## 结 构 Construction

### 指示器 Indicator

NAMUR 标准指示器便于安装位置开关、定位器等附件。

Position indicator with NAMUR is convenient for mounting accessories such as Limit Switch box,Positioner and so on.

### 输出轴 Pinion

镀镍合金钢、高精密一体式输出轴同时符合 NAMUR、ISO5211、DIN3337 标准。可根据客户要求定制尺寸和不锈钢材料。

The pinion is high-precision and integrative, made from nickelled-alloy steel, full conform to the lastest standards of ISO5211, DIN3337, NAMUR.The dimensions can be customized and the stainless steel is available.

### 缸 体 Actuator Body

ASTM6005 压铸铝合金缸体可以采用硬质氧化、环氧树脂喷涂（根据要求喷涂兰色、橙色、黄色等）、PTFE 涂层或镀镍满足不同要求。

According to different requirements, the extruede aluminum alloy body can be treated with hard anodizing, epoxy powder coating, PTFE or nickel plated.

### 端 盖 End caps

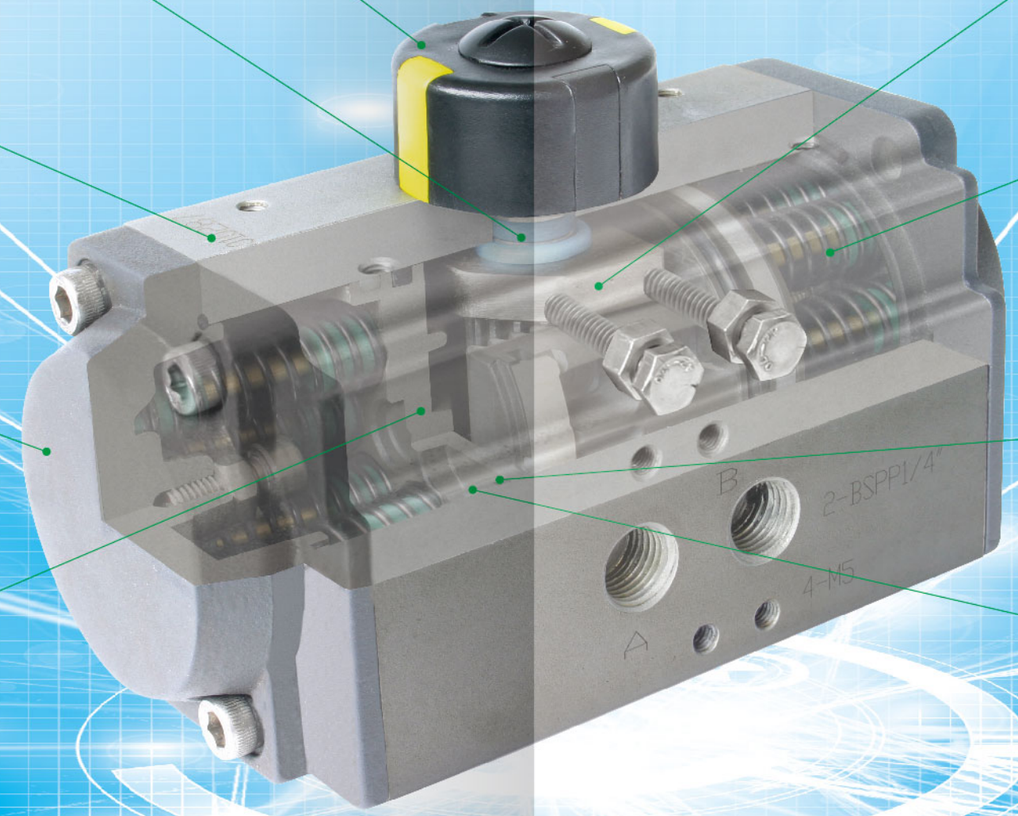
压铸铝合金表面金属粉末喷涂各种颜色、PTFE 涂层或镀镍处理。

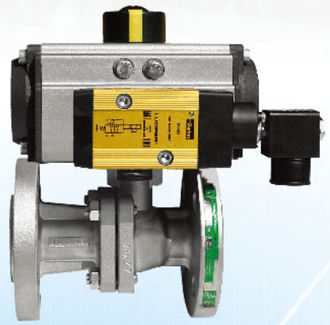
Die-casting aluminum alloy end caps with epoxy powder coating in different colors, PTFE or nickel plated.

### 活 塞 Pistons

双活塞齿条、采用铸铝硬质氧化或者铸钢镀锌处理，安装位置对称、运作迅速、使用寿命长，简单的颠倒活塞可以改变旋转方向。

The twin rack pistons are made from Die-casting aluminum treated with Hard anodized or made from Cast steel with galvanization. Symmetric mounting position,long cycle life and fast operation, reversing rotation by simply inverting the pistons.




### 行程调节 Travel adjustment

两个独立的行程调节螺钉可以进行方便、精确 ±5°的调节开、关位置。

The two independent external travel stop adjustment bolts can adjust ±5°at both open and close directions easily and precisely.

### 高性能弹簧 High performance springs

采用优质材料、涂层处理，预压装配。具有较强的抗腐蚀性和使用寿命。能够安全、简单的拆卸单作用执行器，通过改变弹簧数量满足不同的力矩输出范围。

Preloaded coating springs are made from the high quality material for resistant to corrosion and longer service life, which can be demounted safely and conveniently to satisfy different requirements of torque by changing quantity of springs.

### 轴承、导板 Bearings & Guides

采用低摩擦、长寿命复合材料，避免了金属与金属的直接接触，维修更换简单方便。

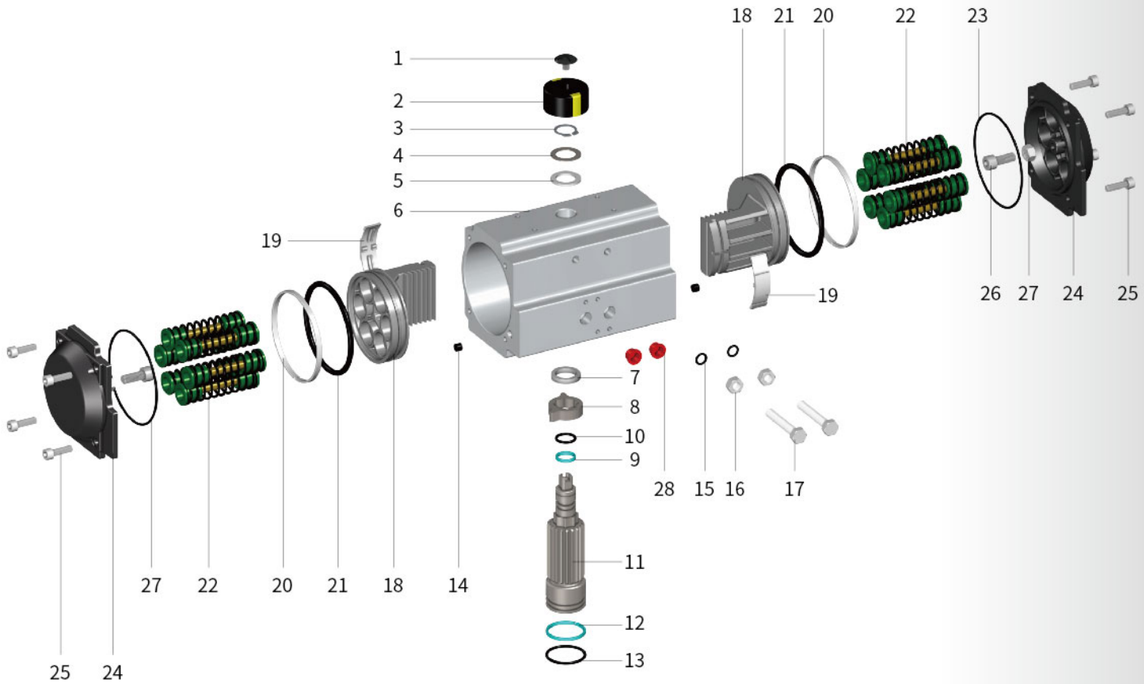
Made from low friction,long-life compound material,to avoid the direct contact between metals. The maintenance and replacement are easy and convenient.

### O-rings 密封

在常温工作条件下使用丁腈橡胶，在高温或低温时采用氢化丁腈橡胶或硅橡胶。

NBR O-rings provide trouble free operation at standard temperature. FKM and L-NBR O-rings for high and low temperature ranges.

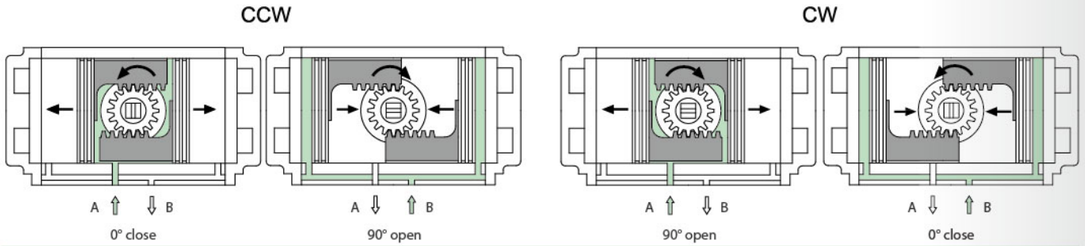
## 零件和材料 Parts and Material




| 序号 No. | 名称 Description | 数量 Qty. | 材料 Standard Material | 防腐处理 Protection | 可选材料 Optional Material |
|---|---|---|---|---|---|
| 1 | Indicator screw<br>指示器螺钉 | 1 | Plastic<br>塑料 | | |
| 2 | Indicator<br>指示器 | 1 | Plastic<br>塑料 | | |
| 3 | Spring clip<br>卡簧 | 1 | Stainless steel<br>不锈钢 | | |
| 4 | Thrust washer<br>垫圈 | 1 | Stainless steel<br>不锈钢 | | |
| 5 | Outside washer<br>外垫片 | 1 | Engineering plastics<br>工程塑料 | | |
| 6 | Body<br>缸体 | 1 | Extruded aluminum alloy<br>铸铝 | Hard anodized etc<br>硬质氧化等 | |
| 7 | Inside washer<br>内垫片 | 1 | Engineering plastics<br>工程塑料 | | |
| 8 | Cam<br>凸轮 | 1 | Alloy steel<br>合金钢 | | |
| 9 | Bearing (Pinion top)<br>上轴轴承 | 1 | Engineering plastics<br>工程塑料 | | |
| 10 | O-ring (Pinion top)<br>上轴O型圈 | 1 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 11 | Pinion<br>齿轴 | 1 | Alloy steel<br>合金钢 | Nickel phosphorus<br>镍磷 | Stainless steel<br>不锈钢 |
| 12 | Bearing (Pinion bottom)<br>下轴轴承 | 1 | Engineering plastics<br>工程塑料 | | |
| 13 | O-ring (Pinion bottom)<br>下轴O型圈 | 1 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 14 | Plug<br>堵头 | 2 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 15 | O-ring (Adjust screw)<br>调节螺钉O型圈 | 2 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 16 | Nut (Adjust screw)<br>调节螺钉螺母 | 2 | Stainless steel<br>不锈钢 | | |
| 17 | Adjust screw<br>调节螺栓 | 2 | Stainless steel<br>不锈钢 | | |
| 18 | Piston<br>活塞 | 2 | Cast aluminum / Casting<br>铸铝/铸钢 | Anodized/Galvanization<br>氧化/镀锌 | Stainless steel<br>不锈钢 |
| 19 | Guide (Piston)<br>活塞导板 | 2 | Engineering plastics<br>工程塑料 | | |
| 20 | Bearing (Piston)<br>活塞轴承 | 2 | Engineering plastics<br>工程塑料 | | |
| 21 | O-ring (Piston)<br>活塞O型圈 | 2 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 22 | Spring<br>弹簧 | 0-12 | Piano wire<br>琴钢丝 | Electrophoretic paint<br>浸漆 | |
| 23 | O-ring (End cap)<br>端盖O型圈 | 2 | NBR<br>丁腈橡胶 | | Viton / LNBR<br>氟橡胶/低温丁腈橡胶 |
| 24 | End cap<br>端盖 | 2 | Cast aluminum<br>铸铝 | Epoxy powder painted etc<br>环氧树脂粉末喷涂 | |
| 25 | Cap screw<br>端盖螺栓 | 8 | Stainless steel<br>不锈钢 | | |
| 26 | Stop screw<br>限位螺栓 | 2 | Stainless steel<br>不锈钢 | | |
| 27 | Nut (Stop screw)<br>限位螺母 | 2 | Stainless steel<br>不锈钢 | | |
| 28 | Dustproof plug<br>防尘塞 | 2 | Plastic<br>塑料 | | |

## 工作原理 Operating Principle

### 双作用执行器 Double Acting Actuators




A口进气，压缩空气推动活塞向外运动，使执行器输出轴逆时针旋转(0°→90°)，B口排气。

B口进气，压缩空气推动活塞向内运动，使执行器输出轴顺时针旋转(90°→0°)，A口排气。

Air to Port A forces the pistons outwards, causing the drive shaft to turn counterclockwise while the air is being exhausted from Port B.

Air to Port B forces the pistons inwards, causing the drive shaft to turn clockwise while the air is being exhausted from Port A.

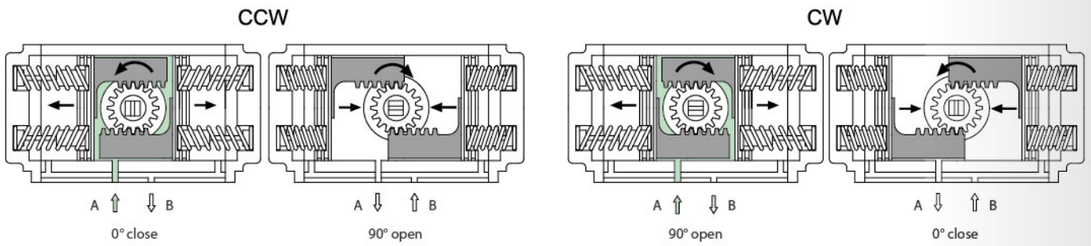
A口进气，压缩空气推动活塞向外运动，使执行器输出轴顺时针旋转(90°→0°)，B口排气。

B口进气，压缩空气推动活塞向内运动，使执行器输出轴逆时针旋转(0°→90°)，A口排气。

Air to Port A forces the pistons outwards, causing the drive shaft to turn clockwise while the air is being exhausted from Port B.

Air to Port B forces the pistons inwards, causing the drive shaft to turn counterclockwise while the air is being exhausted from Port A.

### 单作用执行器 Spring Return Actuators




A口进气,压缩空气克服弹簧力，推动活塞向外运动，执行器输出轴逆时针转动(0°→90°)，B口排气；

执行器失气，活塞在弹簧力的作用下向内运动，执行器输出轴顺时针转动(90°→0°)，A口排气。

Air to port A forces the pistons outwards, causing the springs to compress, The drive shaft turns counterclockwise while air is being exhausted from port B.

Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The drive shaft turns clockwise while air is being exhausted from port A.

A口进气,压缩空气克服弹簧力，推动活塞向外运动，执行器输出轴顺时针转动(90°→0°)，B口排气；

执行器失气，活塞在弹簧力的作用下向内运动，执行器输出轴逆时针转动(0°→90°)，A口排气。

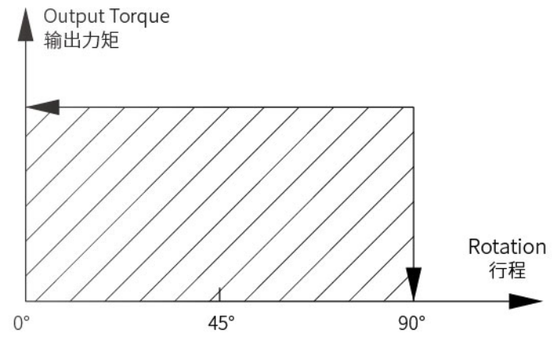
Air to port A forces the pistons outwards, causing the springs to compress, The drive shaft turns clockwise while air is being exhausted from port B.

Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The drive shaft turns counterclockwise while air is being exhausted from port A.





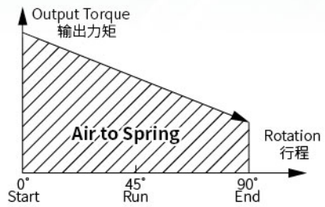
## 双作用输出力矩 Output Torque of Double Acting Actuators

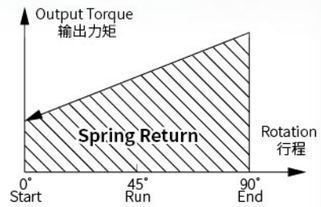



### 输出扭矩表 Torque Output (Nm)

| 型号Model | Cylinder Dia. | 气源压力 Air supply pressure (Unit: bar) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 2.5 | 3 | 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 |
| RT007DA | Ø32 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 9 | 11 | 12 |
| RT012DA | Ø40 | 5 | 6 | 7 | 10 | 11 | 12 | 13 | 14 | 17 | 19 |
| RT020DA | Ø52 | 8 | 10 | 12 | 16 | 18 | 20 | 22 | 24 | 28 | 32 |
| RT035DA | Ø63 | 15 | 18 | 22 | 29 | 33 | 36 | 40 | 44 | 51 | 58 |
| RT050DA | Ø75 | 20 | 25 | 30 | 40 | 45 | 50 | 55 | 60 | 70 | 80 |
| RT075DA | Ø83 | 31 | 39 | 47 | 63 | 70 | 78 | 86 | 94 | 110 | 125 |
| RT110DA | Ø92 | 45 | 56 | 68 | 90 | 102 | 113 | 124 | 135 | 158 | 181 |
| RT160DA | Ø105 | 66 | 83 | 99 | 132 | 149 | 165 | 182 | 198 | 231 | 264 |
| RT255DA | Ø125 | 100 | 125 | 150 | 200 | 226 | 251 | 276 | 301 | 351 | 401 |
| RT435DA | Ø140 | 171 | 214 | 256 | 342 | 385 | 427 | 470 | 513 | 598 | 684 |
| RT665DA | Ø160 | 266 | 332 | 399 | 532 | 598 | 665 | 731 | 798 | 931 | 1064 |
| RT1000DA | Ø190 | 426 | 532 | 638 | 851 | 958 | 1064 | 1170 | 1277 | 1490 | 1702 |
| RT1200DA | Ø210 | 532 | 665 | 798 | 1064 | 1197 | 1330 | 1463 | 1596 | 1862 | 2128 |
| RT1800DA | Ø240 | 769 | 962 | 1154 | 1539 | 1731 | 1924 | 2116 | 2308 | 2693 | 3078 |
| RT2700DA | Ø270 | 1170 | 1462 | 1754 | 2339 | 2632 | 2924 | 3216 | 3509 | 4094 | 4679 |
| RT3800DA | Ø300 | 1526 | 1908 | 2289 | 3052 | 3434 | 3815 | 4197 | 4578 | 5341 | 6104 |
| RT5700DA | Ø350 | 2285 | 2856 | 3427 | 4570 | 5141 | 5712 | 6283 | 6854 | 7997 | 9139 |
| RT8000DA | Ø400 | 3256 | 4070 | 4884 | 6512 | 7326 | 8140 | 8954 | 9768 | 11396 | 13024 |

# 单作用输出力矩 Output Torque of Spring Return Actuators



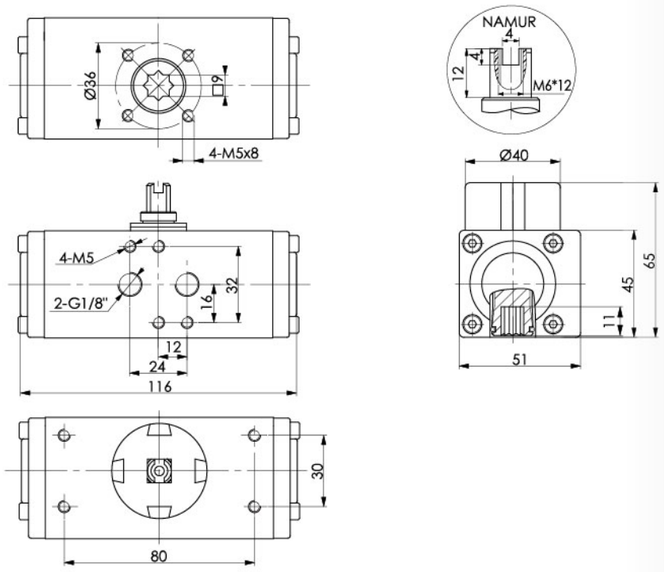




| 输出扭矩 Output torque of air to springs (Nm) | | | | | | | | | | | | | | | | | | Springs' output | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 气压 Air Pressure | | | 2.5 BAR | | 3 BAR | | 4 BAR | | 5 BAR | | 6 BAR | | 7 BAR | | 8 BAR | | | |
| 型号Model | Cylinder Dia. | Spring Qty | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 90° Start | 0° End |
| RT020SR | Ø52 | K5 | 5.7 | 3.8 | 7.6 | 5.7 | | | | | | | | | | | 6.2 | 4.3 |
| | | K6 | 4.9 | 2.5 | 6.9 | 4.5 | 10.9 | 8.5 | | | | | | | | | 7.4 | 5.0 |
| | | K7 | 4.0 | 1.3 | 6.0 | 3.3 | 9.8 | 7.3 | 14.0 | 10.4 | | | | | | | 8.6 | 5.9 |
| | | K8 | | | 5.2 | 2.0 | 9.2 | 6.0 | 13.2 | 9.1 | 17.2 | 14.1 | | | | | 9.9 | 6.7 |
| | | K9 | | | 4.3 | 0.8 | 8.3 | 4.8 | 12.3 | 7.9 | 16.3 | 12.8 | 20.3 | 16.8 | | | 11.1 | 7.6 |
| | | K10 | | | | | 7.4 | 3.6 | 11.5 | 6.7 | 15.5 | 11.6 | 19.5 | 15.6 | | | 12.4 | 8.5 |
| | | K11 | | | | | 6.6 | 2.3 | 10.6 | 5.4 | 14.6 | 10.4 | 18.6 | 14.3 | 22.6 | 18.3 | 13.6 | 9.3 |
| | | K12 | | | | | | | 9.7 | 4.2 | 13.8 | 9.1 | 17.8 | 12.2 | 21.8 | 17.1 | 14.8 | 10.2 |
| RT035SR | Ø63 | K5 | 11.4 | 7.7 | 15.0 | 11.4 | 22.3 | 18.7 | | | | | | | | | 10.4 | 6.8 |
| | | K6 | 10.1 | 5.7 | 13.6 | 9.3 | 20.9 | 16.6 | 28.3 | 23.9 | | | | | | | 12.5 | 8.2 |
| | | K7 | 8.6 | 3.6 | 12.5 | 7.2 | 19.5 | 14.5 | 26.8 | 21.9 | | | | | | | 14.6 | 9.6 |
| | | K8 | | | 10.9 | 5.1 | 18.2 | 12.4 | 25.5 | 19.8 | 32.8 | 27.0 | 40.1 | 34.3 | | | 16.7 | 10.9 |
| | | K9 | | | | | 16.8 | 10.4 | 24.1 | 17.7 | 31.4 | 24.9 | 38.7 | 32.2 | | | 18.8 | 12.3 |
| | | K10 | | | | | 14 | 8.2 | 22.8 | 15.6 | 30.0 | 22.8 | 37.3 | 30.1 | 44.7 | 37.4 | 20.9 | 13.7 |
| | | K11 | | | | | | | 21.5 | 13.5 | 28.7 | 20.7 | 36.0 | 28.0 | 43.3 | 35.3 | 22.9 | 15.0 |
| | | K12 | | | | | | | 20.0 | 11.4 | 27.3 | 18.6 | 34.6 | 25.9 | 41.9 | 33.3 | 25.0 | 16.4 |
| RT050SR | Ø75 | K5 | 14.5 | 10.6 | 19.4 | 15.5 | 29.5 | 25.7 | | | | | | | | | 14.5 | 10.5 |
| | | K6 | 12.4 | 7.6 | 17.3 | 12.6 | 27.4 | 22.7 | 37.5 | 32.8 | | | | | | | 17.4 | 12.7 |
| | | K7 | 10.4 | 4.8 | 15.2 | 9.7 | 25.3 | 19.9 | 35.4 | 29.9 | | | | | | | 20.3 | 14.8 |
| | | K8 | | | 13.1 | 6.8 | 23.1 | 16.9 | 33.3 | 27.0 | 43.2 | 37.0 | 53.3 | 47.0 | | | 23.2 | 16.9 |
| | | K9 | | | | | 21.0 | 14.1 | 31.2 | 24.1 | 41.1 | 34.1 | 51.2 | 44.2 | | | 26.1 | 19.0 |
| | | K10 | | | | | 19.0 | 11.1 | 28.8 | 21.2 | 39.0 | 31.2 | 49.1 | 41.2 | 59.1 | 51.2 | 29.0 | 21.1 |
| | | K11 | | | | | | | 27.0 | 18.3 | 37.0 | 28.3 | 47.0 | 38.4 | 57.0 | 48.4 | 31.9 | 23.2 |
| | | K12 | | | | | | | 24.9 | 15.4 | 34.9 | 25.4 | 44.9 | 35.4 | 54.9 | 45.4 | 34.7 | 25.3 |
| RT075SR | Ø83 | K5 | 23.3 | 16.1 | 31.1 | 24.0 | 46.8 | 39.7 | | | | | | | | | 23.0 | 15.8 |
| | | K6 | 20.1 | 11.5 | 28.0 | 19.3 | 43.7 | 35.1 | 59.4 | 50.7 | | | | | | | 27.6 | 19.0 |
| | | K7 | 17.0 | 6.9 | 24.8 | 14.8 | 40.5 | 30.5 | 56.2 | 46.2 | | | | | | | 32.2 | 22.1 |
| | | K8 | | | 21.7 | 10.1 | 37.4 | 25.8 | 53.1 | 41.5 | 68.8 | 57.2 | 84.5 | 72.9 | | | 36.8 | 25.3 |
| | | K9 | | | | | 34.2 | 21.3 | 49.9 | 37.0 | 65.6 | 52.6 | 81.2 | 68.3 | | | 41.4 | 28.5 |
| | | K10 | | | | | 31.0 | 16.6 | 46.7 | 32.3 | 62.4 | 48.0 | 78.1 | 63.7 | 93.8 | 79.3 | 46.0 | 31.6 |
| | | K11 | | | | | | | 43.6 | 27.7 | 59.3 | 43.4 | 75.0 | 59.1 | 90.6 | 74.8 | 50.6 | 34.8 |
| | | K12 | | | | | | | 40.4 | 23.2 | 56.1 | 38.9 | 71.7 | 54.5 | 87.4 | 70.2 | 55.2 | 38.0 |
| RT110SR | Ø92 | K5 | 33.1 | 22.0 | 44.2 | 33.2 | 66.8 | 55.9 | | | | | | | | | 34.4 | 23.3 |
| | | K6 | 28.4 | 15.2 | 39.6 | 26.4 | 62.2 | 49.0 | 84.8 | 71.6 | | | | | | | 41.2 | 28.0 |
| | | K7 | 23.8 | 8.2 | 34.9 | 19.4 | 57.5 | 42.1 | 80.2 | 64.7 | | | | | | | 48.1 | 32.7 |
| | | K8 | | | 31.3 | 12.6 | 52.9 | 35.2 | 75.5 | 57.9 | 98.1 | 80.5 | 120.7 | 103.0 | | | 55.0 | 37.3 |
| | | K9 | | | | | 48.2 | 28.4 | 70.9 | 51.0 | 93.5 | 73.6 | 116.0 | 96.1 | | | 61.9 | 42.0 |
| | | K10 | | | | | 43.6 | 21.5 | 66.2 | 44.1 | 88.8 | 66.7 | 111.3 | 89.2 | 134.0 | 111.8 | 68.7 | 46.7 |
| | | K11 | | | | | | | 61.5 | 37.2 | 84.1 | 59.9 | 106.6 | 82.4 | 129.2 | 105.0 | 75.6 | 51.4 |
| | | K12 | | | | | | | 56.8 | 30.4 | 79.4 | 53.0 | 101.9 | 75.5 | 124.5 | 98.1 | 82.5 | 56.0 |
| RT160SR | Ø105 | K5 | 51.0 | 33.4 | 67.5 | 49.9 | 100.6 | 83.0 | | | | | | | | | 49.2 | 31.6 |
| | | K6 | 44.7 | 23.5 | 61.1 | 40.0 | 94.2 | 73.2 | 127.3 | 106.2 | | | | | | | 59.1 | 38.0 |
| | | K7 | 38.4 | 13.7 | 54.9 | 30.3 | 87.9 | 63.4 | 121.0 | 96.4 | | | | | | | 68.9 | 44.3 |
| | | K8 | | | 48.5 | 20.4 | 81.6 | 53.5 | 114.7 | 86.5 | 147.7 | 119.6 | 180.8 | 152.7 | | | 78.7 | 50.6 |
| | | K9 | | | | | 75.3 | 43.7 | 108.4 | 76.8 | 141.5 | 109.8 | 174.5 | 142.9 | | | 88.6 | 56.9 |
| | | K10 | | | | | 68.9 | 33.4 | 102.0 | 66.5 | 135.1 | 99.6 | 168.2 | 132.6 | 201.2 | 165.7 | 98.4 | 63.3 |
| | | K11 | | | | | | | 95.7 | 57.0 | 128.7 | 90.1 | 161.8 | 123.1 | 194.8 | 156.2 | 108.3 | 69.6 |
| | | K12 | | | | | | | 89.4 | 47.5 | 122.5 | 80.6 | 155.5 | 113.6 | 188.6 | 146.7 | 118.1 | 75.9 |
| RT255SR | Ø125 | K5 | 73 | 47 | 98 | 72 | 148 | 122 | | | | | | | | | 79 | 52 |
| | | K6 | 63 | 31 | 88 | 56 | 138 | 107 | 188 | 157 | | | | | | | 94 | 63 |
| | | K7 | 52 | 15 | 77 | 40 | 127 | 90 | 178 | 141 | | | | | | | 110 | 73 |
| | | K8 | | | 67 | 25 | 117 | 75 | 167 | 125 | 217 | 176 | 268 | 226 | | | 125 | 84 |
| | | K9 | | | | | 107 | 59 | 157 | 109 | 207 | 159 | 257 | 210 | | | 141 | 94 |
| | | K10 | | | | | 96 | 44 | 146 | 94 | 196 | 144 | 247 | 194 | 297 | 245 | 157 | 105 |
| | | K11 | | | | | | | 136 | 78 | 186 | 128 | 236 | 178 | 286 | 228 | 173 | 115 |
| | | K12 | | | | | | | 125 | 63 | 176 | 113 | 226 | 163 | 276 | 213 | 188 | 125 |
| RT435SR | Ø140 | K5 | 128 | 85 | 171 | 127 | 256 | 213 | | | | | | | | | 129 | 86 |
| | | K6 | 111 | 59 | 154 | 102 | 239 | 187 | 325 | 273 | | | | | | | 155 | 103 |
| | | K7 | 94 | 33 | 137 | 76 | 222 | 162 | 308 | 247 | | | | | | | 181 | 120 |
| | | K8 | | | 120 | 50 | 205 | 136 | 291 | 221 | 376 | 307 | 462 | 392 | | | 206 | 137 |
| | | K9 | | | | | 187 | 110 | 273 | 196 | 358 | 281 | 444 | 367 | | | 232 | 155 |
| | | K10 | | | | | 170 | 84 | 256 | 169 | 341 | 255 | 427 | 340 | 512 | 426 | 258 | 172 |
| | | K11 | | | | | | | 238 | 143 | 324 | 229 | 409 | 314 | 495 | 400 | 284 | 189 |
| | | K12 | | | | | | | 221 | 118 | 307 | 203 | 392 | 289 | 478 | 374 | 310 | 206 |

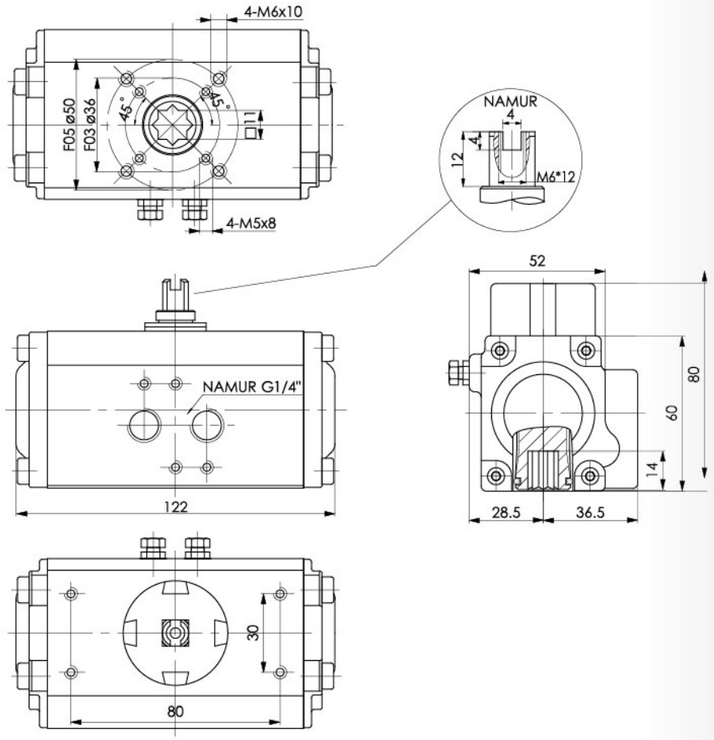
| 输出扭矩 Output torque of air to springs (Nm) | | | | | | | | | | | | | | | | | | Springs' output | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 气压 Air Pressure | | | 2.5 Bar | | 3 Bar | | 4 Bar | | 5 Bar | | 6 Bar | | 7 Bar | | 8 Bar | | | |
| Model | Cylinder Dia. | Spring Qty | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 0° Start | 90° End | 90° Start | 0° End |
| RT665SR | Ø160 | K5 | 193 | 124 | 259 | 191 | 392 | 324 | | | | | | | | | 208 | 140 |
| | | K6 | 165 | 83 | 232 | 149 | 365 | 282 | 498 | 415 | | | | | | | 250 | 168 |
| | | K7 | 137 | 41 | 203 | 107 | 336 | 240 | 469 | 373 | | | | | | | 292 | 196 |
| | | K8 | | | 176 | 66 | 309 | 199 | 442 | 237 | 575 | 465 | 708 | 598 | | | 333 | 223 |
| | | K9 | | | | | 280 | 157 | 413 | 290 | 546 | 423 | 679 | 556 | | | 375 | 251 |
| | | K10 | | | | | 253 | 115 | 386 | 248 | 519 | 381 | 652 | 514 | 785 | 647 | 417 | 279 |
| | | K11 | | | | | | | 358 | 207 | 491 | 340 | 624 | 473 | 757 | 606 | 458 | 307 |
| | | K12 | | | | | | | 330 | 165 | 463 | 298 | 596 | 431 | 729 | 564 | 500 | 335 |
| RT1000SR | Ø190 | K5 | 332 | 222 | 438 | 329 | 651 | 542 | | | | | | | | | 309 | 200 |
| | | K6 | 292 | 161 | 398 | 267 | 611 | 480 | 824 | 693 | | | | | | | 371 | 240 |
| | | K7 | 252 | 99 | 358 | 205 | 571 | 418 | 784 | 631 | | | | | | | 433 | 280 |
| | | K8 | | | 318 | 143 | 531 | 356 | 744 | 569 | 957 | 782 | 1169 | 995 | | | 495 | 320 |
| | | K9 | | | | | 491 | 295 | 704 | 507 | 917 | 720 | 1130 | 933 | | | 557 | 360 |
| | | K10 | | | | | 451 | 233 | 664 | 446 | 877 | 658 | 1090 | 871 | 1302 | 1084 | 618 | 400 |
| | | K11 | | | | | | | 624 | 384 | 837 | 597 | 1050 | 809 | 1263 | 1022 | 680 | 440 |
| | | K12 | | | | | | | 584 | 322 | 797 | 535 | 1010 | 748 | 1223 | 960 | 742 | 480 |
| RT1200SR | Ø210 | K5 | 390 | 285 | 523 | 418 | 789 | 684 | | | | | | | | | 380 | 275 |
| | | K6 | 335 | 209 | 468 | 342 | 734 | 608 | 1000 | 874 | | | | | | | 456 | 330 |
| | | K7 | 280 | 133 | 413 | 266 | 679 | 532 | 945 | 798 | | | | | | | 532 | 385 |
| | | K8 | | | 358 | 190 | 624 | 456 | 890 | 722 | 1156 | 988 | 1422 | 1254 | | | 608 | 440 |
| | | K9 | | | | | 569 | 380 | 835 | 646 | 1101 | 912 | 1367 | 1178 | | | 684 | 495 |
| | | K10 | | | | | 514 | 304 | 780 | 570 | 1046 | 836 | 1312 | 1102 | 1578 | 1368 | 760 | 550 |
| | | K11 | | | | | | | 725 | 494 | 991 | 760 | 1257 | 1026 | 1523 | 1292 | 836 | 605 |
| | | K12 | | | | | | | 670 | 418 | 936 | 684 | 1202 | 950 | 1468 | 1216 | 912 | 660 |
| RT1800SR | Ø240 | K5 | 552 | 409 | 744 | 600 | 1129 | 985 | | | | | | | | | 554 | 410 |
| | | K6 | 470 | 297 | 662 | 489 | 1047 | 874 | 1432 | 1259 | | | | | | | 665 | 492 |
| | | K7 | 388 | 187 | 580 | 379 | 964 | 764 | 1349 | 1149 | | | | | | | 775 | 575 |
| | | K8 | | | 498 | 268 | 883 | 653 | 1267 | 1037 | 1652 | 1422 | 2037 | 1807 | | | 886 | 656 |
| | | K9 | | | | | 800 | 542 | 1185 | 926 | 1569 | 1311 | 1954 | 1696 | | | 998 | 739 |
| | | K10 | | | | | 718 | 431 | 1103 | 816 | 1488 | 1201 | 1872 | 1586 | 2257 | 1970 | 1108 | 821 |
| | | K11 | | | | | | | 1021 | 705 | 1406 | 1090 | 1791 | 1474 | 2176 | 1859 | 1219 | 903 |
| | | K12 | | | | | | | 939 | 594 | 1323 | 979 | 1708 | 1363 | 2093 | 1748 | 1330 | 985 |
| RT2700SR | Ø270 | K5 | 903 | 675 | 1195 | 968 | 1779 | 1552 | | | | | | | | | 787 | 560 |
| | | K6 | 790 | 519 | 1083 | 811 | 1667 | 1396 | 2252 | 1981 | | | | | | | 943 | 672 |
| | | K7 | 679 | 361 | 972 | 654 | 1556 | 1238 | 2141 | 1823 | | | | | | | 1101 | 783 |
| | | K8 | | | 860 | 497 | 1444 | 1081 | 2029 | 1666 | 2614 | 2252 | 3199 | 2836 | | | 1258 | 895 |
| | | K9 | | | | | 1332 | 923 | 1917 | 1509 | 2502 | 2094 | 3087 | 2678 | | | 1416 | 1007 |
| | | K10 | | | | | 1220 | 767 | 1805 | 1352 | 2390 | 1937 | 2974 | 2521 | 3560 | 3107 | 1572 | 1119 |
| | | K11 | | | | | | | 1693 | 1194 | 2278 | 1779 | 2862 | 2364 | 3448 | 2949 | 1730 | 1231 |
| | | K12 | | | | | | | 1582 | 1037 | 2167 | 1623 | 2751 | 2207 | 3336 | 2792 | 1887 | 1342 |
| RT3800SR | Ø300 | K5 | 1097 | 729 | | | | | | | | | | | | | 1061 | 730 |
| | | K6 | 935 | 494 | 1316 | 875 | | | | | | | | | | | 1273 | 876 |
| | | K7 | 772 | 258 | 1153 | 639 | 1916 | 1402 | | | | | | | | | 1485 | 1022 |
| | | K8 | | | 991 | 403 | 1754 | 1166 | 2517 | 1929 | | | | | | | 1697 | 1168 |
| | | K9 | | | | | 1592 | 930 | 2355 | 1693 | 3118 | 2456 | | | | | 1909 | 1314 |
| | | K10 | | | | | 1430 | 695 | 2193 | 1458 | 2956 | 2221 | 3719 | 2984 | 4482 | 3747 | 2122 | 1460 |
| | | K11 | | | | | | | 2030 | 1222 | 2793 | 1985 | 3556 | 2748 | 4319 | 3511 | 2334 | 1606 |
| | | K12 | | | | | | | 1868 | 986 | 2631 | 1749 | 3394 | 2512 | 4157 | 3275 | 2546 | 1752 |
| RT5700SR | Ø350 | K5 | 1553 | 964 | | | | | | | | | | | | | 1702 | 1173 |
| | | K6 | 1292 | 586 | 1863 | 1157 | | | | | | | | | | | 2043 | 1408 |
| | | K7 | 1031 | 208 | 1602 | 779 | 2745 | 1922 | | | | | | | | | 2383 | 1642 |
| | | K8 | | | 1341 | 401 | 2484 | 1544 | 3626 | 2686 | | | | | | | 2724 | 1877 |
| | | K9 | | | | | 2224 | 1165 | 3336 | 2307 | 4508 | 3449 | | | | | 3064 | 2112 |
| | | K10 | | | | | 1963 | 787 | 3105 | 1929 | 4247 | 3071 | 5390 | 4214 | 6532 | 5356 | 3405 | 2346 |
| | | K11 | | | | | | | 2844 | 1551 | 3986 | 2693 | 5129 | 3836 | 6271 | 4978 | 3745 | 2581 |
| | | K12 | | | | | | | 2584 | 1172 | 3726 | 2314 | 4869 | 3457 | 6011 | 4599 | 4086 | 2816 |
| RT8000SR | Ø400 | K7 | 2028 | 869 | | | | | | | | | | | | | 2880 | 1837 |
| | | K8 | 1736 | 411 | 2550 | 1225 | | | | | | | | | | | 3292 | 2100 |
| | | K9 | | | 2259 | 768 | 3887 | 2396 | | | | | | | | | 3703 | 2362 |
| | | K10 | | | 1967 | 311 | 3595 | 1939 | 5223 | 3567 | | | | | | | 4115 | 2624 |
| | | K11 | | | | | 3303 | 1482 | 4931 | 3110 | 6559 | 4738 | | | | | 4526 | 2887 |
| | | K12 | | | | | 3012 | 1025 | 4640 | 2653 | 6268 | 4281 | 7895 | 5908 | 9523 | 7536 | 4938 | 3149 |
| | | K13 | | | | | | | 4348 | 2195 | 5976 | 3823 | 7603 | 5450 | 9231 | 7078 | 5349 | 3412 |
| | | K14 | | | | | | | 4057 | 1738 | 5685 | 3366 | 7312 | 4993 | 8940 | 6621 | 5761 | 3674 |
| | | K15 | | | | | | | 3765 | 1281 | 5393 | 2909 | 7020 | 4536 | 8648 | 6164 | 6172 | 3937 |
| | | K16 | | | | | | | | | 5101 | 2452 | 6728 | 4079 | 8356 | 5707 | 6584 | 4199 |

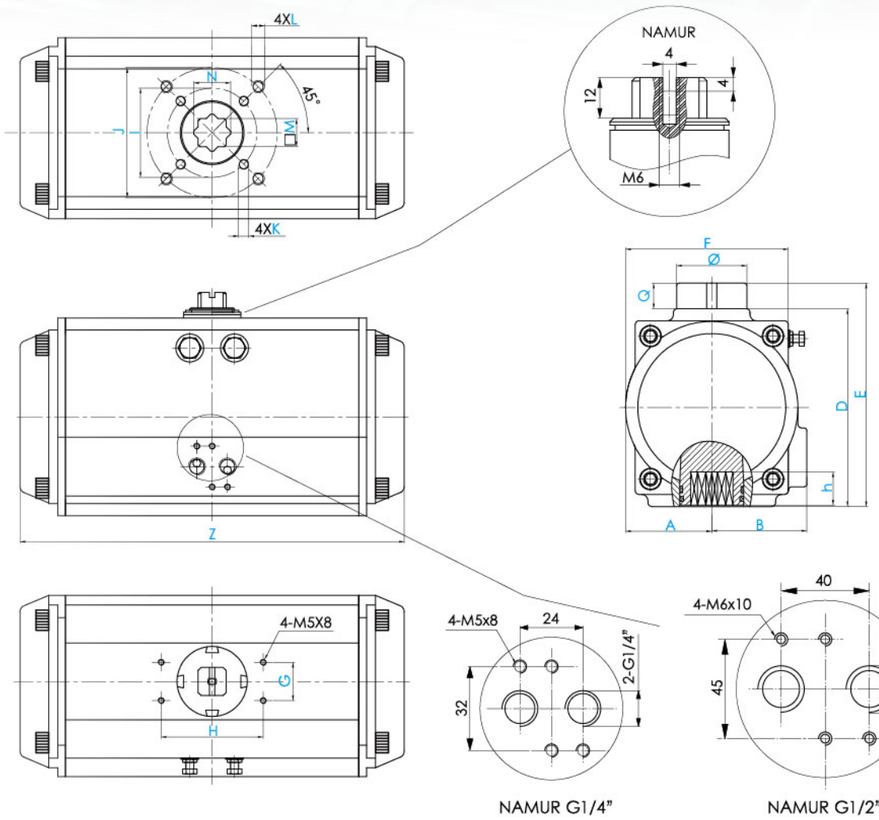
## 外形尺寸 Dimension

RT007DA
(Ø32)



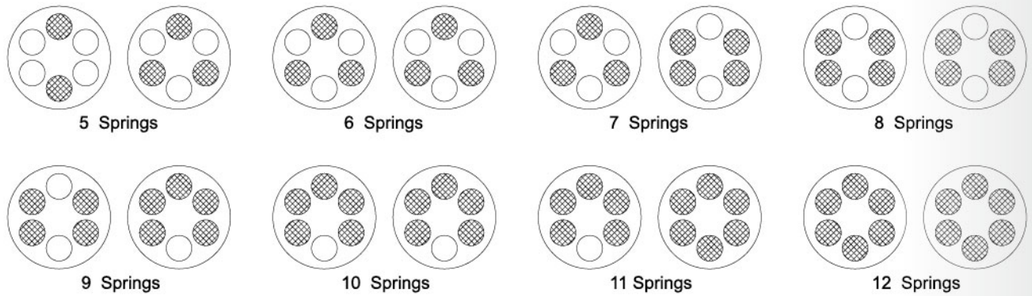

RT012DA
(Ø40)




| 型号 Model | 缸径 Cylinder | A | B | D | E | F | G | H | I | J | K | L | M | N | Q | h | Z | Ø | 气源接口 Air Connection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RT020 | Ø52 | 30 | 41.5 | 72 | 92 | 65 | 30 | 80 | F03 | F05 | M5x8 | M6x10 | 11 | Ø15.5 | 20 | 14 | 149 | Ø40 | |
| RT035 | Ø63 | 36 | 47 | 88 | 108 | 72 | 30 | 80 | F05 | FO7 | M6x10 | M8x13 | 14 | Ø19.7 | 20 | 18 | 168 | Ø40 | |
| RT050 | Ø75 | 42 | 53 | 99.5 | 119.5 | 81 | 30 | 80 | F05 | FO7 | M6x10 | M8x13 | 14 | Ø19.7 | 20 | 18 | 184 | Ø40 | |
| RT075 | Ø83 | 46 | 57 | 109 | 129 | 92 | 30 | 80 | F05 | FO7 | M6x10 | M8x13 | 17 | Ø24 | 20 | 21 | 210 | Ø40 | |
| RT110 | Ø92 | 50 | 58.5 | 116.5 | 136.5 | 98 | 30 | 80 | F05 | FO7 | M6x10 | M8x13 | 17 | Ø24 | 20 | 21 | 262 | Ø40 | |
| RT160 | Ø105 | 57.5 | 64 | 133 | 153 | 109.5 | 30 | 80 | F07 | F10 | M8x13 | M10x16 | 22 | Ø31 | 20 | 26 | 268 | Ø40 | NAMUR G1/4" |
| RT255 | Ø125 | 67.5 | 74.5 | 155 | 175 | 127.5 | 30 | 80 | F07 | F10 | M8x13 | M10x16 | 22 | Ø29.5 | 20 | 26 | 301 | Ø55 | (1/4" NPT) |
| RT435 | Ø140 | 75 | 77 | 172 | 192 | 137.5 | 30 | 80 | F10 | F12 | M10x16 | M12x20 | 27 | Ø36.7 | 20 | 31 | 394 | Ø55 | |
| RT665 | Ø160 | 87 | 87 | 197 | 217 | 158 | 30 | 80 | F10 | F12 | M10x16 | M12x20 | 27 | Ø36.7 | 20 | 31 | 458 | Ø55 | |
| RT1000 | Ø190 | 103 | 103 | 230 | 260 | 189 | 30 | 130 | / | F14 | | M16x25 | 36 | Ø49.5 | 30 | 40 | 528 | Ø80 | |
| RT1200 | Ø210 | 113 | 113 | 255 | 285 | 210 | 30 | 130 | / | F14 | | M16x25 | 36 | Ø49.5 | 30 | 40 | 536 | Ø80 | |
| RT1800 | Ø240 | 130 | 130 | 289 | 319 | 245 | 30 | 130 | / | F16 | | M20x25 | 46 | Ø63.6 | 30 | 50 | 606 | Ø80 | |
| RT2700 | Ø270 | 147 | 147 | 328 | 358 | 273 | 30 | 130 | / | F16 | | M20x25 | 46 | Ø63.6 | 30 | 50 | 726 | Ø80 | |
| RT3800 | Ø300 | 203 | 203 | 348 | 378 | 290 | 30 | 130 | F16 | Ø215 | M20x25 | M20x25 | 46 | Ø63.6 | 30 | 60 | 760 | Ø80 | NAMUR G1/2" |
| RT5700 | Ø350 | 230 | 230 | 408 | 438 | 336 | 30 | 130 | F16 | F25 | M20x25 | 8-M16x25 | 55 | Ø63.6 | 30 | 60 | 888 | Ø80 | (1/2" NPT) |
| RT8000 | Ø400 | 258 | 258 | 480 | 510 | 360 | 30 | 130 | F16 | F25 | M20x25 | 8-M16x25 | 55 | Ø77.7 | 30 | 60 | 930 | Ø80 | |

## 单作用执行器弹簧安装形式 Spring mounting form for spring return actuators




## 重量表 Weight Table (Net Weight)

Unit: KG

| Model | RT007 | RT012 | RT020 | RT035 | RT050 | RT075 | RT110 | RT160 | RT255 |
|---|---|---|---|---|---|---|---|---|---|
| Cylinder Dia. | Ø32 | Ø40 | Ø52 | Ø63 | Ø75 | Ø83 | Ø92 | Ø105 | Ø125 |
| DA | 0.70 | 1.00 | 1.35 | 1.95 | 2.56 | 3.28 | 4.58 | 5.89 | 8.94 |
| SRK12 | - | 1.10 | 1.48 | 2.12 | 2.83 | 3.69 | 5.35 | 6.72 | 10.32 |

| Model | RT435 | RT665 | RT1000 | RT1200 | RT1800 | RT2700 | RT3800 | RT5700 | RT8000 |
|---|---|---|---|---|---|---|---|---|---|
| Cylinder Dia. | Ø140 | Ø160 | Ø190 | Ø210 | Ø240 | Ø270 | Ø300 | Ø350 | Ø400 |
| DA | 13.43 | 19.96 | 34.99 | 46.77 | 54.16 | 77.17 | 106.53 | 160.07 | 181.94 |
| SRK12 | 15.84 | 23.73 | 41.93 | 55.94 | 67.03 | 98.29 | 133.94 | 209.10 | 225.46 |

Note: DA=Double Acting, SRK12=spring return with 12 springs　　注：表中单作用的弹簧数量为12

## 耗气量 Air Consumption

开向体积和关向体积Air Volume Opening & Closing

Unit: L

| Model 型 号 | Air volume opening 开向体积(升) | Air volume closing 关向体积(升) |
|---|---|---|
| RT007 | 0.04 | 0.05 |
| RT012 | 0.08 | 0.11 |
| RT020 | 0.12 | 0.16 |
| RT035 | 0.21 | 0.23 |
| RT050 | 0.3 | 0.34 |
| RT075 | 0.43 | 0.47 |
| RT110 | 0.64 | 0.73 |
| RT160 | 0.95 | 0.88 |
| RT255 | 1.6 | 1.4 |

| Model 型 号 | Air volume opening 开向体积(升) | Air volume colsing 关向体积(升) |
|---|---|---|
| RT435 | 2.5 | 2.2 |
| RT665 | 3.7 | 3.2 |
| RT1000 | 5.9 | 5.4 |
| RT1200 | 7.5 | 7.5 |
| RT1800 | 11 | 9 |
| RT2700 | 17 | 14 |
| RT3800 | 23.8 | 29.7 |
| RT5700 | 35.1 | 46.3 |
| RT8000 | 52.6 | 56 |

耗气量取决于供气压力、开关行程、体积及动作次数，计算如下：

升/分=气缸体积（开向体积+关向体积）×［供气压力(Kpa)+101.3 / 101.3］×次数/分钟

**Air consumption rest with Air Supply. Air volume and Action cycle times, expressions:**

L/Min = Air volume (Air volume Opening+Air volume closing) × [Air Supply (Kpa)+101.3 / 101.3] ×Action cycle times (/min)





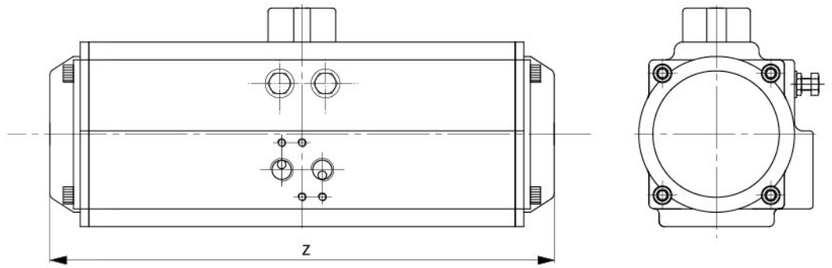
## 120°,135°,180° 双作用执行器 Double Acting Actuator

为满足不同类型阀门及机械自动化的驱动要求，我司可根据客户要求定制不同行程(例120°、135°、180°等)的气动执行器。
We product special strokes actuator(e.g. 120°, 135°, 180°) on requests.

### 输出扭矩 Output Torque

输出扭矩请参考90°行程气动执行器扭矩表
Please refer to the output torque of 90° actuator

### 120°,135°,180° 双作用执行器尺寸表
### Measurement of 120°,135°,180° Double Acting Actuator




| Size | RT020 180° | RT035 180° | RT050 180° | RT075 180° | RT110 180° | RT160 180° | RT255 180° | RT435 180° | RT665 180° | RT1000 180° | RT1200 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Z(mm) | 213 | 243 | 258 | 298 | 362 | 386 | 429 | 569 | 652 | 756 | 760 |

For more information, please contact us.　　(The size of 120°, 135° actuator is the same as 180°)

## 三位式执行器 Three Position Pneumatic Actuator

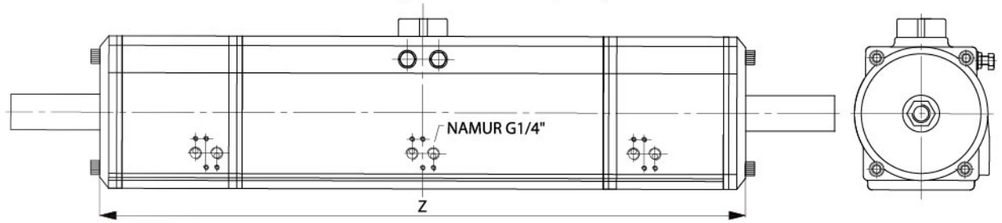
三位式气动执行器是一种特殊规格的执行机构，提供了0°，45°，90°或0°，90°，180°的三位式操作方式。中间位置是依靠两个辅助活塞的移动产生的机械制动来实现的。中间位置是可调的。如90°行程的执行器能提供20°，30°，50°，70°等的中间位置。

Three position actuator provide an three position operation mode of 0°, 45°, 90°or 0°, 90°, 180°, The midway position is achieved by a mechanical stop produced by the movement of the 2 auxiliary pistons. The midway position is adjustable. Example: A 90° three position actuator can provide a midway position of 20°, 30°, 40°, 50°, 70°etc.

### 输出扭矩 Output Torque

输出扭矩请参考90°行程气动执行器扭矩表
Please refer to the output torque of 90° actuator

### 90° 三位式双作用执行器尺寸表 Length of DA–3P(90°)




| Size | RT020-3P | RT035-3P | RT050-3P | RT075-3P | RT110-3P | RT160-3P | RT255-3P | RT435-3P | RT665-3P | RT1000-3P | RT1200-3P |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Z(mm) | 266 | 303 | 306 | 336 | 394 | 410 | 456 | 570 | 646 | 788 | 788 |

For more information, please contact us.