



# ART系列 气动执行机构

ART SERIES PNEUMATIC ACTUATORS

无锡爱圣拓克流体控制有限公司  
Ascend Torque Flow Controls Co., Ltd.



爱圣拓克是中国较早研制、开发和生产齿轮齿条式气动执行器的工厂之一。经过近多年的改革与创新，爱圣拓克正向世界各地供应高质量的气动执行器和阀门控制产品。

为了给客户创造价值，爱圣拓克坚持不断改进并引进先进的生产工艺，严格控制产品质量。高精度的加工中心和专业的产品研发团队，为产品质量的可靠性、稳定性提供了有力保障，同时也保证了新产品研发的质量和效率。

公司本着“传承匠心，融合创新”的核心理念，竭诚为新老客户提供更周到的服务，更专业的技术，更卓越的产品。



## 关于我们

## ABOUT US



**ASCEND TORQUE** is a professional manufacturer of rack & pinion pneumatic actuator. With many years reform and innovation, ASCEND TORQUE is supplying the high-quality pneumatic actuators and other valve control products to all over the world.

To create customer value, **ASCEND TORQUE** continues to improve and introduce advanced production technology and strict control of product quality all the time. The world class production equipment and professional engineering team provides strong guarantee for the reliability and stability of product quality, and also for the quality and efficiency of researching and developing new products.

**ASCEND TORQUE** will offer all of our new and regular customers more attentive service, more professional technology and more excellent products.

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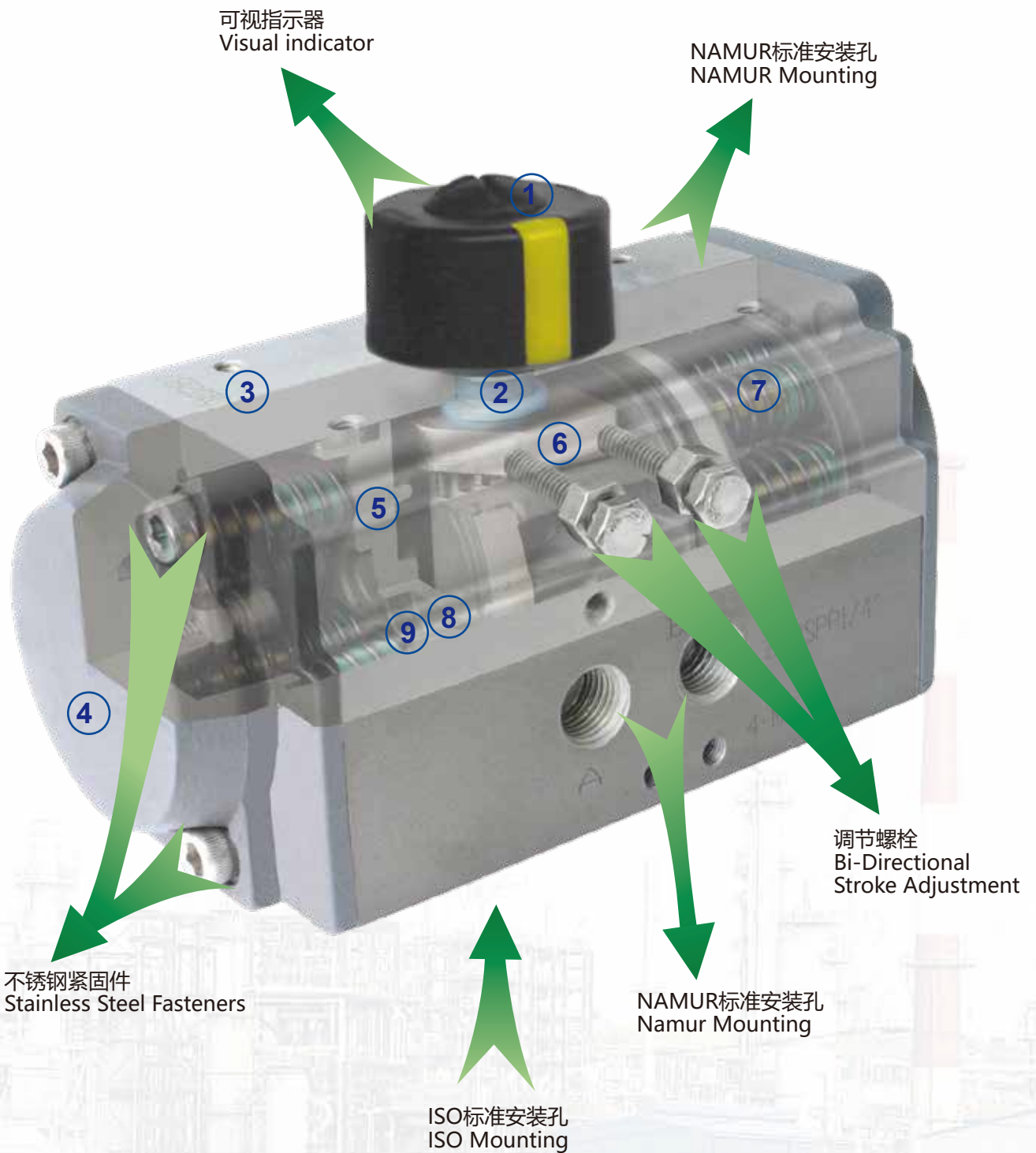
RAL3020

RAL5017

RAL7024



## 产品结构 Construction



## ① 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.

## ② 输出轴 Pinion

镀镍合金钢、高精度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 latest standards of ISO5211, DIN3337, NAMUR. The dimensions can be customized and the stainless steel is available.



## ③ 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（根据要求喷涂蓝色、橙色、黄色等）、PTFE 涂层或镀镍满足不同要求。  
According to the different requirements, the extruded aluminum alloy ASTM6005 Body can be treated with hard anodized, powder polyester painted (different colours is available such as blue, orange, yellow etc.), PTFE or Nickel plated.

## ④ 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 powder polyester painted in different colours, PTFE or Nickel plated.

## ⑤ 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.

## ⑥ 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 $\pm 5^\circ$ 的调节开、关位置。  
The two independent external travel stop adjustment bolts can adjust  $\pm 5^\circ$  at both open and close directions easily and precisely.

## ⑦ 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.

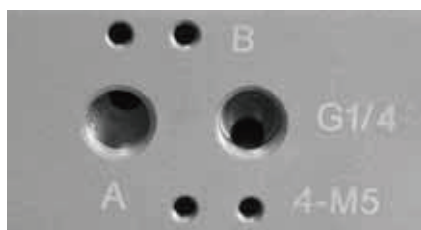
## ⑧ 轴承、导板 Bearings & Guides

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.

## ⑨ 密封圈 O-rings

在常温工作条件下使用丁腈橡胶，在高温或低温时采用氟橡胶或低温丁腈橡胶。  
NBR rubber O-rings provide trouble-free operation at standard temperature ranges. For high and low temperature applications FKM or LTNBR.

## 安装标准 Mounting Standard



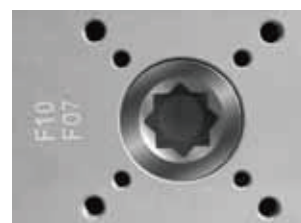
气源接口符合NAMUR标准，可简单地安装电磁阀。

Air supply connection is designed in accordance with NAMUR Standard to install solenoid valves.



输出轴的NAMUR标准槽和缸体上部标准安装孔，可使限位开关、定位器直接啮合和安装。

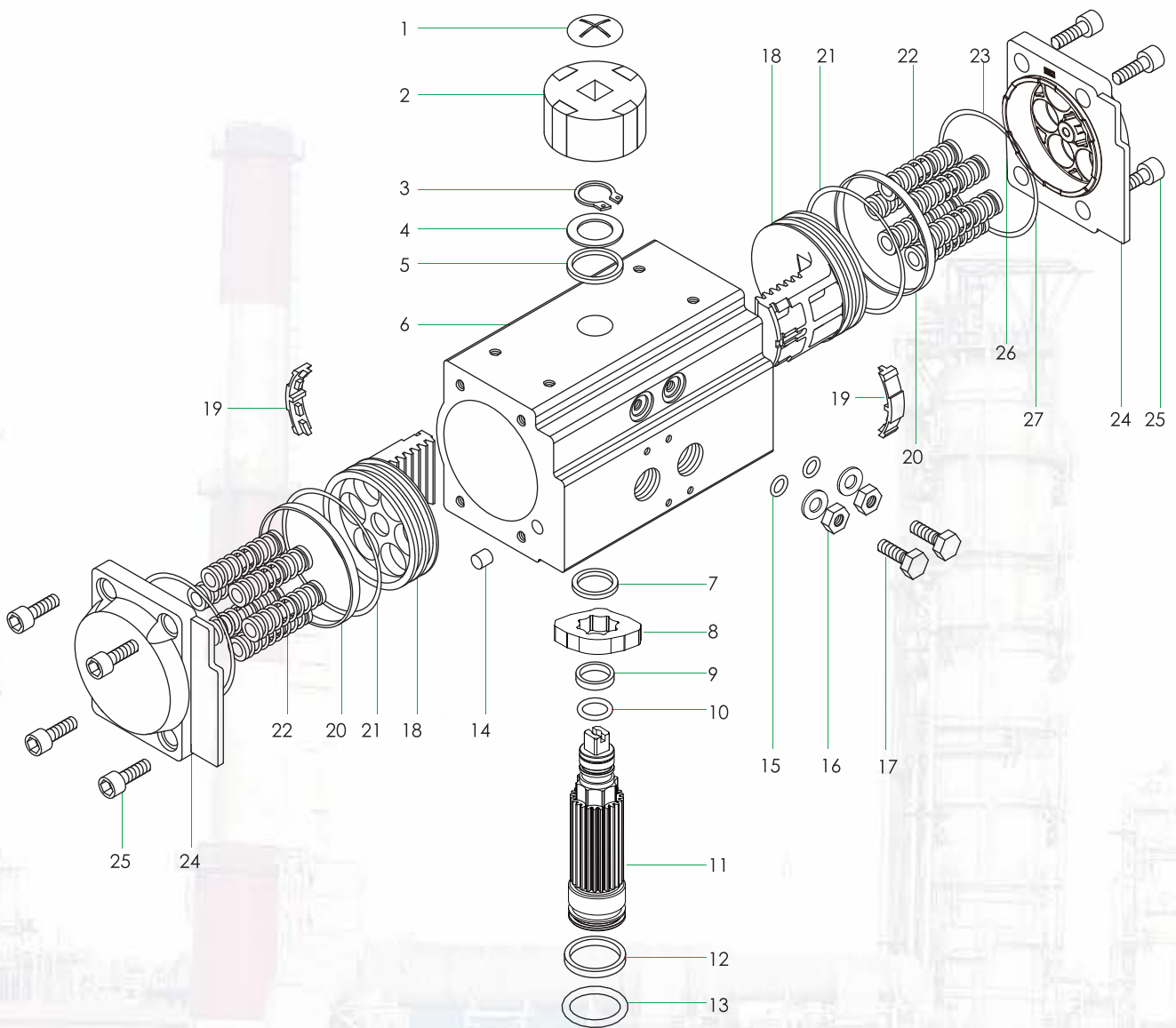
The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limit switch box and positioner.



底部安装孔设计符合ISO 5211、DIN3337标准，可以直接安装离合器(气动手轮机构)或安装支架。

Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.

## 零件和材料 Parts and Material



序号	名称	数量	材料	防腐处理	可选材料
1	指示器螺钉	1	塑料+不锈钢		
2	指示器	1	塑料		
3	卡簧	1	不锈钢		
4	垫圈	1	不锈钢		
5	外垫片	1	工程塑料		
6	缸体	1	铸铝	硬质氧化等	
7	内垫片	1	工程塑料		
8	凸轮	1	合金钢		
9	上轴轴承	1	工程塑料		
10	上轴O型圈	1	丁腈橡胶		氟橡胶/低温丁腈橡胶
11	齿轴	1	合金钢	镀镍	不锈钢
12	下轴轴承	1	工程塑料		
13	下轴O型圈	1	丁腈橡胶		氟橡胶/低温丁腈橡胶
14	堵头	2	丁腈橡胶		
15	调节螺钉O型圈	2	丁腈橡胶		氟橡胶/低温丁腈橡胶
16	调节螺母和垫片	4	不锈钢		
17	调节螺栓	2	不锈钢		
18	活塞	2	铸铝	氧化	
19	活塞导板	2	工程塑料		
20	活塞轴承	2	工程塑料		
21	活塞O型圈	2	丁腈橡胶		氟橡胶/低温丁腈橡胶
22	弹簧	0~12	弹簧钢	电泳漆	
23	端盖O型圈	2	丁腈橡胶		氟橡胶/低温丁腈橡胶
24	端盖	2	铸铝	粉末喷涂等	
25	端盖螺栓	8	不锈钢		
26	限位螺栓	2	不锈钢		
27	限位螺母	2	不锈钢		

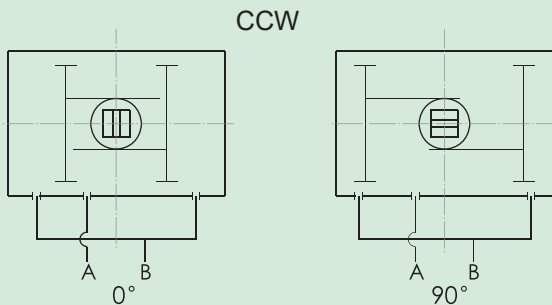


No.	Description	Qty	STANDARD MATERIAL	PROTECTION	OPTIONAL MATERIAL
1	Indicator screw	1	Plastic+Stainless Steel		
2	Indicator	1	Plastic		
3	Spring clip	1	Stainless Steel		
4	Thrust washer	1	Stainless Steel		
5	Outside washer	1	Engineering plastics		
6	Body	1	Extruded aluminum alloy	Hard anodized etc	
7	Inside washer	1	Engineering plastics		
8	Cam	1	Alloy steel		
9	O-ring (pinion top)	1	NBR		
10	Bearing(pinion top)	1	Engineering plastics		FKM/LTNBR
11	Pinion	1	Alloy steel	Nickel plated	Stainless Steel
12	O-ring pinion bottom)	1	Engineering plastics		
13	Bearing(pinion bottom)	1	NBR		FKM/LTNBR
14	Plug	2	NBR		
15	O-ring(Adjust screw)	2	NBR		FKM/LTNBR
16	Nut(Adjust screw) & Gasket	4	Stainless Steel		
17	Adjust screw	2	Stainless Steel		
18	Piston	2	Cast aluminum/casting	Anodized	
19	Guide(Piston)	2	Engineering plastics		
20	Bearing(Piston)	2	Engineering plastics		
21	O-ring(Piston)	2	NBR		FKM/LTNBR
22	Spring	0~12	Spring steel	Electrophoretic paint	
23	O-ring(End cap)	2	NBR		FKM/LTNBR
24	End cap	2	Cast aluminum	Powder polyster painted etc	
25	Cap screw	8	Stainless Steel		
26	Stop screw	2	Stainless Steel		
27	Nut(stop screw)	2	Stainless Steel		



## 工作原理 Operating Principle

### 双作用执行器 Double Acting Actuators

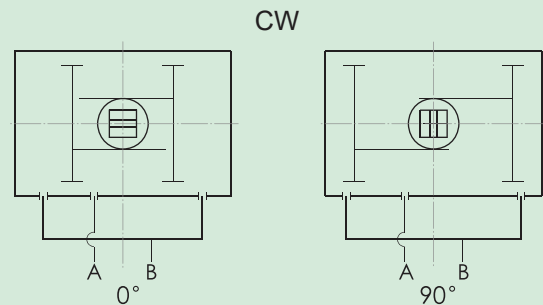


A口进气, 压缩空气推动活塞向外运动, 使执行器输出轴逆时针旋转( $0^\circ \rightarrow 90^\circ$ ), B口排气。

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( $90^\circ \rightarrow 0^\circ$ ), A口排气。

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

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



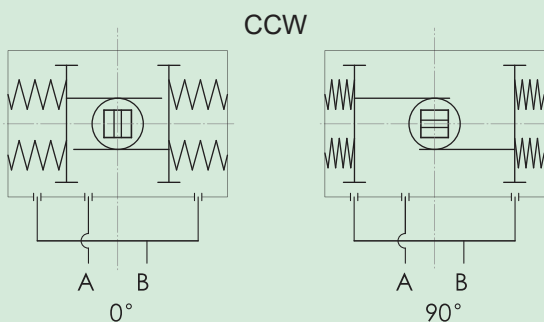
A口进气, 压缩空气推动活塞向外运动, 使执行器输出轴顺时针旋转( $0^\circ \rightarrow 90^\circ$ ), B口排气。

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( $90^\circ \rightarrow 0^\circ$ ), A口排气。

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

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

### 单作用执行器 Spring Return Actuators

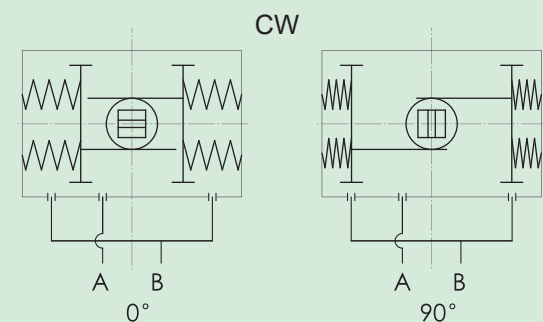


A口进气, 压缩空气克服弹簧力, 推动活塞向外运动, 执行器输出轴逆时针转动( $0^\circ \rightarrow 90^\circ$ ), B口排气;

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( $90^\circ \rightarrow 0^\circ$ ), A口排气。

Air to port A forces the pistons outwards, causing the springs to compress. The pinion 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 pinion 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( $0^\circ \rightarrow 90^\circ$ ), 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( $90^\circ \rightarrow 0^\circ$ ), A口排气。

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



## 选型办法 Sizing Method

### 双作用执行器的选型:

在正常工作条件下, 双作用执行器考虑的安全系数为20%-30%。  
示例:

阀门力矩=100Nm  
安全力矩=100×(1+30%)=130Nm  
气源压力=5Bar

对照双作用力矩表, 选配双作用执行器最小规格为ART105DA。

### Sizing: Double Acting Actuator

The suggested safety factor for double acting actuators under normal working conditions is 20%-30%.

#### Example:

The torque needed by valve=100Nm  
The torque considered safety factor (1+30%)=130Nm  
Air Supply=5Bar

According to the above table, we can choose the minimum model is ART105DA.

### 单作用执行器的选型:

在正常工作条件下, 单作用执行器考虑的安全系数为30%-50%  
示例:

阀门需要力矩=120N.m  
安全力矩=120×(1+30%)=156N.m  
气源压力=5Bar

对照单作用执行器输出力矩表, 我们可以查到  
ART140SR K10输出力矩为  
空气行程0°=256N.m 空气行程90°=169N.m  
弹簧行程90°=258N.m 弹簧行程0°=172N.m  
所有输出力矩均大于需求力矩。

### Sizing: Spring Return Actuator

The suggested safety factor for spring return actuator under normal working conditions is 30-50%

#### Example:

The torque needed by valve=120N.m  
The torque consider safety factor =120×(1+30%)=156N.m  
Air Supply=5Bar

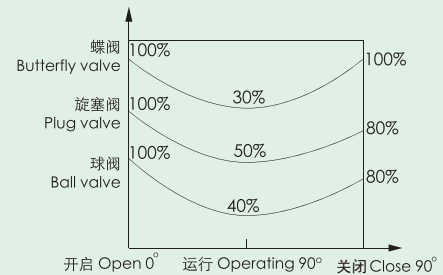
According to the table of spring return actuators output we find output torque of ART140SR K10 is:

Air stroke 0°=256N.m Air stroke 90°=169N.m  
Spring stroke 90°=258N.m Spring stroke 0°=172N.m

All the output torque is larger than we needed.

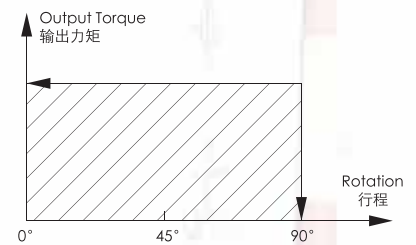
在单作用执行器的选配过程中, 如果能够了解阀门在开启、运行和关闭时的扭矩分配, 我们就可以更加经济、更加合理地选配执行器。

During sizing the spring return actuators, we can choose the more reasonable and more economical actuators, if we know the different torque needed by the valve working at opening, operating and closing.



## 双作用输出力矩

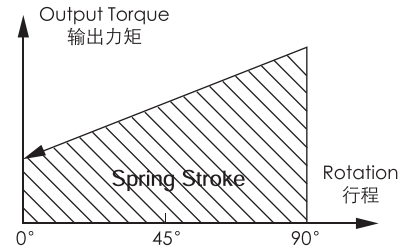
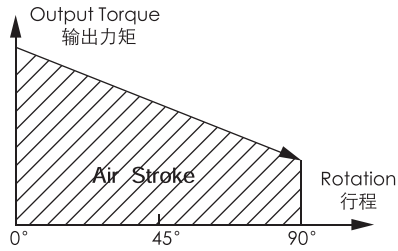
## Output Torque of Double Acting Actuators



单位: 牛米 / Unit: Nm

型号 Model	气源压力(单位: 巴) Air supply pressure (Unit: bar)									
	2Bar	2.5Bar	3Bar	4Bar	4.5Bar	5Bar	5.5Bar	6Bar	7Bar	8Bar
ART32DA	3	4	5	6	7	8	8	9	11	12
ART40DA	5	6	7	10	11	12	13	14	17	19
ART52DA	8	10	12	16	18	20	22	24	28	32
ART63DA	15	18	22	29	33	36	40	44	51	58
ART75DA	20	25	30	40	45	50	55	60	70	80
ART83DA	31	39	47	63	70	78	86	94	110	125
ART92DA	45	56	68	90	102	113	124	135	158	181
ART105DA	66	83	99	132	149	165	182	198	231	264
ART125DA	100	125	150	200	226	251	276	301	351	401
ART140DA	171	214	256	342	385	427	470	513	598	684
ART160DA	266	332	399	532	598	665	731	798	931	1064
ART190DA	426	532	638	851	958	1064	1170	1277	1490	1702
ART210DA	532	665	798	1064	1197	1330	1463	1596	1862	2128
ART240DA	769	962	1154	1539	1731	1924	2116	2308	2693	3078
ART270DA	1170	1462	1754	2339	2632	2924	3216	3509	4094	4679
ART300DA	1526	1908	2289	3052	3434	3815	4197	4578	5341	6104
ART350DA	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
ART400DA	3256	4070	4884	6512	7326	8140	8954	9768	11396	13024

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



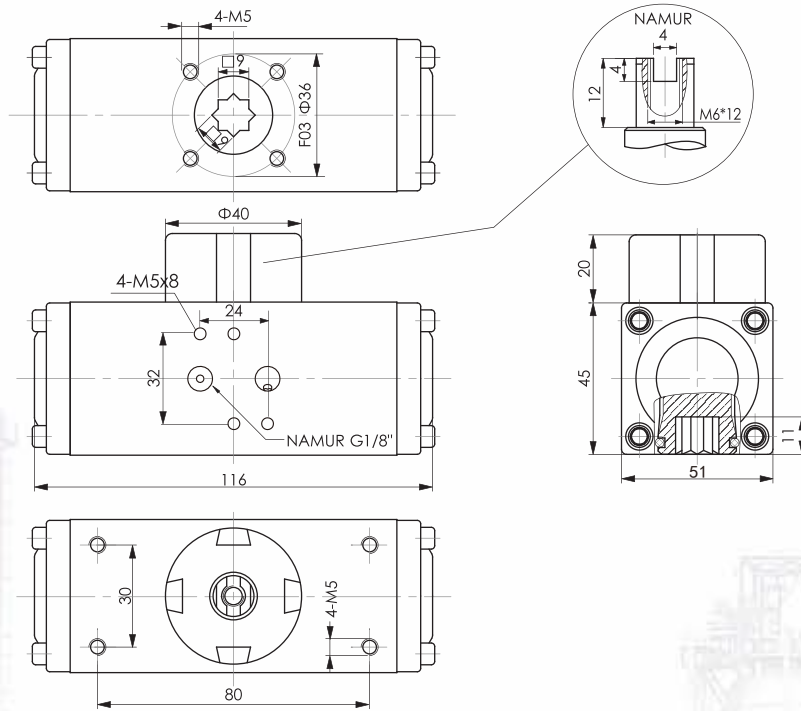
单位：牛米 / Unit: Nm

气压 Air Pressure		输出扭矩 Output torque of air to springs																				弹簧输出扭矩 Spring's output			
		2.5 Bar		3 Bar		3.5 Bar		4 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar					
型号 Model	弹簧数量 Spring Qty.	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
		开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End	开始 Start	结束 End
ART40	SR2					4.0	1.8	5.6	3.4	6.4	4.2	7.6	5.4	8.8	5.4	9.6	7.4	12.6	10.4	14.6	12.4	6.6	4.4		
ART52	SR5	5.7	3.8	7.6	5.7	9.7	7.8																	6.2	4.3
	SR6	4.9	2.5	6.9	4.5	9.0	6.6	10.9	8.5	13.0	10.6													7.4	5.0
	SR7	4.0	1.3	6.0	3.3	8.1	5.4	9.8	7.3	12.1	9.4	14.0	10.4	16.1	13.4									8.6	5.9
	SR8			5.2	2.0	7.3	4.1	9.2	6.0	11.3	8.1	13.2	9.1	15.3	12.1	17.2	14.1							9.9	6.7
	SR9			4.3	0.8	6.4	2.9	8.3	4.8	10.4	6.9	12.3	7.9	14.4	10.9	16.3	12.8	20.3	16.8					11.1	7.6
	SR10					5.5	1.6	7.4	3.6	9.5	5.6	11.5	6.7	13.5	9.6	15.5	11.6	19.5	15.6					12.4	8.5
	SR11					4.7	0.4	6.6	2.3	8.7	4.4	10.6	5.4	12.7	8.4	14.6	10.4	18.6	14.3	22.6	18.3			13.6	9.3
ART63	SR5	11.4	7.7	15.0	11.4	18.4	14.8	22.3	14.9	25.6	22.0													10.4	6.8
	SR6	10.1	5.7	13.6	9.3	17.0	12.7	20.9	16.6	24.2	19.9	28.3	23.9	31.4	27.1									12.5	8.2
	SR7	8.6	3.6	12.5	7.2	15.6	10.6	19.5	14.5	22.8	17.8	26.8	21.9	30.0	25.0									14.6	9.6
	SR8			10.9	5.1	14.3	8.5	18.2	12.4	21.5	15.7	25.5	19.8	28.7	22.9	32.8	27.0	40.1	34.3					16.7	10.9
	SR9					12.9	6.4	16.8	10.4	20.1	13.6	24.1	17.7	27.3	20.8	31.4	24.9	38.7	32.2					18.8	12.3
	SR10					11.5	4.3	14.0	8.2	18.7	11.5	22.8	15.6	25.9	18.7	30.0	22.8	37.3	30.1	44.7	37.4			20.9	13.7
	SR12									17.4	9.5	21.5	13.5	24.6	16.7	28.7	20.7	36.0	28.0	43.3	35.3	22.9	15.0		
ART75	SR5	14.5	10.6	19.4	15.5	24.5	20.5	29.5	25.7	34.5	30.5													14.5	10.5
	SR6	12.4	7.6	17.3	12.6	22.3	17.6	27.4	22.7	32.3	27.6	37.5	32.8	42.3	37.6									17.4	12.7
	SR7	10.4	4.8	15.2	9.7	20.2	14.7	25.3	19.9	30.2	24.7	35.4	29.9	40.2	34.7									20.3	14.8
	SR8			13.1	6.8	18.1	11.8	23.1	16.9	28.1	21.8	33.3	27.0	38.1	31.8	43.2	37.0	53.3	47.0					23.2	16.9
	SR9					16.0	8.9	21.0	14.1	26.0	18.9	31.2	24.1	36.0	28.9	41.1	34.1	51.2	44.2					26.1	19.0
	SR10					13.9	6.0	19.0	11.1	23.9	16.0	28.8	21.2	33.9	26.0	39.0	31.2	49.1	41.2	59.1	51.2			29.0	21.1
	SR12									21.8	13.1	27.0	18.3	31.8	23.1	37.0	28.3	47.0	38.4	57.0	48.4	31.9	23.2		
ART83	SR5	23.3	16.1	31.1	24.0	38.8	31.6	46.8	39.7	54.4	47.2													23.0	15.8
	SR6	20.1	11.5	28.0	19.3	35.6	27.0	43.7	35.1	51.2	42.6	59.4	50.7	66.8	58.2									27.6	19.0
	SR7	17.0	6.9	24.8	14.8	32.5	22.4	40.5	30.5	48.1	38.0	56.2	46.2	63.7	53.6									32.2	22.1
	SR8			21.7	10.1	29.3	17.8	37.4	25.8	44.9	33.4	53.1	41.5	60.5	49.0	68.8	57.2	84.5	72.9					36.8	25.3
	SR9					26.1	13.2	34.2	21.3	41.7	28.8	49.9	37.0	57.3	44.4	65.6	52.6	81.2	68.3					41.4	28.5
	SR10					23.0	8.6	31.0	16.6	38.6	24.2	46.7	32.3	54.2	39.8	62.4	48.0	78.1	63.7	93.8	79.3			46.0	31.6
	SR12									35.4	19.6	43.6	27.7	51.0	35.2	59.3	43.4	75.0	59.1	90.6	74.8	50.6	34.8		
ART92	SR5	33.1	22.0	44.2	33.2	55.8	44.7	66.8	55.9	78.4	67.3													34.4	23.3
	SR6	28.4	15.2	39.6	26.4	51.1	37.9	62.2	49.0	73.7	60.5	84.8	71.6	96.3	83.1									41.2	28.0
	SR7	23.8	8.2	34.9	19.4	46.4	31.0	57.5	42.1	69.0	53.6	80.2	64.7	91.6	76.2									48.1	32.7
	SR8			31.3	12.6	41.8	24.1	52.9	35.2	64.4	46.7	75.5	57.9	87.0	69.3	98.1	80.5	120.7	103.0					55.0	37.3
	SR9					37.1	17.2	48.2	28.4	59.7	39.8	70.9	51.0	82.3	62.4	93.5	73.6	116.0	96.1					61.9	42.0
	SR10					32.4	10.4	43.6	21.5	55.0	33.0	66.2	44.1	77.6	55.6	88.8	66.7	111.3	89.2	134.0	111.8			68.7	46.7
	SR12									50.3	26.1	61.5	37.2	72.9	48.7	84.1	59.9	106.6	82.4	129.2	105.0	75.6	51.4		
ART105	SR5	51.0	33.4	67.5	49.9	83.9	66.3	100.6	83.0	116.9	99.3													49.2	31.6
	SR6	44.7	23.5	61.1	40.0	77.5	56.4	94.2	73.2	110.5	89.4	127.3	106.2	143.5	122.4									59.1	38.0
	SR7	38.4	13.7	54.9	30.3	71.2	46.6	87.9	63.4	104.2	79.6	121.0	96.4	137.2	112.6									68.9	44.3
	SR8			48.5	20.4	64.9	36.8	81.6	53.5	97.9	69.8	114.7	86.5	130.9	102.8	147.7	119.6	180.8	152.7					78.7	50.6
	SR9					58.6	26.9	75.3	43.7	91.6	59.9	108.4	76.8	124.6	92.9	141.5	109.8	174.5	142.9					88.6	56.9
	SR10					52.2	17.1	68.9	33.4	85.2	50.1	102.0	66.5	118.2	83.1	135.1	99.6	168.2	132.6	201.2	165.7			98.4	63.3
	SR12									78.9	40.2	95.7	57.0	111.9	73.2	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6		
ART125	SR5	73	47	98	72	123.7	96.7	148	122	174	147													79	52
	SR6	63	31	88	56	112.7	81.7	138	107	163	132	188	157	213	182									94	63
	SR7	52	15	77	40	102.7	65.7	127	90	153	116	178	141	203	166									110	73
	SR8			67	25	91.7	50.7	117	75	142	101	167	125	192	151	217	176	268	226					125	84
	SR9					81.7	34.7	107	59	132	85	157	109	182	135	207	159	257	210					141	94
	SR10					70.7	18.7	96	44	121	69	146	94	171	119	196	144	247	194	297	245			157	105
	SR12									111	53	136	78	161	103	186	128	236	178	286	228	173	115		

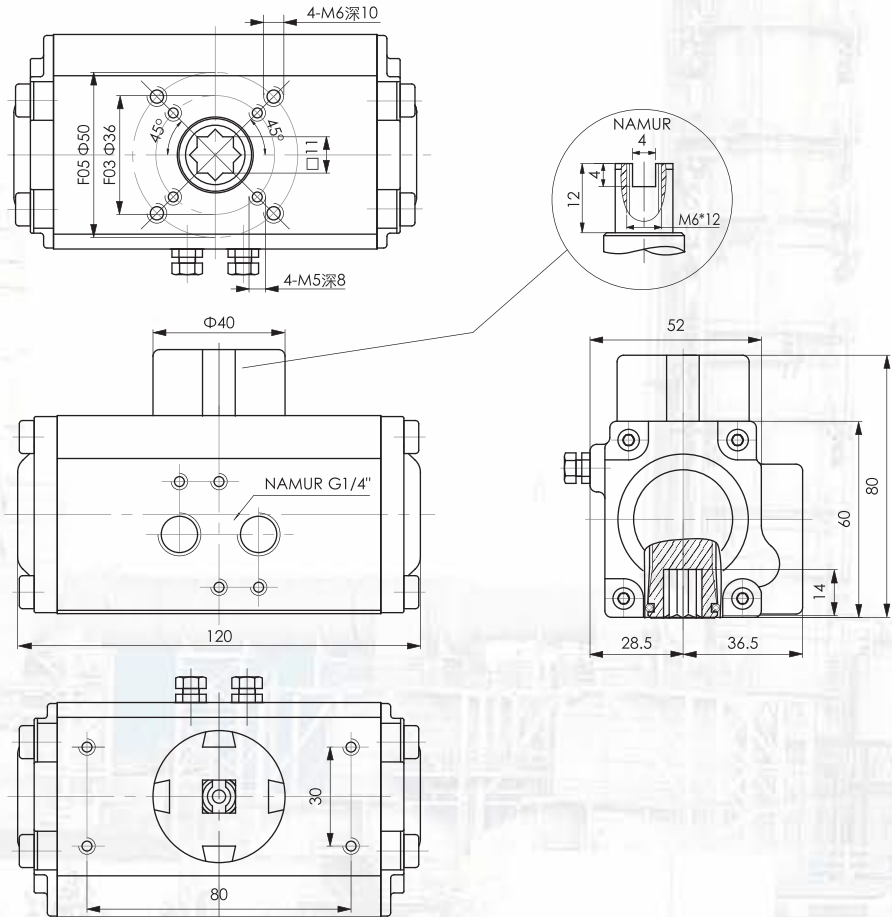


外形尺寸 Dimension

ART32

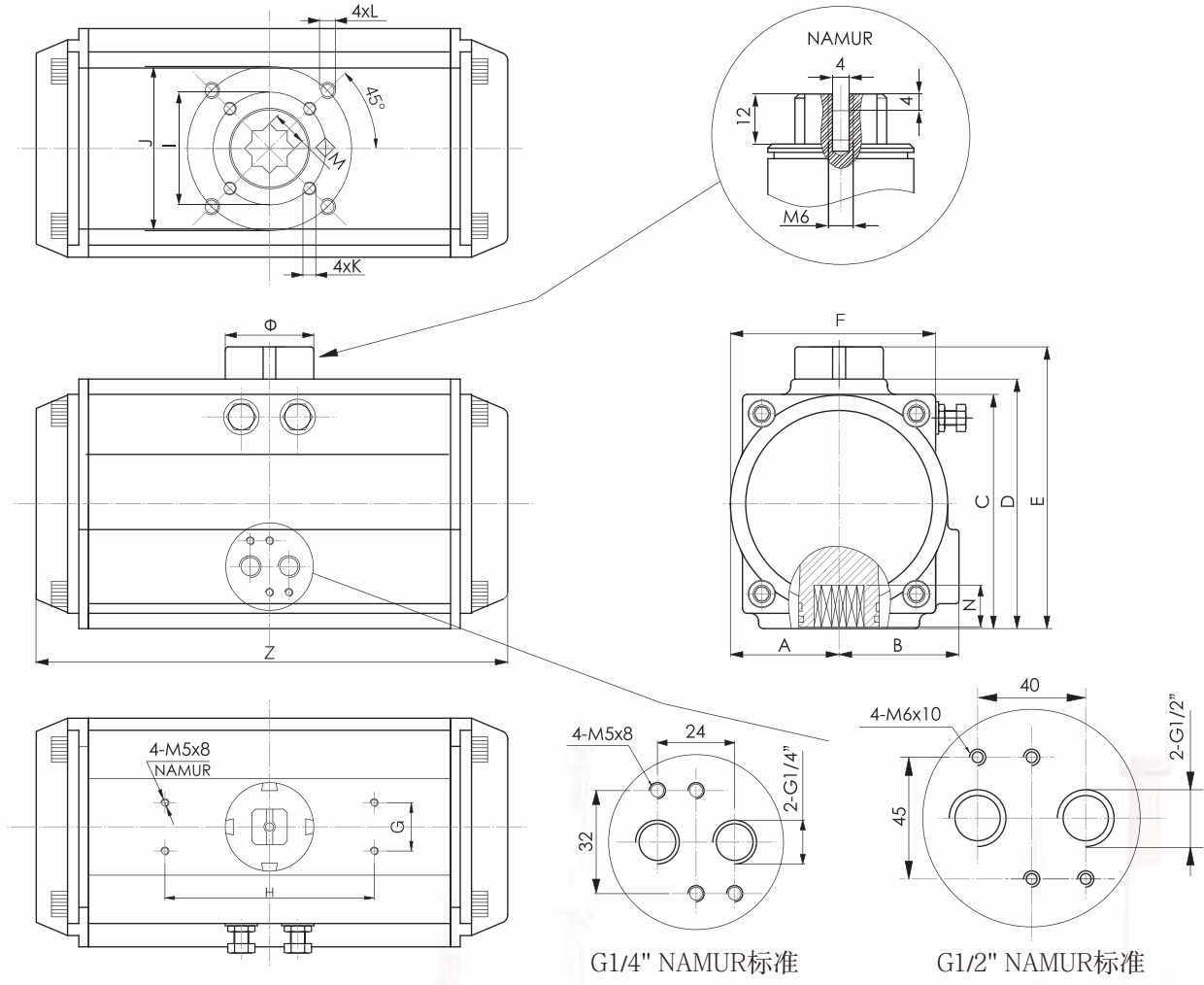


ART40





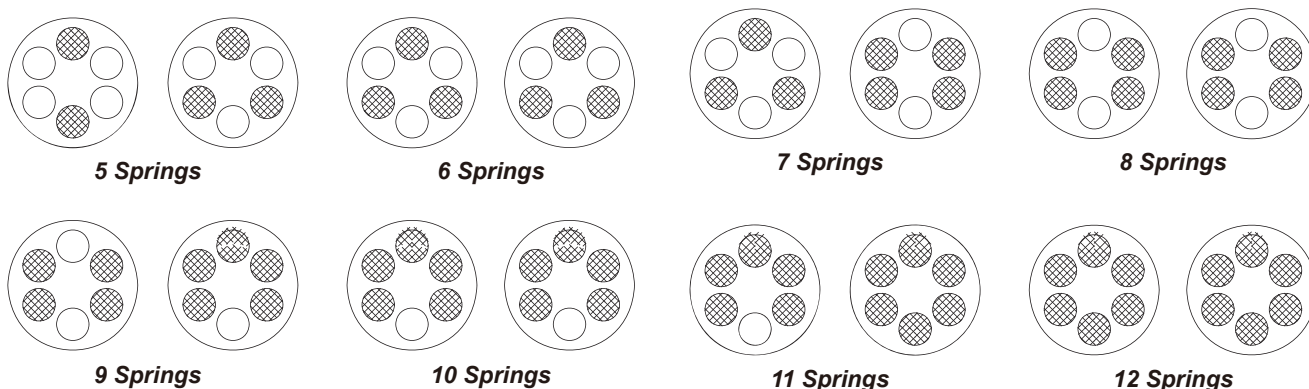
# ART52 ~ ART400



单位：毫米 / Unit: mm

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	气源接口 Air Connection
ART52DA	30	41.5	65.5	72	92	65	30	80	Φ36	Φ50	M5x8	M6x10	11	14	147	Φ40	NAMUR G1/4"
ART63DA	36	47	81	87.5	107.5	72	30	80	Φ50	Φ70	M6x10	M8x13	14	18	168	Φ40	NAMUR G1/4"
ART75DA	42	53	94	99.5	119.5	81	30	80	Φ50	Φ70	M6x10	M8x13	14	18	184	Φ40	NAMUR G1/4"
ART83DA	46	57	98.5	108.7	128.7	92	30	80	Φ50	Φ70	M6x10	M8x13	17	21	204	Φ40	NAMUR G1/4"
ART92DA	50	58.5	111	116.5	136.5	98	30	80	Φ50	Φ70	M6x10	M8x13	17	21	262	Φ40	NAMUR G1/4"
ART105DA	57.5	64	122.5	133	153	109.5	30	80	Φ70	Φ102	M8x13	M10x16	22	26	268	Φ40	NAMUR G1/4"
ART125DA	67.5	74.5	145.5	155	175	127.5	30	80/130	Φ70	Φ102	M8x13	M10x16	22	26	301	Φ55	NAMUR G1/4"
ART140DA	75	77	161	172	192	137.5	30	80/130	Φ102	Φ125	M10x16	M12x20	27	31	390	Φ55	NAMUR G1/4"
ART160DA	87	87	184	197	217	158	30	80/130	Φ102	Φ125	M10x16	M12x20	27	31	458	Φ55	NAMUR G1/4"
ART190DA	103	103	213	230	260	189	30	130		Φ140		M16x25	36	40	525	Φ80	NAMUR G1/4"
ART210DA	113	113	235.5	255	285	210	30	130		Φ140		M16x25	36	40	532	Φ80	NAMUR G1/4"
ART240DA	130	130	264.5	289	319	245	30	130		Φ165		M20x25	46	50	602	Φ80	NAMUR G1/4"
ART270DA	147	147	299	326	356	273	30	130		Φ165		M20x25	46	50	722	Φ80	NAMUR G1/2"
ART300DA	162	162	348	348	378	324	30	130	Φ165	Φ215	M20x25	M20x25	46	60	742	Φ80	NAMUR G1/2"
ART350DA	190	190	402	402	432	380	30	130	Φ165	Φ215	M20x25	M20x25	55	60	860	Φ80	NAMUR G1/2"
ART400DA	258	258	464	464	494	298	30	130	Φ165	Φ254	M20x25	8-M16x25	55	60	924	Φ80	NAMUR G1/2"

## 单作用执行器弹簧安装形式 Spring Mounting Form for Spring Return Actuators



## 重量表 Weight Table

单位：千克 / Unit:KG

型号/Model	ART32	ART40	ART52	ART63	ART75	ART83	ART92	ART105	ART125
双作用/DA	0.7	1	1.4	2	2.7	3.1	4.6	6.8	8.9
单作用/SR	-	1.1	1.5	2.1	2.9	3.6	5.2	6.9	10.1

型号/Model	ART140	ART160	ART190	ART210	ART240	ART270	ART300	ART350	ART400
双作用/DA	13	20	31	47	67	97	110	186	289
单作用/SR	15	24	35	55	80	118	130	234	360

注：1、SR为12根弹簧；2、重量为净重量。 / Note: 1. SR is 12 springs; 2. Weight is net weight.

## 耗气量 Air Consumption

单位：升 / Unit: L

Model 型号	Air volume opening 开向体积(升)	Air volume closing 关向体积(升)
ART32DA	0.04	0.05
ART40DA	0.08	0.11
ART52DA	0.12	0.16
ART63DA	0.21	0.23
ART75DA	0.3	0.34
ART83DA	0.43	0.47
ART92DA	0.64	0.73
ART105DA	0.95	0.88
ART125DA	1.6	1.4

Model 型号	Air volume opening 开向体积(升)	Air volume closing 关向体积(升)
ART140DA	2.5	2.2
ART160DA	3.7	3.2
ART190DA	5.9	5.4
ART210DA	7.5	7.5
ART240DA	11	9
ART270DA	17	14
ART300DA	23.8	29.7
ART350DA	35.1	46.3
ART400DA	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：

$$\text{升/分} = \text{气缸体积}(\text{开向体积} + \text{关向体积}) \times \left[ \frac{\text{供气压力}(\text{Kpa}) + 101.3}{101.3} \right] \times \text{次数/分钟}$$

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

$$\text{L/Min} = \text{Air volume}(\text{Air volume Opening} + \text{Air volume closing}) \times \left[ \frac{\text{Air Supply}(\text{Kpa}) + 101.3}{101.3} \right] \times \text{Action cycle times}(\text{/min})$$

**120°, 135°, 180°双作用气动执行器****120°, 135°, 180° Pneumatic Actuator (Double Acting only)**

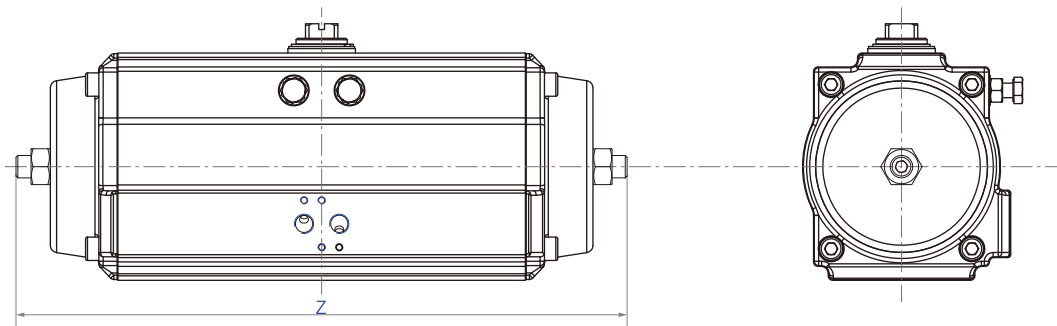
为满足不同类型阀门及机械自动化的驱动要求，我司可根据客户要求定制不同行程(例120°、135°、180°等)的气动执行器。

In order to meet the special requirements of control valve, we produce special strokes actuators on customer request (e.g. 120°,135°,180°etc.).

**输出扭矩 Output Torque**

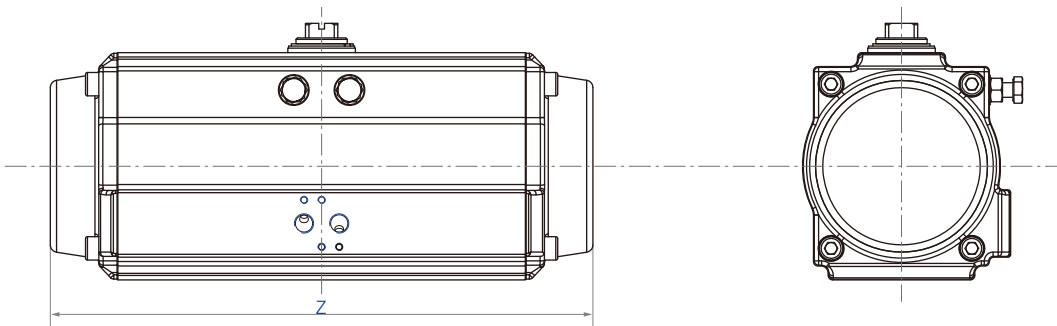
输出扭矩请参考 90°行程气动执行器扭矩表。

Output torque of special strokes actuators, please refer to the torque of 90° actuators (P11).

**180°双作用执行器尺寸表 Length of 180° pneumatic actuator**

单位：毫米 / Unit:mm

型号 Model	ART52 -180	ART63 -180	ART75 -180	ART83 -180	ART92 -180	ART105 -180	ART125 -180	ART140 -180	ART160 -180	ART190 -180	ART210 -180	ART240 -180
长度(Z)	219	247	270	319	380	410	450	613	691	813	813	929



单位：毫米 / Unit:mm

型号 Model	ART52 -180-C	ART63 -180-C	ART75 -180-C	ART83 -180-C	ART92 -180-C	ART105 -180-C	ART125 -180-C	ART140 -180-C	ART160 -180-C	ART190 -180-C	ART210 -180-C	ART240 -180-C
长度(Z)	199	227	252	293	355	387	420	578	655	752	755	870

联系我们获取更多信息。Please contact us for more information.

## 工作条件 Operating Conditions

### 1、工作介质

干燥或润滑的空气或无腐蚀性气体介质中杂质微粒小于30 um。

### 2、气源压力

最小气源压力2.5巴，最大气源压力8巴。

### 3、介质环境温度

标准：-20℃~+80℃

低温：-40℃~+80℃

高温：-15℃~+150℃

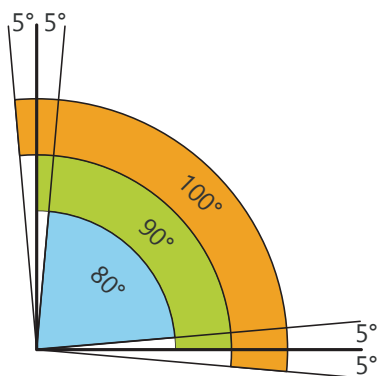
### 4、行程调节

0° 和90° 两个位置

有±5° 的调节范围

### 5、使用场合

室内或室外安装



### 1.Operating media

Dry or lubricated air, or the non-corrosive gases The maximum particle diameter must less than 30 um.

### 2. Air supply pressure

The minimum supply pressure is 2.5 Bar

The maximum supply pressure is 8 Bar

### 3.Operating temperature

Standard:-20℃~+80℃

Low temperature:-40℃~+80℃

High temperature:-15℃~+150℃

### 4.Travel adjustment

Have adjustment range of ±5° for the rotation at 0° and 90°

### 5.Application

Either indoor or outdoor

## 订购 How to Order

示例/Sample: ART32DA / ART52SR K10 FC

1 代号	2 型号	3 动作形式	4 弹簧数量	5 行程	6 功能
ART系列	32 40 52 63 75 ... 400	DA-双作用 SR-单作用	SR K2-2根弹簧 SR K3-3根弹簧 SR K4-4根弹簧 ... SR K16-16根弹簧	空-90° 120-120° 135-135° 180-180°	FC-失效关闭 FO-失效打开 3P-三位式 其他

1 Code	2 Model	3 Acting Type	4 Spring Qty.	5 Travel	6 Function
ART Series	32 40 52 63 75 ... 400	DA-Double Acting SR-Spring Acting	SR K2-2Pcs SR K3-3Pcs SR K4-4Pcs ... SR K16-16Pcs	None-90° 120-120° 135-135° 180-180°	FC-Failure Close FO-Failure Open 3P-Three Position Others

注：ART32仅双作用 / Note: ART32DA only  
ART40单作用仅2根弹簧 / Note: ART40SR K2 use 2 springs only





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Pioneering Excellence

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