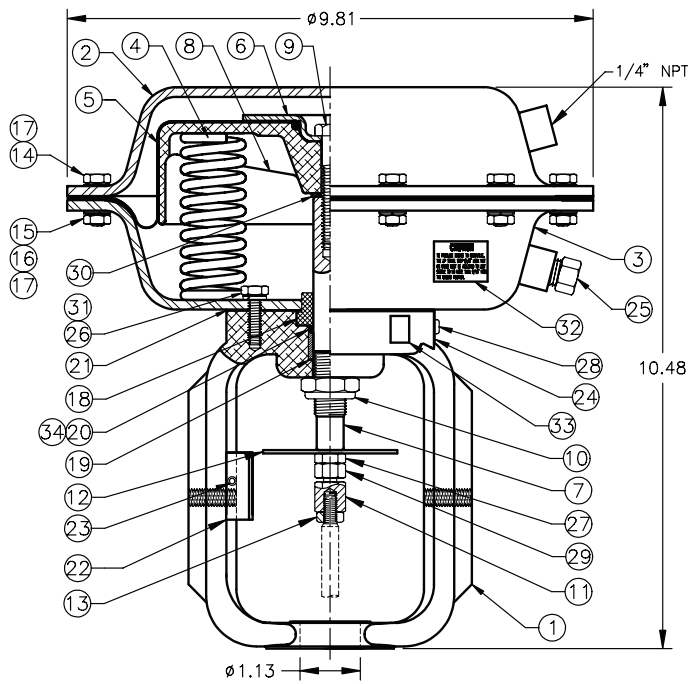
### STANDARD FEATURES

- Reversible in field (without additional parts)
- Heavy duty construction
- Stainless steel external hardware
- Powder coated for increased corrosion resistance
- Simple design for easy maintenance

### OPTIONAL FEATURES

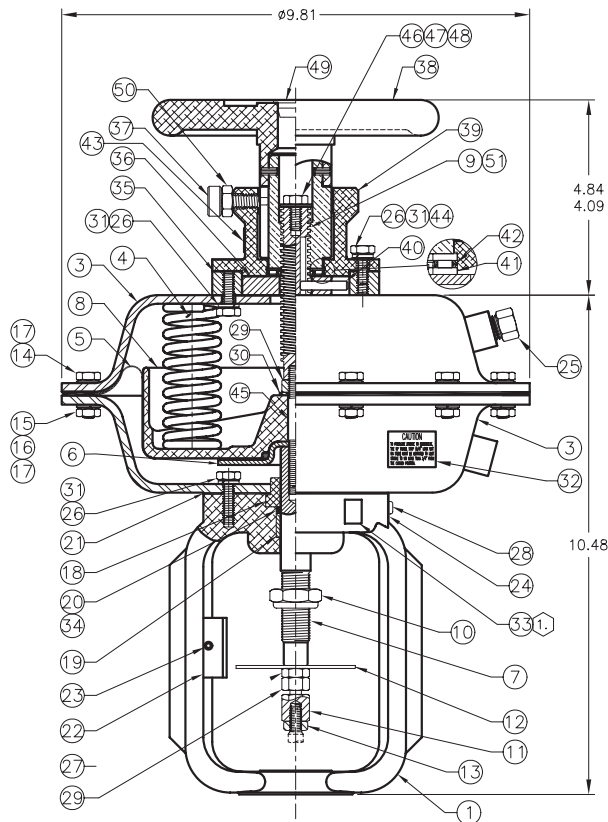
- Signal range options: 3-27#, 6-30#
- Stainless steel housing and yoke
- Electroless nickel-plated housing and yoke
- Diaphragm: Buna N and nylon
- Manual handwheel for operation without air; can be used as a travel stop

## STANDARD MODEL



- |                     |                   |
|---------------------|-------------------|
| 1. Yoke             | 18. Upper Bushing |
| 2. Spring Case      | 19. Lower Bushing |
| 3. Pressure Case    | 20. O-Ring        |
| 4. Spring           | 21. Yoke Gasket   |
| 5. Diaphragm        | 22. Travel Scale  |
| 6. Retainer         | 23. Set Screw     |
| 7. Stem             | 24. Nameplate     |
| 8. Piston           | 25. Vent Plug     |
| 9. 5/16 GR. 8 Screw | 26. Screw         |
| 10. Travel Stop Nut | 27. Locknut       |
| 11. Connector       | 28. Screw         |
| 12. Travel Pointer  | 29. Nut           |
| 13. Stem Nut        | 30. Thrust Washer |
| 14. Rim Screw       | 31. Lock Washer   |
| 15. Lock Washer     | 32. Decal         |
| 16. Rim Nut         | 33. Grease        |
| 17. Washer          |                   |

## MANUAL MODEL



- |                     |                           |
|---------------------|---------------------------|
| 1. Yoke             | 27. Locknut               |
| 2. Not Used         | 28. Screw                 |
| 3. Spring Case      | 29. Nut                   |
| 4. Spring           | 30. Thrust Washer         |
| 5. Diaphragm        | 31. Lock Washer           |
| 6. Retainer         | 32. Caution Decal         |
| 7. Stem             | 33. Spring Quantity Decal |
| 8. Piston           | 34. Grease                |
| 9. Acme Screw       | 35. Base                  |
| 10. Travel Stop Nut | 36. Pin Holder            |
| 11. Connector       | 37. Plunger               |
| 12. Pointer         | 38. Handwheel             |
| 13. Stem Nut        | 39. Housing               |
| 14. Rim Screw       | 40. Pin                   |
| 15. Lock Washer     | 41. Washer                |
| 16. Rim Nut         | 42. Bearing               |
| 17. Washer          | 43. Decal                 |
| 18. Upper Bushing   | 44. Washer                |
| 19. Lower Bushing   | 45. Stem                  |
| 20. O-Ring          | 46. Screw                 |
| 21. Gasket          | 47. Washer                |
| 22. Travel Scale    | 48. Adhesive              |
| 23. Set Screw       | 49. Hole Plug             |
| 24. Nameplate       | 50. Jam Nut               |
| 25. Vent Plug       | 51. Grease                |
| 26. Screw           |                           |

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