

RP-Series Pneumatic Rack Pinion Actuator



Product Overview



Design and Innovation

The technical features incorporated in RP Series pneumatic rack pinion actuators, deliver a consistent quality and yet simple product for high cycle automated valve applications.

Range and options

The RP Series pneumatic actuators are available in:

- PED 97/23/EC compliant to meet the stringent requirements of pressure mounting vessels
- Spring return and double acting version
- Torque range up to 13,000 Nm / 115,000 Lb-In
- Operating pressure: pneumatic—30 to 120 PSI
- Low and high temperature constructions
- Large availability of many ISO flanges
- Increased cylinder piston size for low instrument air

Product Quality, Technology and Material

The RP Series pneumatic actuators, have been designed and tested to obtain the highest cycle life and with very reduced maintenance and service. The actuators are manufactured with the highest material quality, proper material selections and the latest production technologies.

International Standards

The RP Series pneumatic actuators, have been designed, manufactured and tested in full compliance with all the applicable International standards— ISO 5211, NAMUR etc.

Versatility and Performance



1. Visual Indicator:

Position indicator with NAMUR is convenient for mounting accessories such as limit switch box and positioner.

2. Alloy Pinion:

The pinion is made with high-precision engagement teeth, made from nickel-alloy steel, fully comply with the latest standards of ISO5211, DIN3337, NAMUR. The dimensions can be customized and stainless steel is available.

3. Actuator Body:

Extruded aluminum alloy ASTM6005 body for high quality integrity materials. Body can be treated with hard anodized, powder polyester painted (PTFE) or nickel plated for good corrosion protection.

4. End Caps:

Die-casting aluminum painted with powder polyester, PTFE or Nickel plated for excellent ambient corrosion protection.

5. Pistons:

The double rack pistons are made from die-casting aluminum treated with hard anodized or made from cast steel with zinc plating. Symmetric mounting position, long cycle life and fast opening/closing, reversing rotation by simply switching the pistons.

6. Travel Adjustment:

The dual independent external travel stop adjustment bolts can easily be adjusted $\pm 5^\circ$ at both directions for tight closing and full opening of the automated valves.

Versatility and Performance



7. Durable Springs:

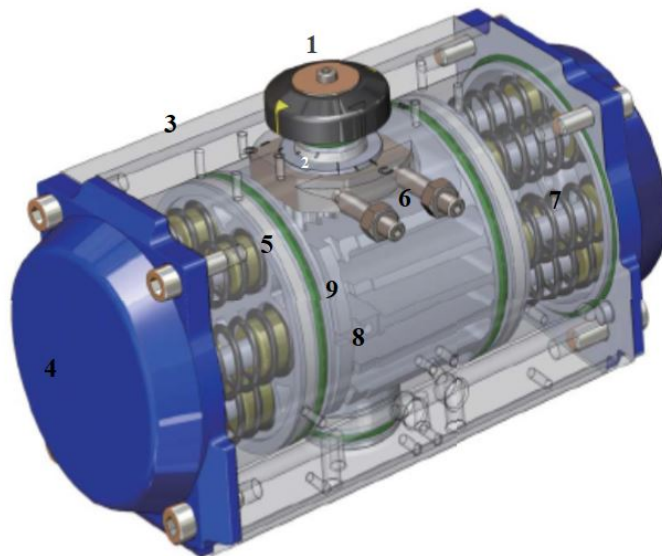
High quality coated coil springs preloaded from assembly for good corrosion resistance and long service life. Springs can be safely and conveniently disassembled in field to satisfy different requirements of spring torques by changing number of springs based on valve requirements.

8. Bearing & Guide:

Made from low friction and durable compound material to avoid direct contact between metals. Low maintenance and easy replacement if needed.

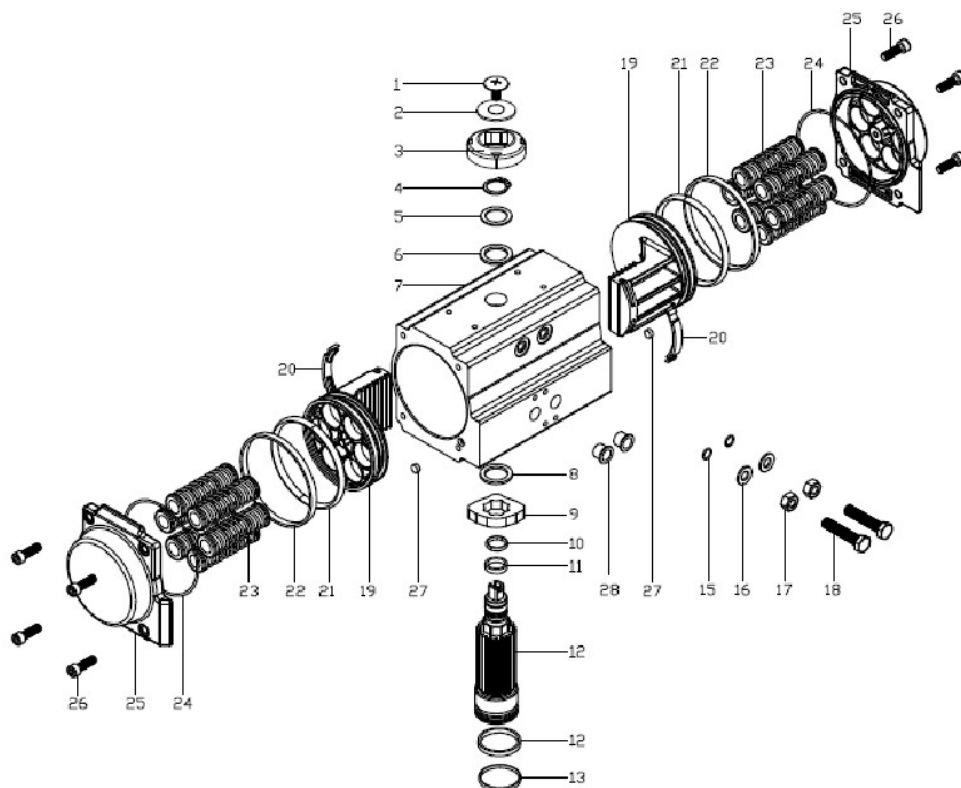
9. O-ring:

NBR rubber O-rings provide trouble-free operation at standard temperature. For high and low temperature applications viton or silicone can be used.



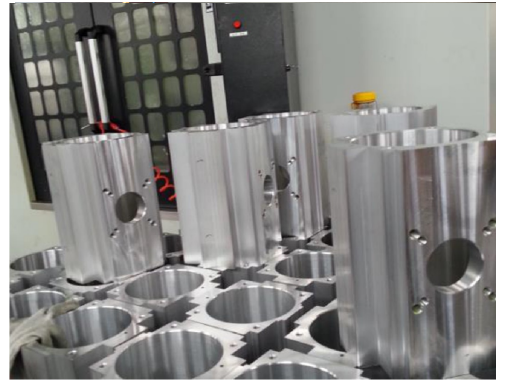
Rack Pinion Actuator

No	Description	Protection	No	Description	Protection	Optional
1	Indicator screw/ washer		13	O-ring (pinion bot- tom)		Viton/ Silicone
2	Indicator		14	Plug		Viton/ Silicone
3	Spring clip		15	O-ring(Adjust screw)		Viton/ Silicone
4	Thrust washer		16	Nut(Adjust screw)		
5	Outside washer		17	Adjust screw		
6	Body	Hard Ano- dized	18	Piston	Anodized/ zinc	Stainless Steel
			19	Guide(Piston)		
7	Inside washer		20	Bearing(Piston)		
8	Cam		21	O-ring(Piston)		Viton/ Silicone
9	Bearing(pinion top)		22	Spring	Dip Coating	
10	O-ring (pinion top)		23	O-ring(End cap)		Viton/ Silicone
11	Pinion	Nickel Plated	24	End cap	Powder Polyster Painted Etc	
12	Bearing(pinion bot- tom)		25	Cap screw		



Quality Control

- All manufacturing is conducted under ISO 9001 certified quality management system.
- Each actuator torque tested before shipment to validate the committed torques provided.
- Products are manufactured in full compliance with applicable industry standards and to specific design specifications .
- Material Test Reports per EN 10204-1991 3.1.B & EN10204 3.1 available for each valve.
- Full pressure torque and hydro test for the automated valve packages could be conducted at factory.



Field Installation & Commission

- On site survey before valve and actuation installation
- On site commissioning support
- Field installation issue diagnostics
- Retrofit/upgrade high pressure actuator automated ESD valves
- Service oriented support team for your projects
- Be your project execution partner from the beginning to the end
- One stop service for both valve, actuation and controls



Rack Pinion Actuator Model Selection



<u>Product Series</u>		RP- Rack Pinion Pneumatic
Example: RP-SR-140-9-FC-MO		
<u>Acuator Configuration</u>		
SR	Spring return	
DA	Double acting	
Acuator Size	<u>52</u>	
	<u>63</u>	
	<u>75</u>	
	<u>83</u>	
	<u>92</u>	
	<u>105</u>	
	<u>125</u>	
	<u>140</u>	
	<u>160</u>	
	<u>190</u>	
	<u>210</u>	
	<u>240</u>	
Spring Set	<u>5</u>	
	<u>6</u>	
	<u>7</u>	
	<u>8</u>	
	<u>9</u>	
	<u>10</u>	
	<u>11</u>	
	<u>12</u>	
	<u>13</u>	
	<u>14</u>	
<u>15</u>		
<u>16</u>		
<u>Fail Safe Configuration</u>		
FC	<u>Fail Close</u>	
FO	<u>Fail Open</u>	
<u>Other Configuration</u>		
Declutchable Gear	<u>MO</u>	
High Temp Seal	<u>HT</u>	
Special Paint	<u>PS</u>	
Stainless Steel Body	<u>SST</u>	

Coretech

Coretech Flow America INC

23555 Clay Road, Katy, TX 77493, USA
+1 832-838-4999
www.coretechflow.com