

## Rack & Pinion Pneumatic Actuator / Features

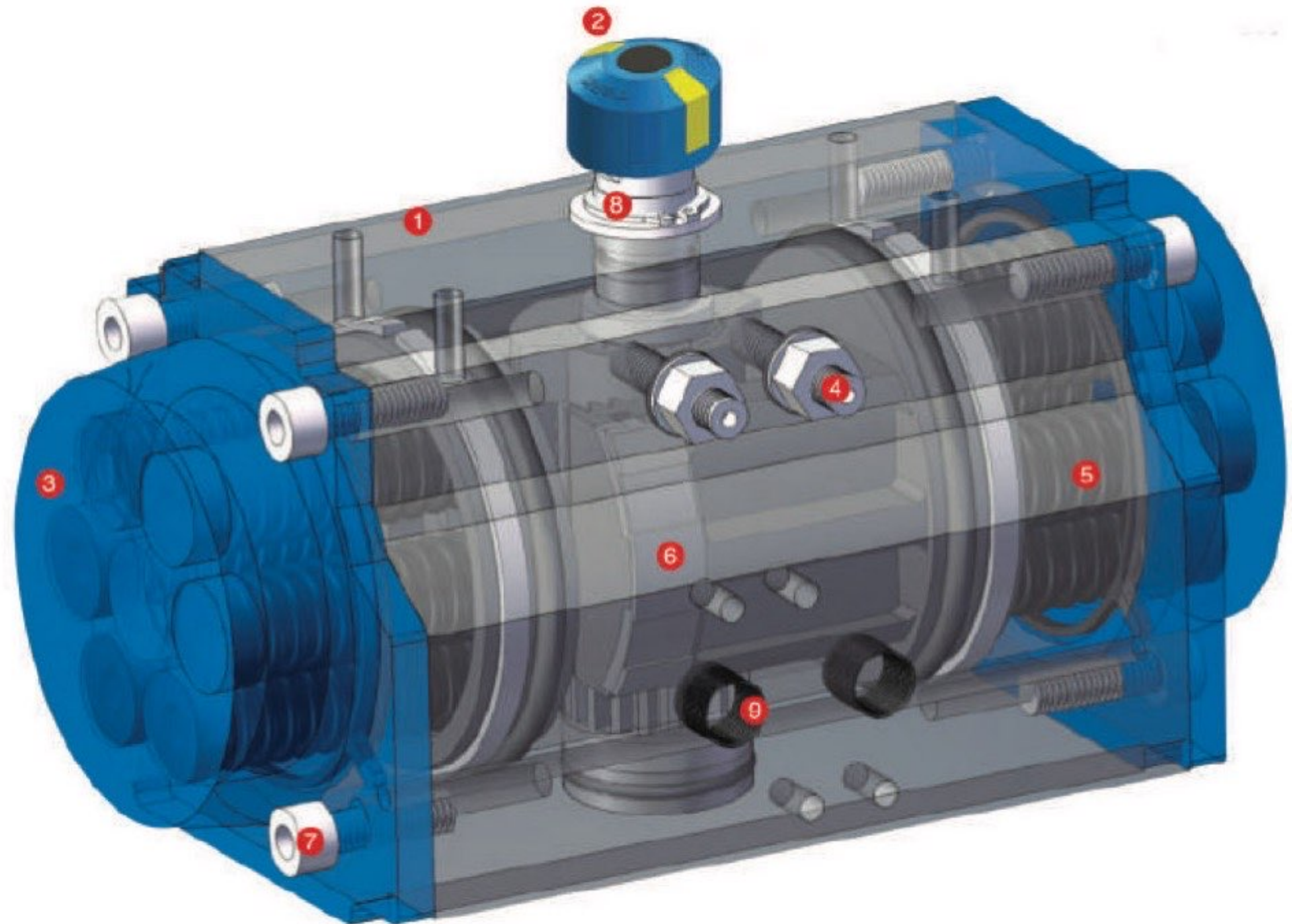
### General Features

- High performance
  - Long lasting
  - High torque (rotation movement) output
  - Position indicator
  - Body: Extruded aluminium, (on request; anodized)
- Optionally; epoxy painted body or PTFE coated body
- Piston and caps: Die cast aluminium
  - Double acting actuators can turn into single acting easily
  - Single acting actuator's springs, preloaded and durable
  - Sensitive and high quality working of bearing system and o-ring
  - Stroke adjustment in both ways 3 50
  - Nickel covered steel or stainless steel shaft
  - ISO 5211, DIN 3337 and namur standard
  - Limit switchbox, positioner connection is namur standard
  - Direction valve montage is namur standard
  - Actuator valve montage is ISO 5211 standard



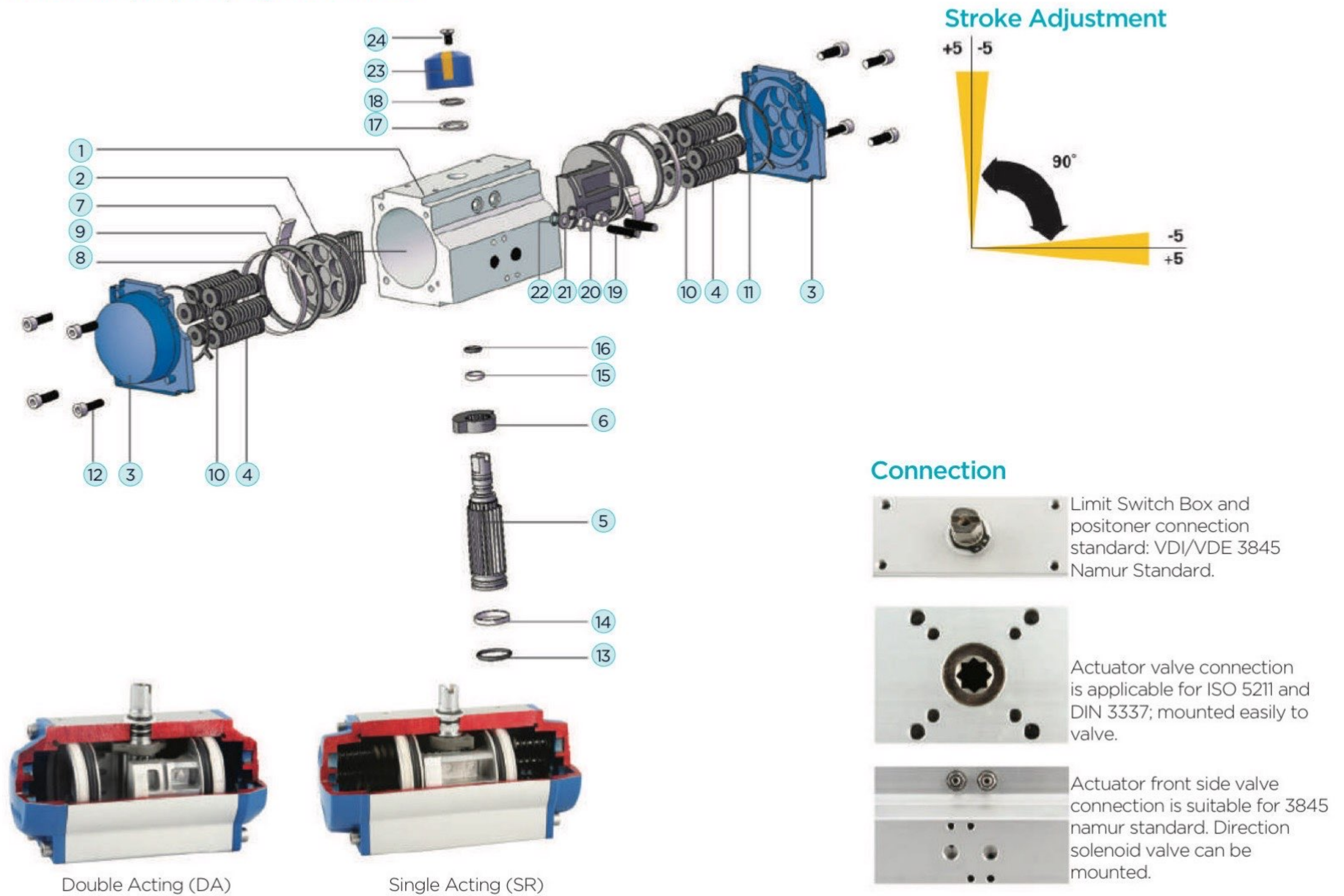
### Design Features of TORK RA Series Actuator (Rack & Pinion Actuator)

- 1) **Actuator Body:** Corrosion protected aluminium extruded body.
  - 2) **Indicator:** It is standard on all actuators.
  - 3) **Caps:** Aluminium extruded caps provide maximum resistance against corrosion, caps are suitable for single and double acting actuators
  - 4) **Stroke Adjustment:** Permit adjustment of 3 %5 in both directions.
  - 5) **Springs:** Cartridge design and corrosion resistant springs.
  - 6) **Piston Bearing O-rings:** Long lasting
  - 7) **Nuts and Bolts:** Stainless steel and high resistance for corrosion.
  - 8) **Actuator Pistons:** Aluminium injections. High quality o-rings and against corrosion.
  - 9) **Connections:**
    - Solenoid Valve, Limit Switch Box, Positioner: Namur VDINDE3845
    - Ball, Butterfly and Plug Valve Montage: ISO5211, DIN3337standard
- Air Quality:**  
ISO 8573-1 : 7-4-4 (Particle - Water - Oil)



# Rack & Pinion Pneumatic Actuator / Spare Parts

## RA Series (DA/ SR): Spare Part List

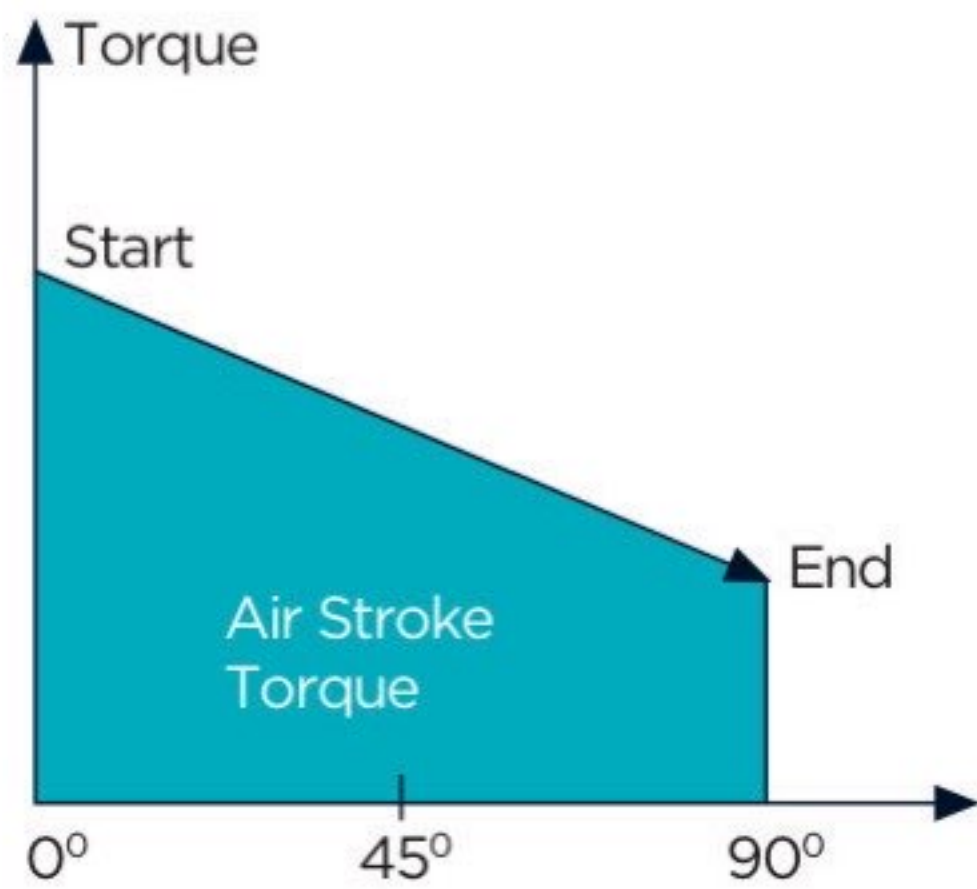


PART NO	UNIT QUANTITY	PART DESCRIPTION	STANDARD MATERIAL
1	1	Body	Extruded Aluminium Alloy
2	2	Piston	Die Cast Aluminium
3	2	Cap	Die Cast Aluminium
4	min.5/max.12	Spring	High Alloy Spring Steel
5	1	Pinion	Steel Alloy
6	1	Cam (Stop Arrangement)	Stainless Steel
7	2	Bearing (Piston Back)	Polyphtalamide
8	2	Bearing (Piston Sliding)	Polyphtalamide
9	2	Piston "O" Ring	Nitrile (NBR70)
10	min.5/max.12	Spring Holder	Polypropylene + Gf
11	2	Cap "O" Ring	Nitrile (NBR70)
12	8	Cap Bolt	Stainless Steel
13	1	Pinion Bottom "O" Ring	Nitrile (NBR70)
14	1	Bearing (Pinion Bottom)	Polyphtalamide
15	1	Bearing (Pinion Top)	Polyphtalamide
16	1	Pinion Top "O" Ring	Nitrile (NBR70)
17	1	Thrust Bearing	Polyphtalamide
18	1	Spring Clip	Steel Alloy
19	2	Stop Set Screw	Stainless Steel
20	2	Stop Nut	Stainless Steel
21	2	Stop Set Screw Washer	Stainless Steel
22	2	Stop Set Screw "O" Ring	Nitrile (NBR70)
23	1	Indicator	Polypropylene + Gf
24	1	Indicator Screw	Stainless Steel

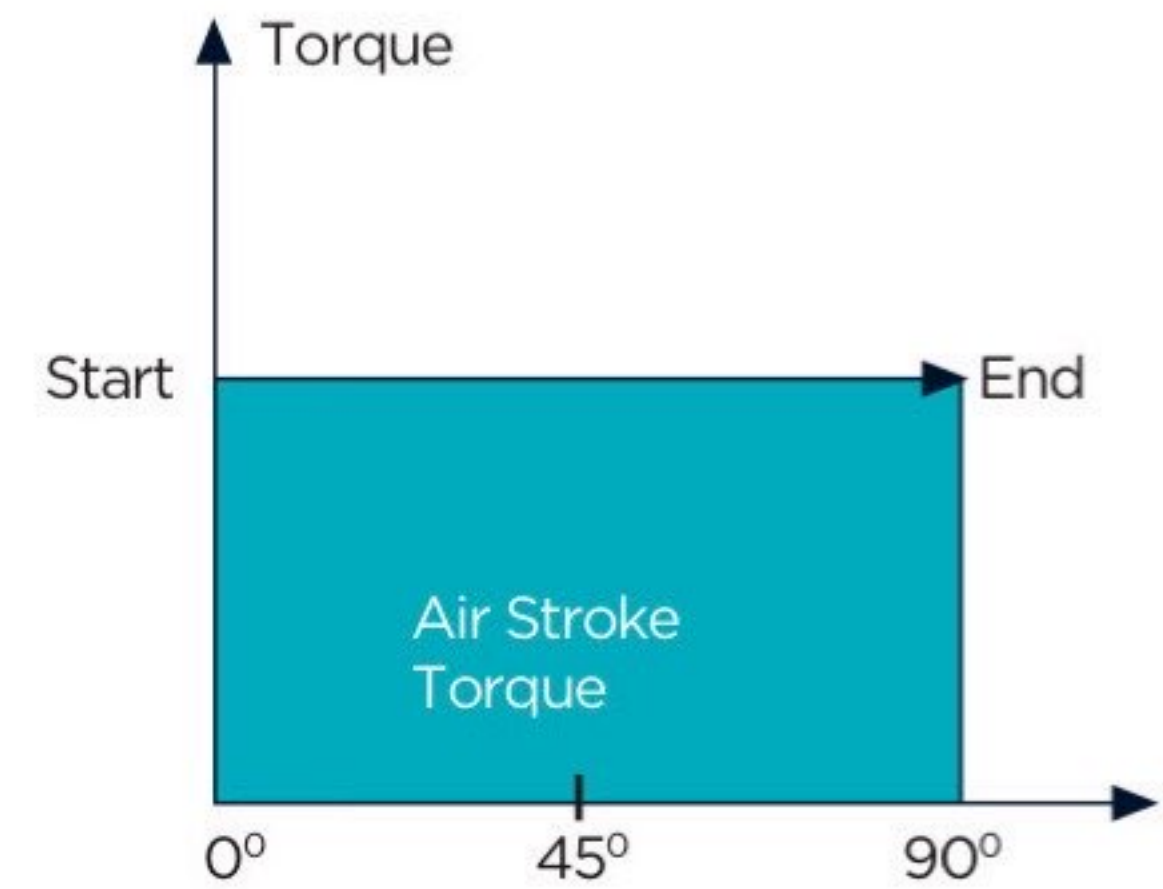
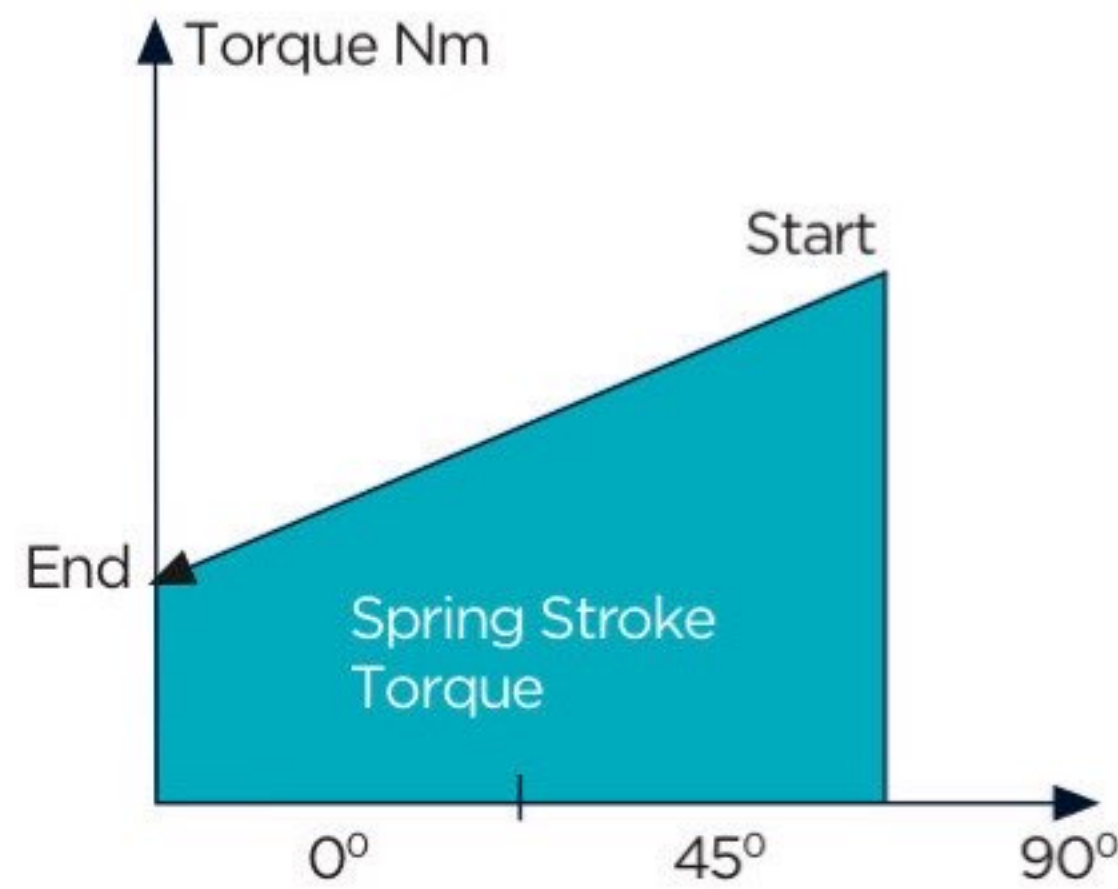
**Note:** All sealing and bearing elements are included in the repair kit.  
**Part No:** 7, 8, 9, 11, 13, 14, 15, 16, 22

# Rack & Pinion Pneumatic Actuator/ Operation

## TORK Actuator, Tork Output Diagrams Rack & Pinion Actuator

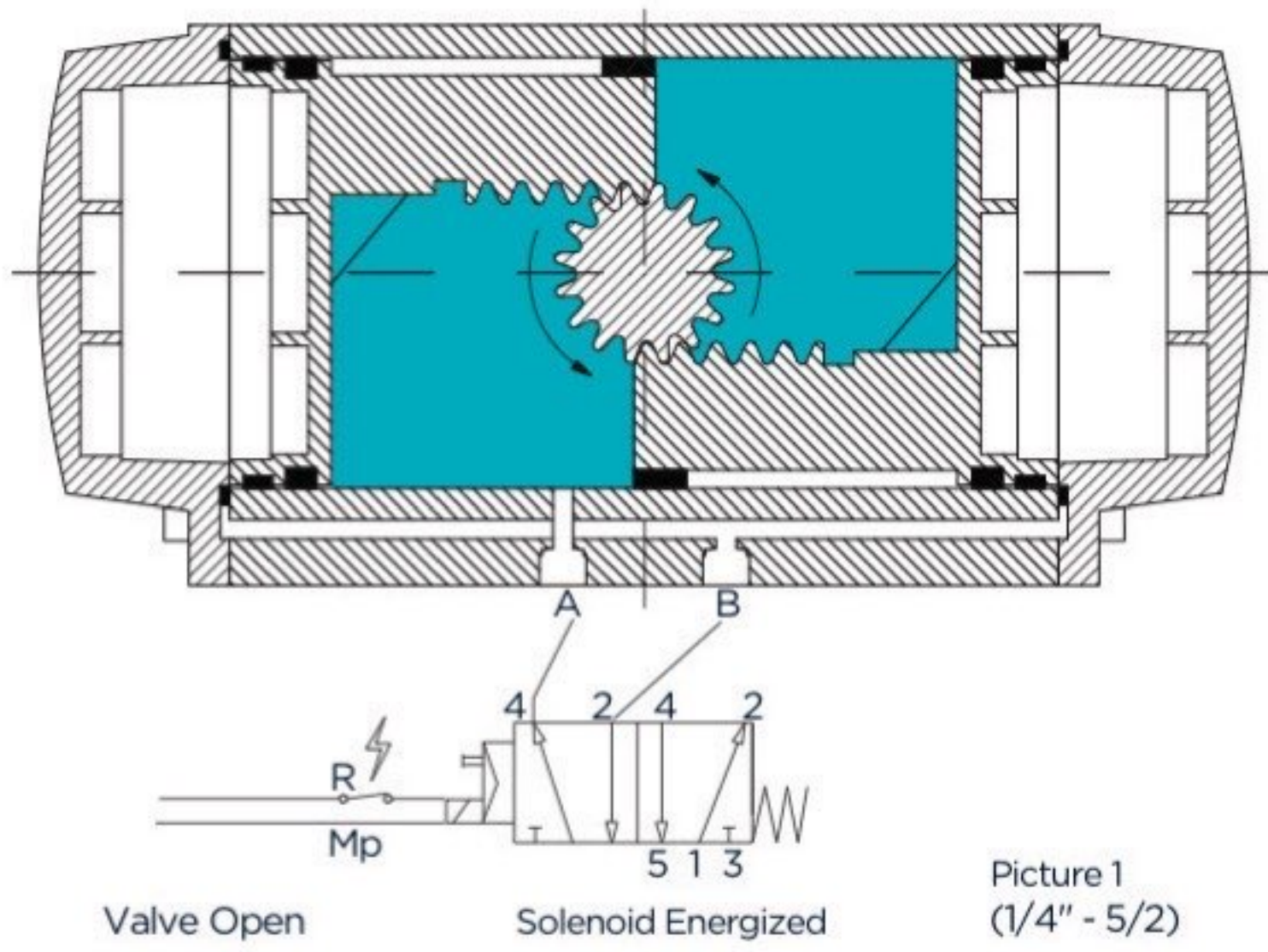


TORK RA ... SR Series (Single Acting) Actuator Output Diagram

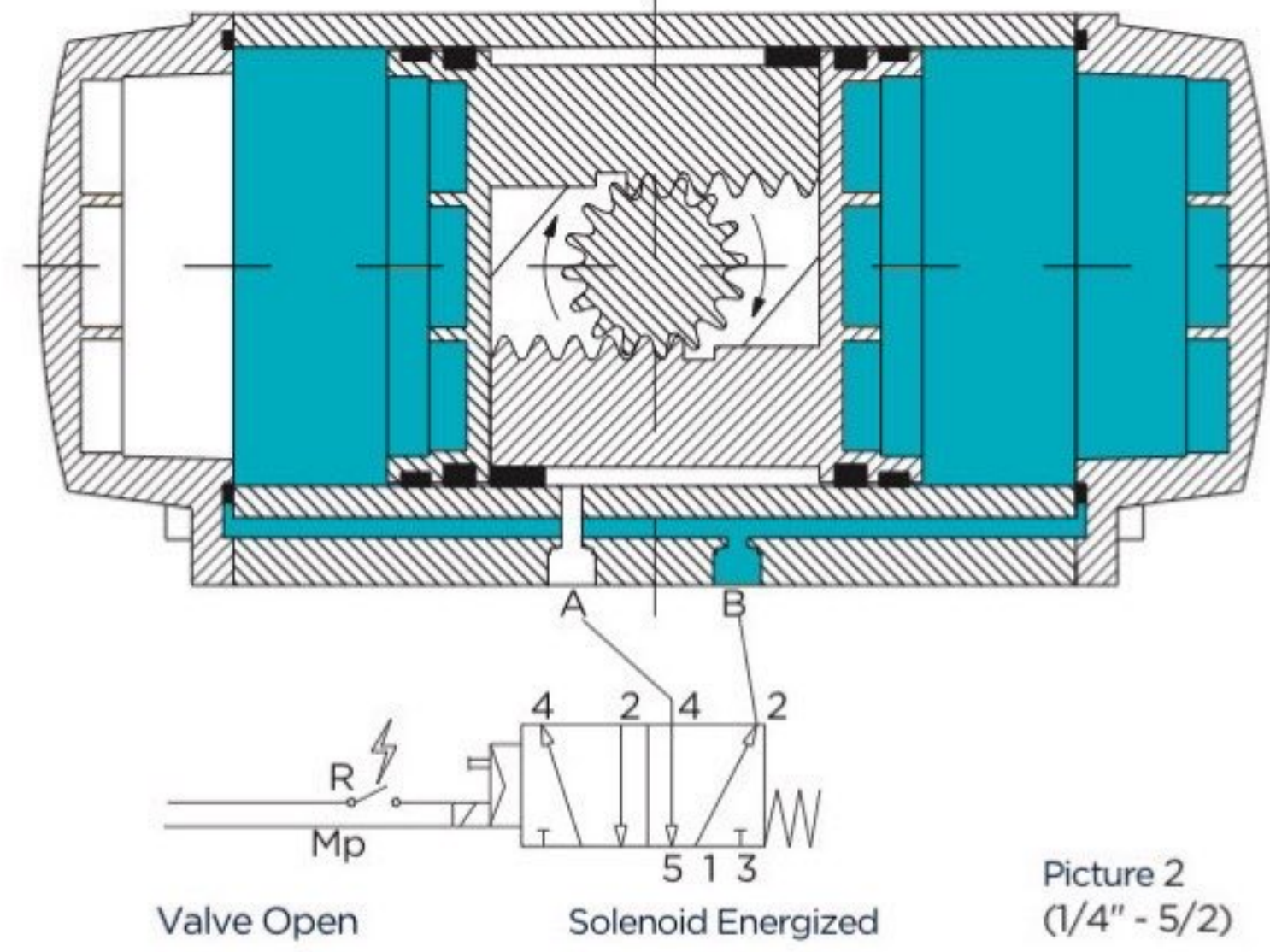


TORK RA ... DA Series (Double Acting) Actuator Output Diagram

## TORK RA/RX/RAM/RXM....DA Series Actuator Operation (Double Acting) Rack & Pinion Actuator

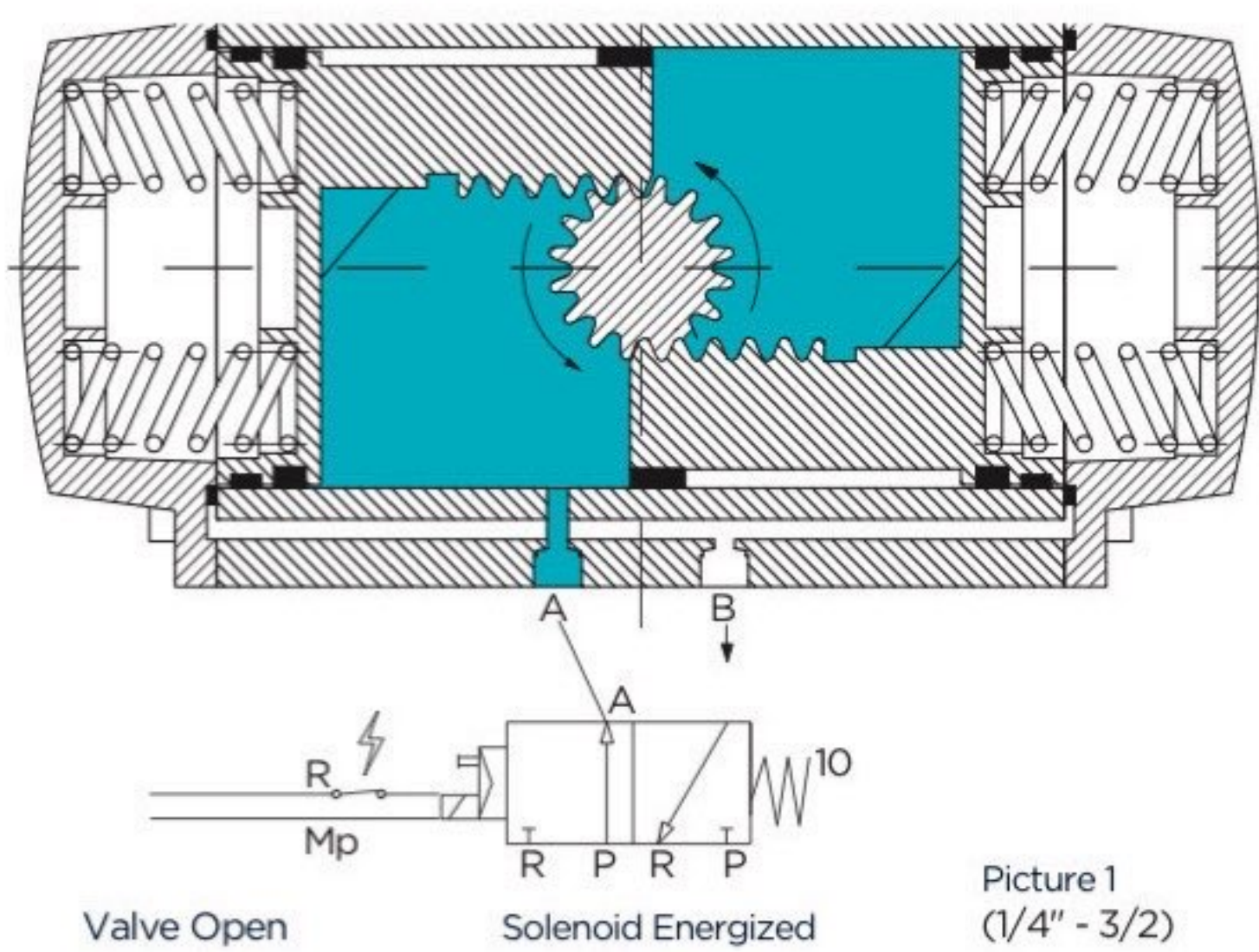


Picture 1 (1/4" - 5/2)

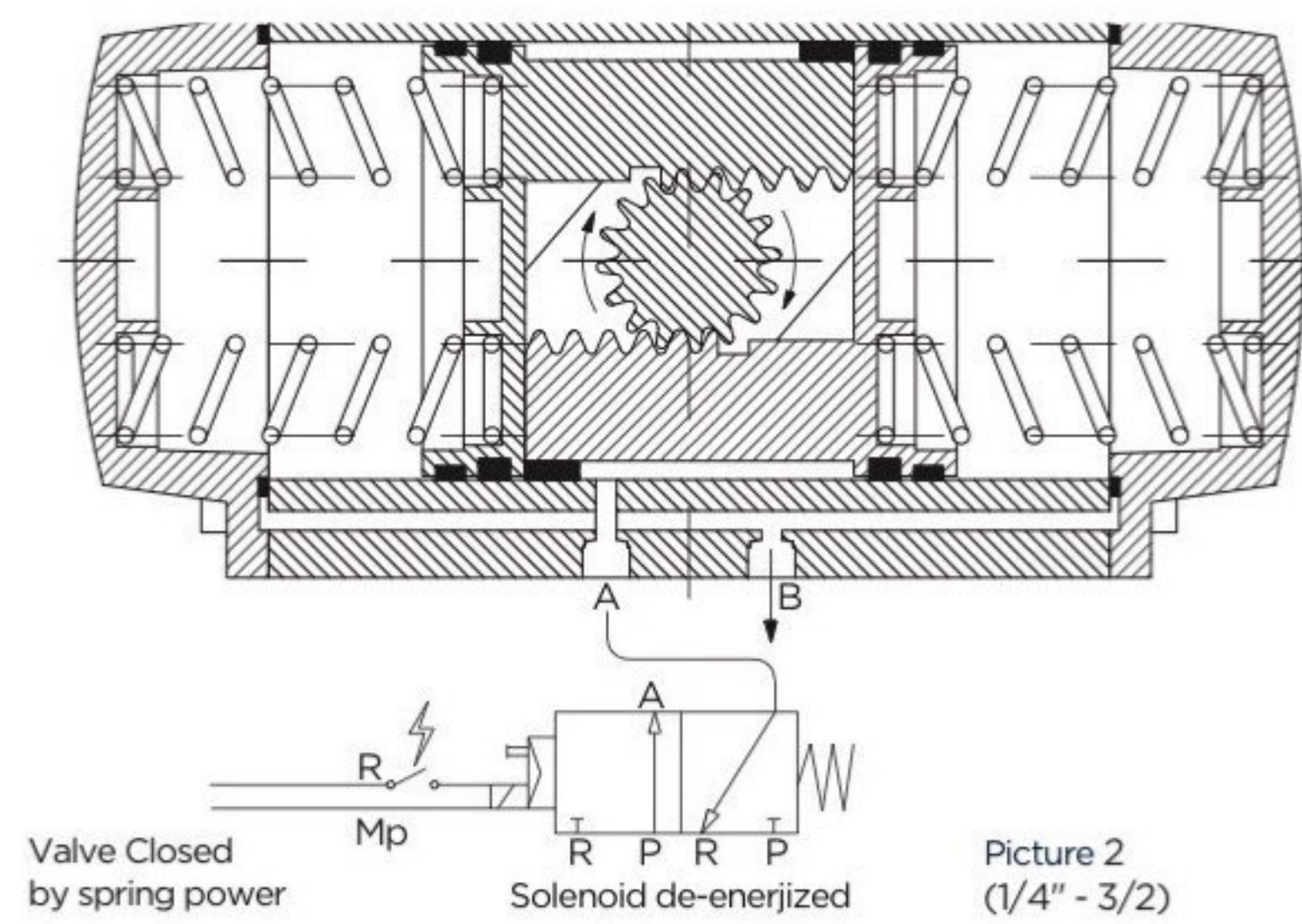


Picture 2 (1/4" - 5/2)

## TORK RA/RX/RAM/RXM....SR Series Actuator Operation (Single Acting) Rack & Pinion Actuator



Picture 1 (1/4" - 3/2)



Picture 2 (1/4" - 3/2)

## TORK RA ... SR Series (Single Acting) Actuator Spring Arrangement

