无锡市圣汉斯气动阀门执行器制造有限公司

Wuxi St.Hans Pneumatic Valve Actuators Maker Co.,Ltd

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SIL3 IEC 61508

ALPHA®

PNEUMATIC ACTUATORS

ALPHA A&B 气动执行器

无锡市圣汉斯气动阀门执行器制造有限公司

WUXI ST.HANS PNEUMATIC VALVE ACTUATORS MAKER CO.,LTD

因为专注 所以专业

Absorbed, Professional

因为专业 所以卓越

Professional, Excellent

专注 专业 卓越

The Global Provider of Actuators

打造全球执行器及阀门附件专业供应商

20世纪90年代初，随着世界加工制造业向中国的转移，无锡圣汉斯气动阀门执行器制造有限公司应运而生，诞生了圣汉斯的第一台执行器。

经过十多年艰苦奋斗，创新发展，圣汉斯取得了今天的成就，成为了最专业，规模最大的执行器生产厂家之一。

公司现有现在三大系列执行器，阿尔法A系列不锈钢执行器，阿尔法B系列铝合金执行器，阿尔法C系列铝合金执行器，离合式手轮机构，阀位反馈装置，过滤减压阀等阀门控制附件。现有Ø32~Ø800近一百多个规格，扭矩从5Nm~100000Nm都有覆盖。

公司于2010年初乔迁进入江南第一古镇梅村工业园区，新工厂投资5000万人民币。公司现有员工220人，工厂占地面积3万平方米，年产26万台执行器，销售近3亿人民币。

公司本着“专注，专业；专业，卓越”的核心理念，竭诚为新老客户提供专注的服务，更专业的技术，更卓越的产品。

In the early 1990's, coming with the trend of global manufacturing transferring to China, Wuxi ST.HANS was established, then ST.HANS's first actuator was born.

With ten-years of hardwork and innovation, ST.HANS has achieved in becoming one of the most professional and biggest actuator manufacturers in China.

ST.HANS supplies three series of actuators, that is, Alpha A series stainless steel actuator, Alpha B series aluminum alloy actuator and Alpha C series aluminum alloy actuator. Additionally ST.HANS supplies valve control accessories such as manual override, valve position feedback device, air pressure regulator-filter, etc. Actuator ranges Ø32~Ø800, torque 5Nm~ 100000Nm.

In early 2010, the ST.HANS factory moved to Meicun Industry Park, the oldest town of the South River region. With a RMB50million investment, the new factory covers 30,000 square meters and hires 220 employees. It manufactures 260,000 actuators and sells around RMB 300million annually.

Leading with its core idea of concentration & professionalism, ST.HANS will serve all its new and regular customers more attentively and professionally with more excellent products.

ALPHA®

工欲善其事，必先利其器

Advanced Equipment

先进的生产设备

圣汉斯人知道，只有好的管理、好的理念、好的人才还是不够的，还要有精良的设备才代表企业拥有强大的生产能力，并确保产品的卓越品质。

我们引进了国际先进水平的生产加工设备和技术人才，拥有高精度的数控机床、大型加工设备和专机设备，为产品质量和企业发展提供了有力保障。

ST.HANS know that good ideas, management and talent are not enough, refined equipment is equally required to guarantee high production capacity and excellent quality.

Importing global advanced producing and processing equipment and talent, ST.HANS now has high-accuracy CNC machines, large-size processing machines and custom machines, which guarantee the excellent product quality and thus the rapid development of the company.

开拓创新，勇无止境

Elite Team
优秀的团队

圣汉斯视科技研发为企业生命力，深谙是人才团队的智慧成就了圣汉斯的品牌、品质，为使圣汉斯产品更趋完美，不吝重金聘请一批高级技术顾问和制造专业人士、高级工程师，加上生产工人孜孜以求的工作态度，注重每一个生产细节，从而形成了圣汉斯在强势品牌战略中最坚不可摧的堡垒。

圣汉斯不断自主创新，保证了新产品研发的质量和速度，在研发上填补了国内多项空白，为行业发展作出了令人瞩目的贡献。

ST.HANS sees technology and research as its vitality, knowing that it's the wisdom of a talented team that help find ST.HANS's brand and quality reputation. In order to perfect ST.HANS products, all sorts of senior technology advisers, manufacturing experts and engineers are high-salary employed. Meanwhile, the diligent working attitudes of ST.HANS's personnel build an indestructible bulwark for ST.HANS in today's fierce brand competition.

ST.HANS's continuous innovation guarantee's its high researching speed and quality of new products, which fill several technology gaps in China, and make a great contribution to the development of national industry.

ALPHA®

注重细节，精益求精

Quality Assurance

完善的检测手段

圣汉斯一直坚持严格控制每一个环节、每一道工序，从设计研发到生产作业各个环节的质量状况。我们的检测系统流程从设计、选材、制造、组装到运行，每个环节都要经历苛刻的检测程序，将精度控制到最严密，将产品品质控制到最优异，对每一细微之处的精益求精，都控制到最完美，让客户在使用的同时，深切感受到圣汉斯严谨务实的品质宗旨……

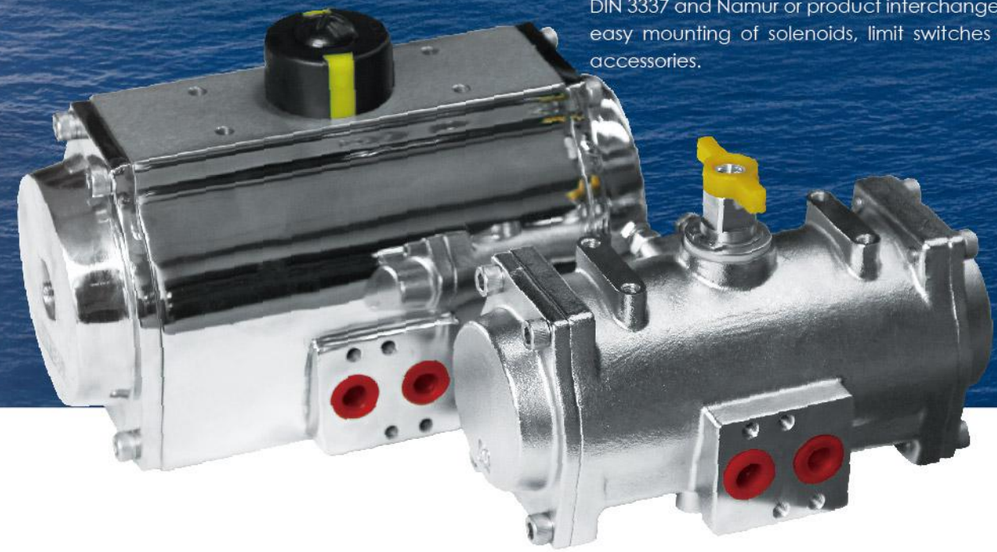
ST.HANS insists on strict detection on every step of the process from researching to producing. Its detecting system works from design, material selection, manufacture, assembling to machine operating. Every step should withstand the severe testing program to guarantee the highest accuracy and excellent quality. We keep perfecting every detail just to ensure our customers knowledge of ST.HANS's precise and pragmatic attitude…

Stainless Steel Actuator

αA系列不锈钢执行器

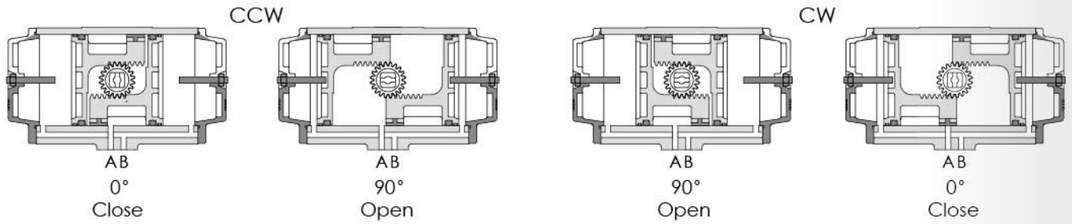
- 316L、316、304、303不锈钢材质执行器，外表电解抛光，光洁美观，抗腐蚀性能强，适合于抗腐蚀要求极高的工程环境。
- 双活塞齿轮齿条式设计，结构紧凑、安装位置对称、改变输出轴转向方便，使用寿命长、动作迅速。
- 活塞齿条背面装有复合轴承及导向环，动作精确、摩擦系数小、使用寿命延长。
- 组合式预负荷镀层弹簧，工作寿命长、抗腐蚀性能强。
- 高精度齿轮和齿条，啮合间隙小、精度高，输出功率大。
- 不锈钢紧固件，安全美观，抗腐蚀性强。
- 采用国际规范尺寸：
  输出轴槽、螺孔；顶部安装孔尺寸符合NAMUR标准；
  气源接口尺寸符合NAMUR标准；
  底部安装孔尺寸符合ISO5211、DIN3337标准，方便安装电磁阀限位开关等附件。

- ASTM316L, 316, 304, 303 stainless steel pneumatic actuators with electro-polish finish offer excellent resistance to most corrosive chemicals as well as industrial atmospheres.
- Dual piston rack and pinion design for compact construction, symmetric mounting position, high-cycle life and fast operation, reverse rotation can be accomplished in the field by simply inverting the pistons.
- Multiple bearings and guides on racks and pistons, low friction, high cycle life and prevent shaft blowout.
- Modular preloaded spring cartridge design, with coated spring for simple versatile range, greater safely and corrosion resistance, longer cycle life.
- Fully machined teeth on piston and pinion for accurate low backlash rack and pinion engagement, maximum efficiency.
  Stainless steel fasteners for long term corrosion resistance.
- Full conformance to the latest specifications: ISO5211, DIN 3337 and Namur or product interchangeability and easy mounting of solenoids, limit switches and other accessories.



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 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.

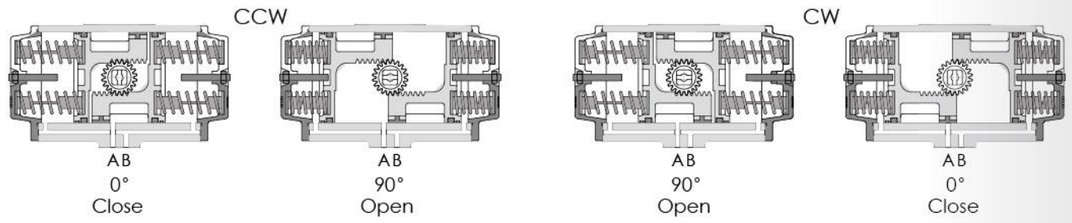
A口进气，压缩空气推动活塞向外运动，使执行器输出轴顺时针旋转(90°→0°)，B口排气。

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 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°→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 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.

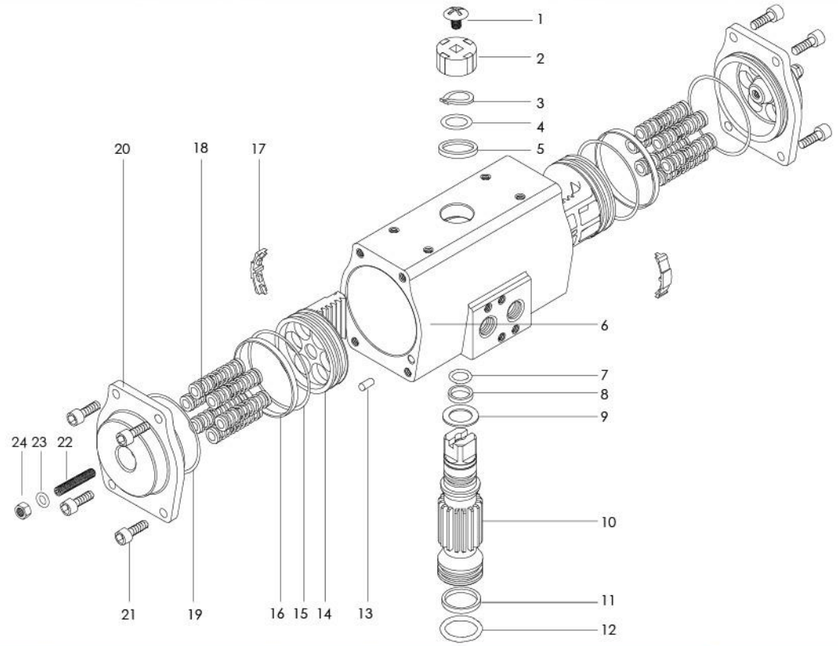
A口进气,压缩空气克服弹簧力，推动活塞向外运动，执行器输出轴顺时针转动(90°→0°)，B口排气；

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 pinion 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 pinion turns counterclockwise while air is being exhausted from port A.

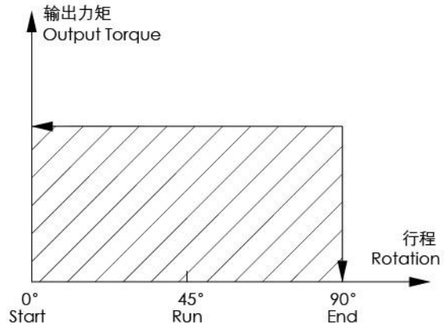
零件和材料 Parts and Materials



序 号 No.	名 称 Description	数 量 Qty.	材 料 Standard Material	可选材料 Option
1	指示器螺钉 Indicator screw	1	塑料 Plastic(ABS)	
2	指示器 Indicator	1	塑料 Plastic(ABS)	
3	弹性挡圈 Circlip	1	不锈钢 Stainless steel(304)	
4	垫片 Thrust washer	1	不锈钢 Stainless steel(304)	
5	外垫片 Outside washer	1	工程塑料 Polyoxymethylene	
6	缸体 Body	1	不锈钢 Stainless steel CF8	CF8M/CF3M
7	上轴"O"型圈 O-ring(Pinion top)	1	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
8	上轴支承圈 Bearing(Pinion top)	1	工程塑料 Polyoxymethylene	
9	内垫片 Inside washer	1	工程塑料 Polyoxymethylene	
10	轴 Pinion	1	不锈钢 Stainless steel 304	316/316L
11	下轴支承圈 Bearing(Pinion bottom)	1	工程塑料 Polyoxymethylene	
12	下轴"O"型圈 O-ring(Pinion bottom)	1	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
13	塞头 Plug	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
14	活塞 Piston	2	不锈钢 Stainless steel CF8	CF8M/CF3M
15	活塞"O"型圈 O-ring(Piston)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
16	活塞支承圈 Bearing(Piston)	2	工程塑料 Polyoxymethylene	
17	活塞导板 Guide(Piston)	2	尼龙66 Nylon66	
18	弹簧 Spring	0~12	琴钢丝 Piano Wire	
19	端盖"O"型圈 O-ring(End-Cap)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
20	端盖 End-Cap	2	不锈钢 Stainless steel CF8	CF8M/CF3M
21	端盖紧固螺杆 End-Cap Screw	8	不锈钢 Stainless steel(304)	
22	调节螺杆 Adjust Screw	2	不锈钢 Stainless steel(304)	
23	调节螺杆"O"型圈 O-ring (Adjust Screw)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
24	调节螺杆螺母 Nut (Adjust Screw)	2	不锈钢 Stainless steel(304)	

双作用扭矩 Output Torque with Double Acting

双作用执行器输出力矩
Output Torque of Double Acting Actuators



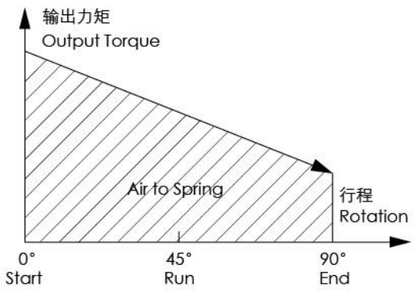
αA 系列气动执行器双作用输出扭矩表
Output Torque Table of αA Series Pneumatic Actuators with Double Acting

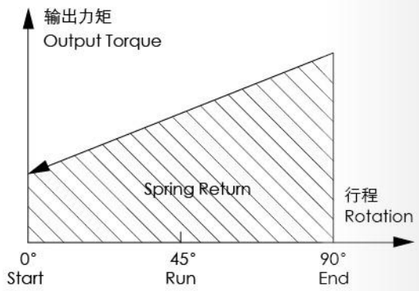
Unit: Nm

规格 Model	气源压力 (巴) Air pressure(Bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
αA-45DA	6.0	7.6	9.1	12.1	13.6	15.1	16.6	18.1	21.1	24.2
αA-60DA	14.2	17.8	21.3	28.4	32.0	35.5	39.1	42.6	49.7	56.8
αA-85DA	30.8	38.5	46.2	61.6	69.4	77.1	84.8	92.5	107.9	123.3
αA-105DA	65.8	82.2	98.7	131.6	148.0	164.4	180.9	197.3	230.2	263.1
αA-125DA	103	128	154	205	231	256	282	308	359	410
αA-140DA	175	219	263	351	395	439	482	526	614	702
αA-160DA	267	334	401	535	601	668	735	802	935	1069
αA-210DA	526	658	789	1052	1184	1316	1447	1579	1842	2105

单作用扭矩 Output Torque with Spring Return

单作用气动执行器输出扭矩
Output Torque of Pneumatic Actuator with Spring Return



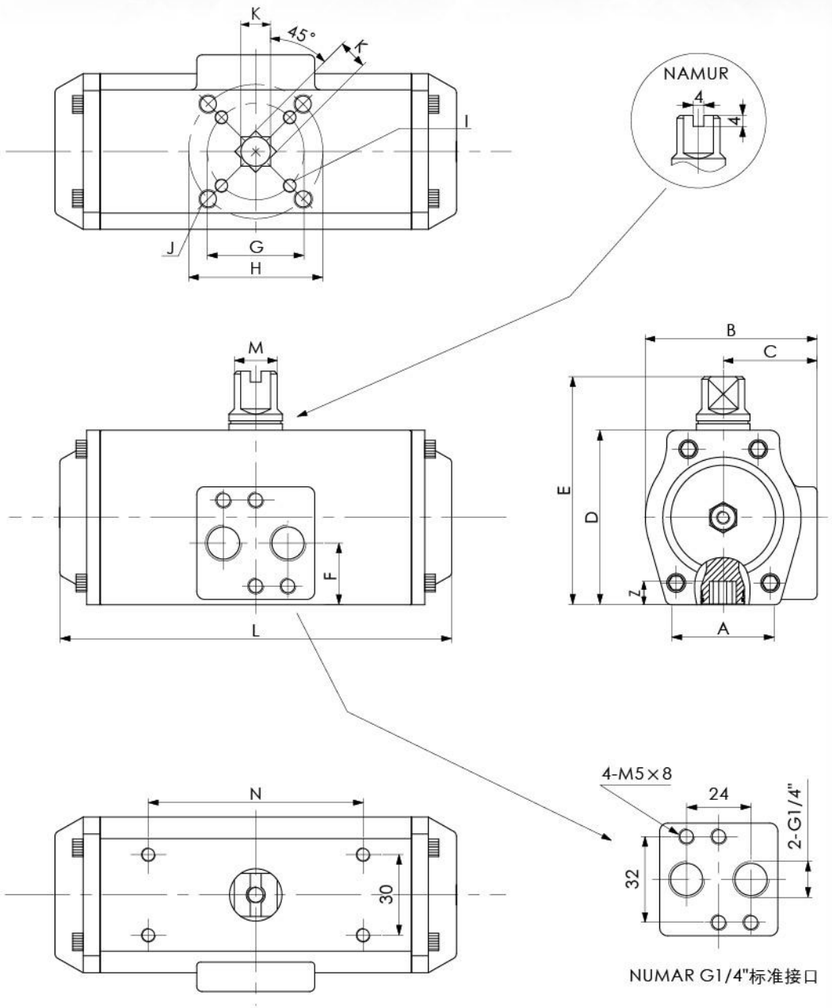


αA系列单作用气动执行器输出扭矩表
Output Torque of αA Series Pneumatic Actuator with Spring Return

Unit: Nm

规格 (Model)	弹簧根数 Spring Qty.	气源压力(巴) Air pressure(Bar) 2		2.5		3		4		5		6		7		8		弹簧输出扭矩 Springs output	
		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	0° Start	90° End	90°	0°
αA-45SR	K5	3.0	1.2	4.6	2.8													4.6	2.9
	K6	2.3	0.2	3.9	1.8	5.4	3.3											5.5	3.5
	K7			3.3	0.8	4.8	2.3	7.8	5.3									6.5	4.1
	K8					4.2	1.3	7.2	4.3	10.2	7.3							7.4	4.6
	K9							6.6	3.4	9.6	6.4	12.6	9.4					8.3	5.2
	K10							6.0	2.4	9.0	5.4	12.0	8.4	15.0	11.4	18.1	14.5	9.2	5.8
	K11									8.4	4.4	11.4	7.4	14.4	10.4	17.5	13.5	10.1	6.4
	K12									7.8	3.5	10.8	6.5	13.8	9.5	16.9	12.6	11.1	7.0
αA-60SR	K5	7.0	3.2	10.6	6.8													10.4	6.8
	K6	5.6	1.0	9.2	4.6	12.7	8.1											12.5	8.2
	K7			7.7	2.4	11.2	5.9	18.3	13.0									14.6	9.6
	K8					9.8	3.7	16.9	10.8	24.0	17.9							16.7	10.9
	K9							15.4	8.6	22.5	15.7	29.6	22.8					18.8	12.3
	K10							14.0	6.4	21.1	13.5	28.2	20.6	35.3	27.7	42.4	34.8	20.9	13.7
	K11									19.7	11.3	26.8	18.4	33.9	25.5	41.0	32.6	22.9	15.0
	K12									18.2	9.1	25.3	16.2	32.4	23.3	39.5	30.4	25.0	16.4
αA-85SR	K5	14.2	6.6	21.9	14.3													23.0	15.8
	K6	10.8	1.7	18.5	9.4	26.2	17.1											27.6	19.0
	K7			15.2	4.6	22.9	12.3	38.3	27.7									32.2	22.1
	K8					19.6	7.4	35.0	22.8	50.5	38.3							36.8	25.3
	K9							31.6	18.0	47.1	33.5	62.5	48.9					41.4	28.5
	K10							28.3	13.2	43.8	28.7	59.2	44.1	74.6	59.5	90.0	74.9	46.0	31.6
	K11									40.5	23.8	55.9	39.2	71.3	54.6	86.7	70.0	50.6	34.8
	K12									37.1	19.0	52.5	34.4	67.9	49.8	83.3	65.2	55.2	38.0
αA-105SR	K5	32.5	14.0	48.9	30.4													49.2	31.6
	K6	25.8	3.6	42.2	20.0	58.7	36.5											59.1	38.0
	K7			35.6	9.7	52.1	26.2	85.0	59.1									68.9	44.3
	K8					45.4	15.8	78.3	48.7	111.1	81.5							78.7	50.6
	K9							71.7	38.4	104.5	71.2	137.4	104.1					88.6	56.9
	K10							65.0	28.0	97.8	60.8	130.7	93.7	163.6	126.6	196.5	159.5	98.4	63.3
	K11									91.1	50.4	124.0	83.3	156.9	116.2	189.8	149.1	108.3	69.6
	K12									84.5	40.1	117.4	73.0	150.3	105.9	183.2	138.8	118.1	75.9
αA-125SR	K5	47.9	20.5	72.9	45.5													78.4	52.4
	K6	36.9	4.0	61.9	29.0	87.9	55.0											94.1	62.8
	K7			50.8	12.5	76.8	38.5	127.8	89.5									109.7	73.3
	K8					65.8	22.0	116.8	73.0	167.8	124.0							125.4	83.8
	K9							105.8	56.5	156.8	107.5	208.8	159.5					141.1	94.2
	K10							94.8	40.0	145.8	91.0	197.8	143.0	248.8	194.0	299.8	245.0	156.8	104.7
	K11									134.8	74.5	186.8	126.5	237.8	177.5	288.8	228.5	172.4	115.2
	K12									123.7	58.0	175.7	110.0	226.7	161.0	277.7	212.0	188.1	125.7
αA-140SR	K5	84.7	39.3	128.7	83.3													129.0	85.8
	K6	66.6	12.1	110.6	56.1	154.6	100.1											154.8	102.9
	K7			92.6	29.0	136.6	73.0	224.6	161.0									180.5	120.1
	K8					118.5	45.8	206.5	133.8	294.5	221.8							206.3	137.3
	K9							188.5	106.7	276.5	194.7	363.5	281.7					232.1	154.4
	K10							170.4	79.5	258.4	167.5	345.4	254.5	433.4	342.5	521.4	430.5	257.9	171.6
	K11									240.3	140.4	327.3	227.4	415.3	315.4	503.3	403.4	283.7	188.7
	K12									222.3	113.2	309.3	200.2	397.3	288.2	485.3	376.2	309.5	205.9
αA-160SR	K5	120.0	47.7	187.0	114.7													208.3	139.7
	K6	90.6	3.9	157.6	70.9	224.6	137.9											250	168
	K7			128.2	27.0	195.2	94.0	329.2	228.0									292	196
	K8					165.8	50.2	299.8	184.2	432.8	317.2							333	223
	K9							270.4	140.3	403.4	273.3	537.4	407.3					375	251
	K10							241.0	96.4	374.0	229.5	508.0	363.5	641.0	496.5	775.0	630.5	417	279
	K11									344.6	185.6	478.6	319.6	611.6	452.6	745.6	586.6	458	307
	K12									315.2	141.7	449.2	275.7	582.2	408.7	716.2	542.7	500	335
αA-210SR	K5	237	126	369	258													360	260
	K6	179	46	311	178	442	309											432	313
	K7			253	99	384	230	647	493									503	365
	K8					326	150	589	413	853	677							575	417
	K9							531	333	795	597	1058	860					647	469
	K10							473	253	737	517	1000	780	1263	1043	1526	1306	719	521
	K11									679	437	942	700	1205	963	1468	1226	791	573
	K12									621	357	884	620	1147	883	1410	1146	863	625

外型尺寸 Dimension



NUMAR G1/4"标准接口

Unit: mm

Model 规格	A	B	C	D	E	F	G	H	I	J	K	L1	M	N	Z	Air Connection 接口螺纹
αA-45	48	70	41	65	85	23	ø36	ø50	M5x8	M6x10	11	148	16	80	14	G1/4"
αA-60	58	78	43	81	101	23	/	ø50	/	M6x10	14	167	16	80	18	G1/4"
αA-85	75	102	53.5	108	128	24	ø50	ø70	M6x10	M8x13	17	197	16	80	21	G1/4"
αA-105	92	122	63.5	133	153	24	/	ø70	/	M8x13	22	251	16	80	26	G1/4"
αA-125	96	140	72	155	185	28	ø70	ø102	M8x13	M10x16	22	284	22	130	26	G1/4"
αA-140	112	154	78	171.5	201.5	34	ø102	ø125	M10x16	M12x20	27	360	22	130	31	G1/4"
αA-160	127	173	86	197	227	39	ø102	ø125	M10x16	M12x20	27	420	22	130	31	G1/4"
αA-210	144	226	110	255	285	45	/	ø140	/	M16x25	36	530	32	130	40	G1/4"

工作技术条件 Operating conditions

1. 使用介质：压缩空气、无腐蚀性气体和油；
2. 压力范围：双作用2～8巴（Bar），单作用2～8巴（Bar）
3. 工作温度：标准型（使用丁腈橡胶O型圈）-20℃～+80℃
   低温型（使用低温丁腈胶O型圈）-40℃～+80℃
   高温型（使用氟橡胶O型圈）-15℃～+150℃
4. 行程调整：活塞在两端位置有±4°的可调范围；
5. 润　滑：在正常工作条件下，不需添加润滑剂；
6. 安　装：适合室内或室外安装；
7. 最高使用压力：输入气压不超过10巴。

1. Control Medium
   Dry or lubricated air, the non-corrosive gases or oil
2. Control Pressure
   2～8 Bar
3. Ambient temperature Standard: -20℃～+80℃
   Low temperature: -40℃～+80℃
   High temperature: -15℃～+150℃
4. Travel adjustment
   Adjustable range of ±4° when the pistons at both ends
5. Lubrication
   Under normal operating condition,no lubricant is required
6. Application
   Either indoor or outdoor
7. Highest Pressure
   The maximum input pressure is 10 Bar

耗气量计算 Air Consumption

αA 系列执行器开向体积和关向体积 αA Series Air volume opening & closing

Unit: L

型号 Model	开向体积（升） Volume Opening	关向体积（升） Volume Closing
αA-45DA	0.08	0.11
αA-63DA	0.20	0.23
αA-85DA	0.41	0.55
αA-105DA	0.94	1.18
αA-125DA	1.47	1.85
αA-140DA	2.43	3.20
αA-160DA	3.65	5.03
αA-210DA	7.4	9.7

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)

重量表 Weight Table

αA执行器系列 αA Series

Unit: Kg

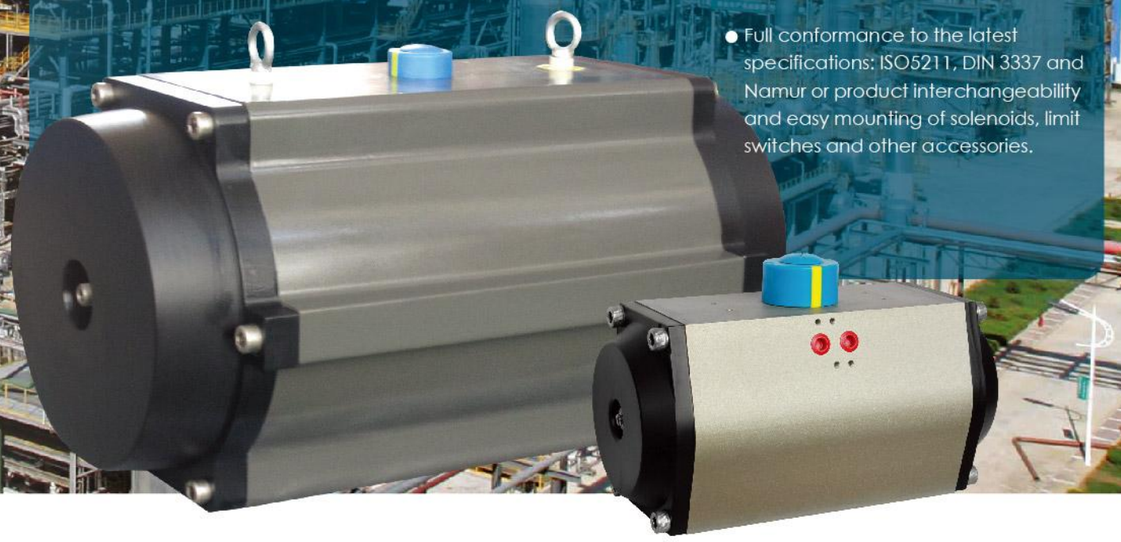
型号 Model	αA-45	αA-60	αA-85	αA-105	αA-125	αA-140	αA-160	αA-210
Weight(SR)	2.65	4.10	7.00	12.60	19.20	27.30	37.60	100.00
Weight(DA)	2.51	3.85	6.35	11.90	18.00	24.80	35.80	91.00

Aluminium Alloy Actuator

αB系列铝合金执行器

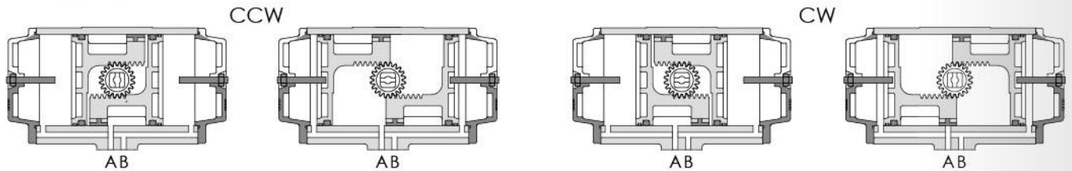
- 均采用高级防腐技术，气缸摩擦系数小，使用寿命长，抗腐蚀性能强。
- 双活塞齿轮齿条式设计，结构紧凑、安装位置对称、改变输出轴转向方便，使用寿命长、动作迅速。
  活塞齿条背面装有复合轴承及导向环，动作精确、摩擦系数小、使用寿命延长。
- 组合式预负荷镀层弹簧，工作寿命长。
- 高精度齿轮和齿条，啮合间隙小、精度高，输出功率大。
- 不锈钢紧固件，安全美观，抗腐蚀性强。
- 采用国际规范尺寸：
  输出轴槽、螺孔；顶部安装孔尺寸符合NAMUR标准；
  气源接口尺寸符合NAMUR标准；
  底部安装孔尺寸符合ISO5211、DIN3337标准，方便安装电磁阀、限位开关等附件。

- Body with both internal and external corrosion protection having honed cylinder surface for longer life and low coefficient of friction.
- Dual piston rack and pinion design for compact construction, symmetric mounting position, high-cycle life and fast operation, reverse rotation can be accomplished in the field by simply inverting the pistons.
- Multiple bearings and guides on racks and pistons, low friction, high cycle life and prevent shaft blowout.
- Modular preloaded spring cartridge design, with coated spring for simple versatile range, greater safely and corrosion resistance, longer cycle life.
- Fully machined teeth on piston and pinion for accurate low backlash rack and pinion engagement, maximum efficiency.
  Stainless steel fasteners for long term corrosion resistance
- Full conformance to the latest specifications: ISO5211, DIN 3337 and Namur or product interchangeability and easy mounting of solenoids, limit switches and other accessories.



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 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.

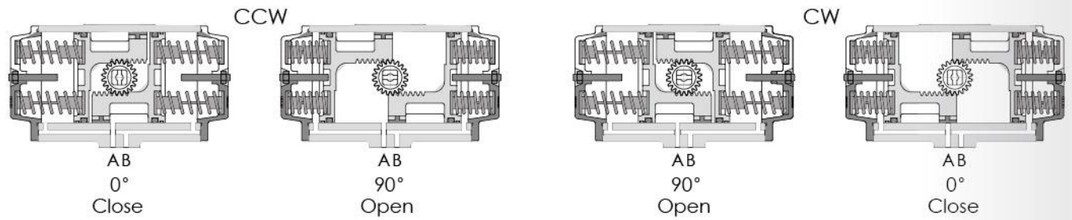
A口进气，压缩空气推动活塞向外运动，使执行器输出轴顺时针旋转(90°→0°)，B口排气。

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 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°→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 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.

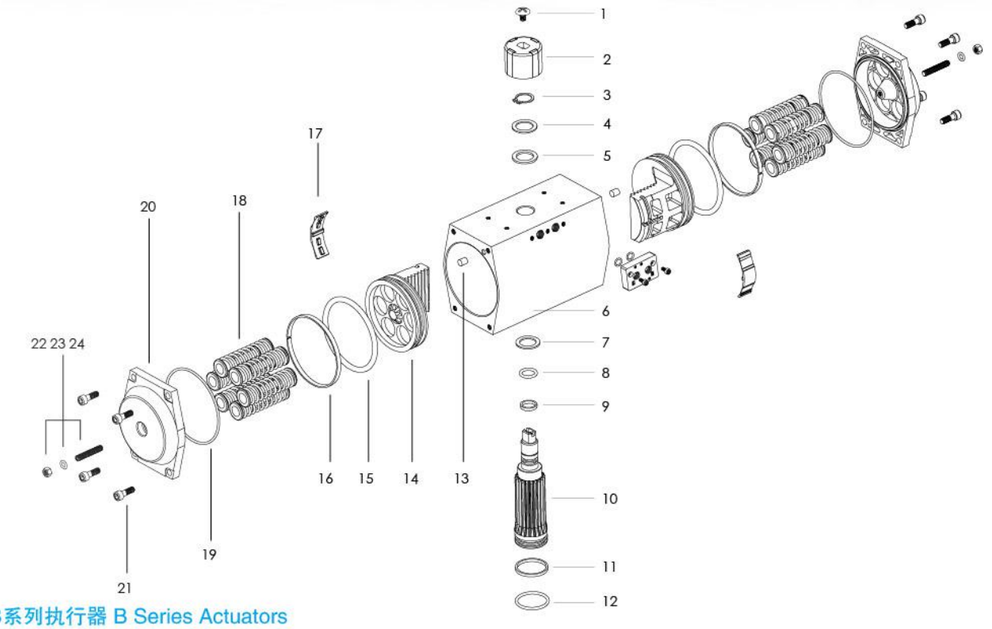
A口进气,压缩空气克服弹簧力，推动活塞向外运动，执行器输出轴顺时针转动(90°→0°)，B口排气；

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 pinion 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 pinion turns counterclockwise while air is being exhausted from port A.

零件和材料 Parts and Materials

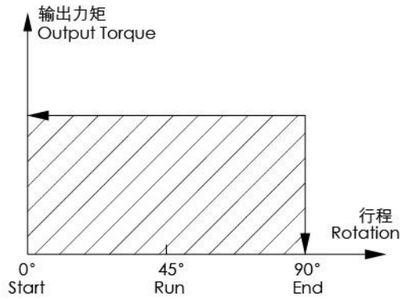


B系列执行器 B Series Actuators

序号 No.	名称 Description	数量 Qty.	材料 Standard Material	可选材料 Option
1	指示器螺钉 Indicator Screw	1	塑料 Plastic(ABS)	
2	指示器 Indicator	1	塑料 Plastic(ABS)	
3	弹性挡圈 Circlip	1	不锈钢 Stainless steel(304)	
4	垫片 Thrust washer	1	不锈钢 Stainless steel(304)	
5	外垫片 Outside washer	1	工程塑料 Polyoxymethylene	
6	缸体 Body	1	铝合金(6005-T5) Extruded aluminum alloy(6005-T5)	
7	内垫片 Inside washer	1	工程塑料 Polyoxymethylene	
8	上轴"O"型圈 O-ring(Pinion top)	1	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
9	上轴支承圈 Bearing(Pinion top)	1	工程塑料 Polyoxymethylene	
10	轴 Pinion	1	合金钢 Alloy Steel	
11	下轴支承圈 Bearing(Pinion Bottom)	1	工程塑料 Polyoxymethylene	
12	下轴"O"型圈 O-ring(Pinion Bottom)	1	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
13	塞头 Plug	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
14	活塞 Piston	2	压铸铝 Die-casting aluminum	
15	活塞"O"型圈 O-ring(Piston)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
16	活塞支承圈 Bearing(Piston)	2	工程塑料 Polyoxymethylene	
17	活塞导板 Guide(Piston)	2	尼龙66 Nylon66	
18	弹簧 Spring	0~12	琴钢丝 Piano Wire	
19	端盖"O"型圈 O-ring(End-cap)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
20	端盖 End-cap	2	压铸铝 Die-casting aluminum	
21	端盖紧固螺杆 End-cap screw	8	不锈钢 Stainless steel(304)	
22	调节螺杆 Adjust screw	2	不锈钢 Stainless steel(304)	
23	调节螺杆"O"型圈 O-ring(Adjust screw)	2	丁腈橡胶 NBR	氟橡胶/硅橡胶 Viton/Silicone
24	调节螺杆螺母 Nut(Adjust screw)	2	不锈钢 Stainless steel(304)	

双作用扭矩 Output Torque with Double Acting

双作用执行器输出力矩
Output Torque of Double Acting Actuators



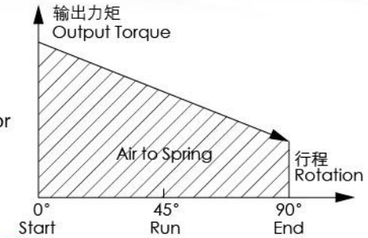
αB 系列气动执行器双作用输出扭矩表
Output Torque Table of αB Series Pneumatic Actuators with Double Acting

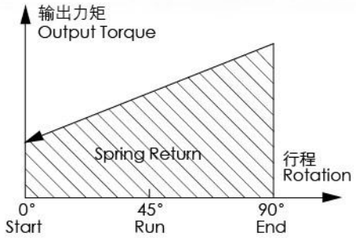
Unit: Nm

规格 Model	气源压力 (巴) Air pressure(Bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
αB-32DA	3.1	3.8	4.6	6.1	6.9	7.6	8.4	9.2	10.7	12.2
αB-45DA	6.0	7.6	9.1	12.1	13.6	15.1	16.6	18.1	21.1	24.2
αB-52DA	8.1	10.1	12.1	16.1	18.1	20.2	22.2	24.2	28.2	32.3
αB-63DA	14.2	17.8	21.3	28.4	32.0	35.5	39.1	42.6	49.7	56.8
αB-75DA	20.1	25.2	30.2	40.3	45.3	50.3	55.4	60.4	70.5	80.5
αB-83DA	30.8	38.5	46.2	61.6	69.4	77.1	84.8	92.5	107.9	123.3
αB-92DA	45.4	56.8	68.2	90.9	102.3	113.6	125.0	136.3	159.1	181.8
αB-105DA	65.8	82.2	98.7	131.6	148.0	164.4	180.9	197.3	230.2	263.1
αB-125DA	103	128	154	205	231	256	282	308	359	410
αB-140DA	175	219	263	351	395	439	482	526	614	702
αB-160DA	267	334	401	535	601	668	735	802	935	1069
αB-190DA	431	538	646	861	969	1077	1185	1292	1508	1723
αB-210DA	526	658	789	1052	1184	1316	1447	1579	1842	2105
αB-240DA	773	966	1160	1546	1740	1933	2126	2320	2706	3093
αB-270DA	1174	1468	1761	2349	2642	2936	3229	3523	4110	4697
αB-300DA	1526	1908	2289	3052	3434	3815	4197	4578	5341	6104
αB-350DA	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
αB-400DA	3256	4069	4883	6511	7325	8139	8953	9767	11394	13022

单作用扭矩 Output Torque with Spring Return

单作用气动执行器输出扭矩
Output Torque of Pneumatic Actuator with Spring Return





αB系列单作用气动执行器输出扭矩表
Output Torque of αB Series Pneumatic Actuator with Spring Return

Unit: Nm

规格 Model	弹簧根数 Spring Qty.	气源压力(巴) Air pressure(Bar) 2		2.5		3		4		5		6		7		8		弹簧输出扭矩 Springs' output	
		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	0° Start	90° End	90° Start	0° End
αB-45SR	K5	3.0	1.2	4.6	2.8													4.6	2.9
	K6	2.3	0.2	3.9	1.8	5.4	3.3											5.5	3.5
	K7			3.3	0.8	4.8	2.3	7.8	5.3									6.5	4.1
	K8					4.2	1.3	7.2	4.3	10.2	7.3							7.4	4.6
	K9							6.6	3.4	9.6	6.4	12.6	9.4					8.3	5.2
	K10							6.0	2.4	9.0	5.4	12.0	8.4	15.0	11.4	18.1	14.5	9.2	5.8
	K11									8.4	4.4	11.4	7.4	14.4	10.4	17.5	13.5	10.1	6.4
	K12									7.8	3.5	10.8	6.5	13.8	9.5	16.9	12.6	11.1	7.0
αB-52SR	K5	3.7	1.6	5.7	3.6													6.2	4.2
	K6	2.8	0.3	4.8	2.3	6.8	4.3											7.4	5.1
	K7			3.9	1.0	5.9	3.0	9.9	7.0									8.6	5.9
	K8					5.0	1.7	9.0	5.7	13.1	9.8							9.9	6.8
	K9							8.1	4.4	12.2	8.5	16.2	12.5					11.1	7.6
	K10							7.2	3.1	11.3	7.2	15.3	11.2	19.3	15.2	23.4	19.3	12.4	8.5
	K11									10.4	5.9	14.4	9.9	18.4	13.9	22.5	18.0	13.6	9.3
	K12									9.5	4.6	13.5	8.6	17.5	12.6	21.6	16.7	14.8	10.1
αB-63SR	K5	7.0	3.2	10.6	6.8													10.4	6.8
	K6	5.6	1.0	9.2	4.6	12.7	8.1											12.5	8.2
	K7			7.7	2.4	11.2	5.9	18.3	13.0									14.6	9.6
	K8					9.8	3.7	16.9	10.8	24.0	17.9							16.7	10.9
	K9							15.4	8.6	22.5	15.7	29.6	22.8					18.8	12.3
	K10							14.0	6.4	21.1	13.5	28.2	20.6	35.3	27.7	42.4	34.8	20.9	13.7
	K11									19.7	11.3	26.8	18.4	33.9	25.5	41.0	32.6	22.9	15.0
	K12									18.2	9.1	25.3	16.2	32.4	23.3	39.5	30.4	25.0	16.4
αB-75SR	K5	9.0	4.9	14.1	10.0													14.5	10.5
	K6	6.8	1.8	11.9	6.9	16.9	11.9											17.4	12.7
	K7			9.7	3.9	14.7	8.9	24.8	19.0									20.3	14.8
	K8					12.4	5.8	22.5	15.9	32.5	25.9							23.2	16.9
	K9							20.3	12.9	30.3	22.9	40.4	33.0					26.1	19.0
	K10							18.1	9.8	28.1	19.8	38.2	29.9	48.3	40.0	58.3	50.0	29.0	21.1
	K11									25.9	16.8	36.0	26.9	46.1	37.0	56.1	47.0	31.9	23.2
	K12									23.7	13.7	33.8	23.8	43.9	33.9	53.9	43.9	34.7	25.3
αB-83SR	K5	14.2	6.6	21.9	14.3													23.0	15.8
	K6	10.8	1.7	18.5	9.4	26.2	17.1											27.6	19.0
	K7			15.2	4.6	22.9	12.3	38.3	27.7									32.2	22.1
	K8					19.6	7.4	35.0	22.8	50.5	38.3							36.8	25.3
	K9							31.6	18.0	47.1	33.5	62.5	48.9					41.4	28.5
	K10							28.3	13.2	43.8	28.7	59.2	44.1	74.6	59.5	90.0	74.9	46.0	31.6
	K11									40.5	23.8	55.9	39.2	71.3	54.6	86.7	70.0	50.6	34.8
	K12									37.1	19.0	52.5	34.4	67.9	49.8	83.3	65.2	55.2	38.0

αB系列单作用气动执行器输出扭矩表 Output Torque of αB Series Pneumatic Actuator with Spring Return

unit: Nm

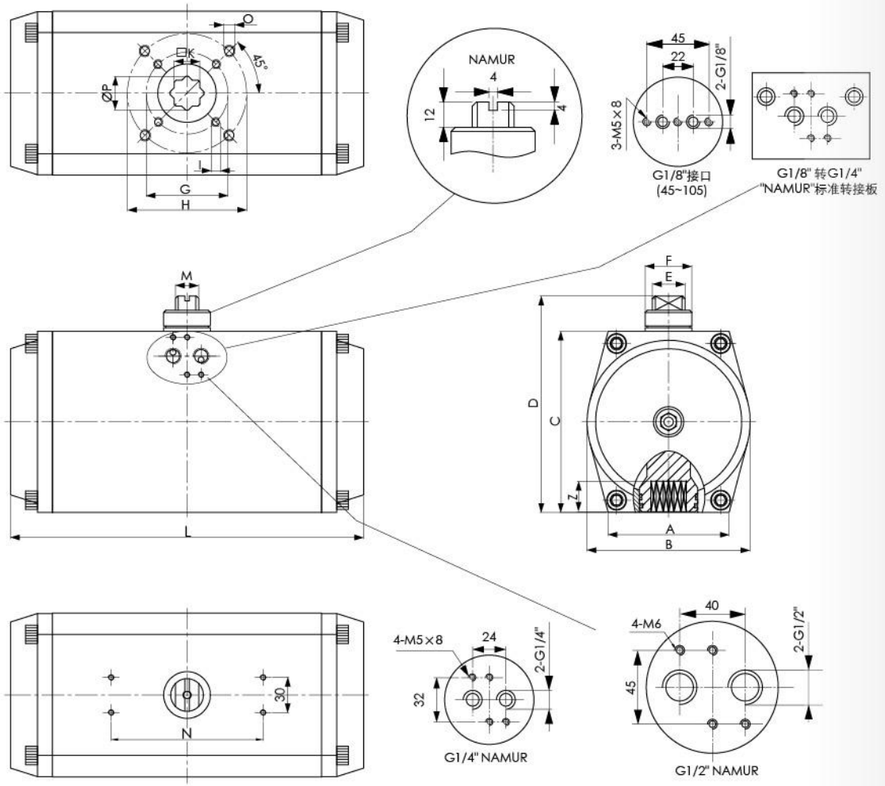
规格 Model	弹簧根数 Spring Qty.	气源压力(巴) Air pressure(Bar) 2		2.5		3		4		5		6		7		8		弹簧输出扭矩 Springs'output	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
αB-92SR	K5	20.8	9.2	32.2	20.6													34.4	23.3
	K6	15.9	2.0	27.3	13.4	38.7	24.8											41.2	28.0
	K7			22.4	6.1	33.8	17.5	56.5	40.2									48.1	32.7
	K8					28.9	10.3	51.6	33.0	74.3	55.7							55.0	37.3
	K9							46.7	25.8	69.4	48.5	92.1	71.2					61.9	42.0
	K10							41.8	18.5	64.5	41.2	87.2	63.9	110.0	86.7	132.7	109.4	68.7	46.7
	K11									59.5	34.0	82.2	56.7	105.0	79.5	127.7	102.2	75.6	51.4
	K12									54.6	26.8	77.3	49.5	100.1	72.3	122.8	95.0	82.5	56.0
αB-105SR	K5	32.5	14.0	48.9	30.4													49.2	31.6
	K6	25.8	3.6	42.2	20.0	58.7	36.5											59.1	38.0
	K7			35.6	9.7	52.1	26.2	85.0	59.1									68.9	44.3
	K8					45.4	15.8	78.3	48.7	111.1	81.5							78.7	50.6
	K9							71.7	38.4	104.5	71.2	137.4	104.1					88.6	56.9
	K10							65.0	28.0	97.8	60.8	130.7	93.7	163.6	126.6	196.5	159.5	98.4	63.3
	K11									91.1	50.4	124.0	83.3	156.9	116.2	189.8	149.1	108.3	69.6
	K12									84.5	40.1	117.4	73.0	150.3	105.9	183.2	138.8	118.1	75.9
αB-125SR	K5	47.9	20.5	72.9	45.5													78.4	52.4
	K6	36.9	4.0	61.9	29.0	87.9	55.0											94.1	62.8
	K7			50.8	12.5	76.8	38.5	127.8	89.5									109.7	73.3
	K8					65.8	22.0	116.8	73.0	167.8	124.0							125.4	83.8
	K9							105.8	56.5	156.8	107.5	208.8	159.5					141.1	94.2
	K10							94.8	40.0	145.8	91.0	197.8	143.0	248.8	194.0	299.8	245.0	156.8	104.7
	K11									134.8	74.5	186.8	126.5	237.8	177.5	288.8	228.5	172.4	115.2
	K12									123.7	58.0	175.7	110.0	226.7	161.0	277.7	212.0	188.1	125.7
αB-140SR	K5	84.7	39.3	128.7	83.3													129.0	85.8
	K6	66.6	12.1	110.6	56.1	154.6	100.1											154.8	102.9
	K7			92.6	29.0	136.6	73.0	224.6	161.0									180.5	120.1
	K8					118.5	45.8	206.5	133.8	294.5	221.8							206.3	137.3
	K9							188.5	106.7	276.5	194.7	363.5	281.7					232.1	154.4
	K10							170.4	79.5	258.4	167.5	345.4	254.5	433.4	342.5	521.4	430.5	257.9	171.6
	K11									240.3	140.4	327.3	227.4	415.3	315.4	503.3	403.4	283.7	188.7
	K12									222.3	113.2	309.3	200.2	397.3	288.2	485.3	376.2	309.5	205.9
αB-160SR	K5	120.0	47.7	187.0	114.7													208.3	139.7
	K6	90.6	3.9	157.6	70.9	224.6	137.9											250	168
	K7			128.2	27.0	195.2	94.0	329.2	228.0									292	196
	K8					165.8	50.2	299.8	184.2	432.8	317.2							333	223
	K9							270.4	140.3	403.4	273.3	537.4	407.3					375	251
	K10							241.0	96.4	374.0	229.5	508.0	363.5	641.0	496.5	775.0	630.5	417	279
	K11									344.6	185.6	478.6	319.6	611.6	452.6	745.6	586.6	458	307
	K12									315.2	141.7	449.2	275.7	582.2	408.7	716.2	542.7	500	335
αB-190SR	K5	220	105	327	212													293	190
	K6	178	40	285	147	393	255											352	227
	K7			243	82	351	190	566	405									410	265
	K8					309	125	524	340	740	556							469	303
	K9							482	275	698	491	913	706					527	341
	K10							440	210	656	426	871	641	1087	857	1302	1072	586	379
	K11									614	361	829	576	1045	792	1260	1007	645	417
	K12									572	296	787	511	1003	727	1218	942	703	455

αB系列单作用气动执行器输出扭矩表 Output Torque of αB Series Pneumatic Actuator – Spring Return

unit: Nm

规格 Model	弹簧根数 Spring Qty.	气源压力(巴) Air pressure(Bar) 2		2.5		3		4		5		6		7		8		弹簧输出扭矩 Springs'output	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
αB-210SR	K5	237	126	369	258													360	260
	K6	179	46	311	178	442	309											432	313
	K7			253	99	384	230	647	493									503	365
	K8					326	150	589	413	853	677							575	417
	K9							531	333	795	597	1058	860					647	469
	K10							473	253	737	517	1000	780	1263	1043	1526	1306	719	521
	K11									679	437	942	700	1205	963	1468	1226	791	573
	K12									621	357	884	620	1147	883	1410	1146	863	625
αB-240SR	K5	341	190	534	383													525	389
	K6	255	73	448	266	642	460											630	467
	K7			361	150	555	344	941	730									735	544
	K8					469	227	855	613	1242	1000							840	622
	K9							768	496	1155	883	1542	1270					945	700
	K10							682	380	1069	767	1456	1154	1842	1540	2229	1927	1050	778
	K11									983	650	1370	1037	1756	1423	2143	1810	1155	855
	K12									896	533	1283	920	1669	1306	2056	1693	1260	933
αB-270SR	K5	585	346	879	640													745	530
	K6	467	181	761	475	1054	768											894	636
	K7			644	309	937	602	1525	1190									1043	742
	K8					819	437	1407	1025	1994	1612							1192	848
	K9							1289	859	1876	1446	2463	2033					1341	954
	K10							1171	694	1758	1281	2345	1868	2932	2455	3519	3042	1490	1060
	K11									1640	1115	2227	1702	2814	2289	3401	2876	1639	1166
	K12									1523	950	2110	1537	2697	2124	3284	2711	1788	1272
αB-300SR	K5	715	347	1097	729													1061	730
	K6	553	112	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
αB-350SR	K5	982	393	1553	964													1702	1173
	K6	721	15	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	3366	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
αB-400SR	K7	1215	56	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

外型尺寸 Dimension

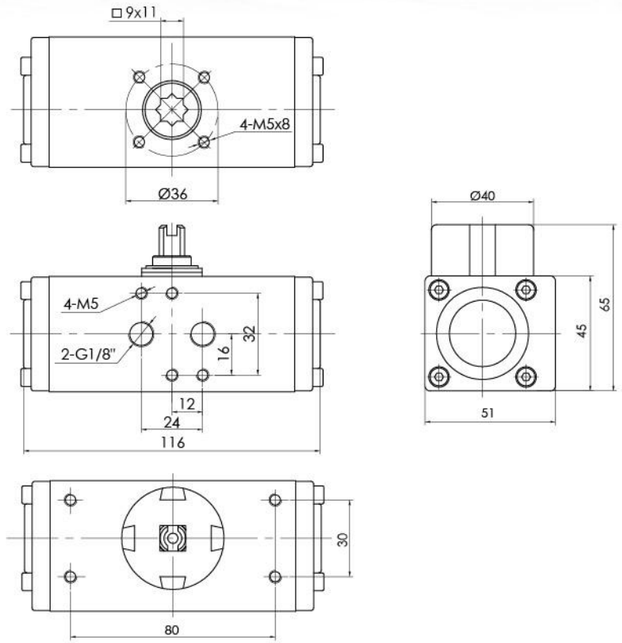


Unit: mm

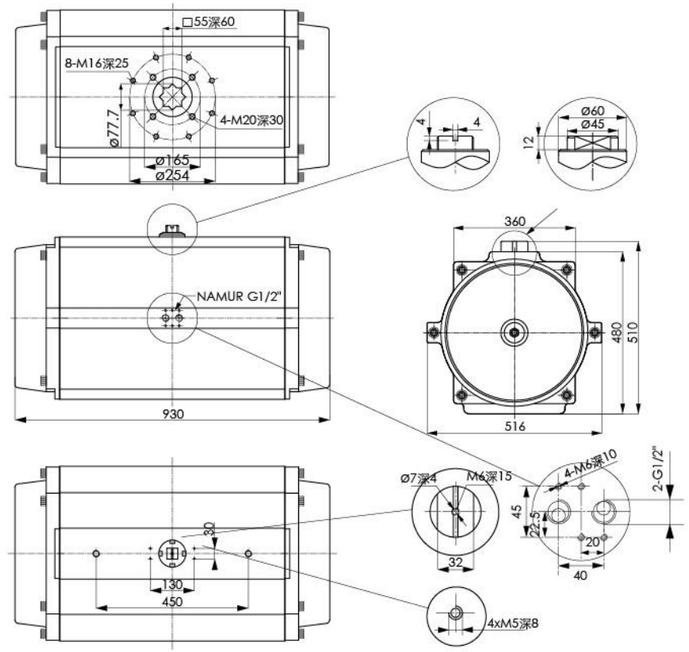
型号 Model	A	B	C	D	E	F	G	H	I	K	L	M	N	O	øP	Z	接口螺纹 Air Connection
αB-45	48	58	65	95	12	14	ø36	ø50	M5×8	11	146	10	80	M6×10	ø15.5	14	G1/8"
αB-52	50	59	74	104	12	14	ø36	ø50	M5×8	11	146	10	80	M6×10	ø15.5	14	G1/8"
αB-63	60	72	88	118	12	18	ø50	ø70	M6×10	14	168	10	80	M8×13	ø19.7	18	G1/8"
αB-75	65	83	100	130	12	18	ø50	ø70	M6×10	14	184	10	80	M8×13	ø19.7	18	G1/8"
αB-83	67	90	109	139	12	18	ø50	ø70	M6×10	17	204	10	80	M8×13	ø24	21	G1/8"
αB-92	76	104	120	150	18	25	ø50	ø70	M6×10	17	260	14	80	M8×13	ø24	21	G1/8"
αB-105	90	115	133	163	18	25	ø70	ø102	M8×13	22	268	14	80	M10×16	ø29.5	26	G1/8"
αB-125	103.5	140	155	185	28	40	ø70	ø102	M8×13	22	298	20	130	M10×16	ø29.5	26	NAMUR G1/4"
αB-140	107	152	171.5	201.5	28	40	ø102	ø125	M10×16	27	390	20	130	M12×20	ø36.7	31	NAMUR G1/4"
αB-160	128	175.8	197	227	28	40	ø102	ø125	M10×16	27	458	20	130	M12×20	ø36.7	31	NAMUR G1/4"
αB-190	135	206	230	260	44	60	/	ø140	/	36	528	32	130	M16×25	ø49.5	40	NAMUR G1/4"
αB-210	135	226	255	285	44	60	/	ø140	/	36	532	32	130	M16×25	ø49.5	40	NAMUR G1/4"
αB-240	155	256	289	319	44	60	/	ø165	/	46	602	32	130	M20×25	ø63.6	50	NAMUR G1/4"
αB-270	170	289	320	350	44	60	/	ø165	/	46	722	32	130	M20×25	ø63.6	50	NAMUR G1/2"
αB-300	196	324	348	378	44	60	ø165	ø215	M20×25	46	754	32	130	M20×25	ø63.6	60	NAMUR G1/2"
αB-350	220	380	408	438	44	60	ø165	ø215	M20×25	46	882	32	130	M20×25	ø63.6	60	NAMUR G1/2"

αB–32DA/400执行器安装尺寸图 Dimensional Drawing of αB–32DA/400

αB–32DA执行器
αB–32DA Actuator



αB–400执行器
αB–400 Actuator



工作技术条件 Operating conditions

1. 使用介质：压缩空气、无腐蚀性气体和油；
2. 压力范围：双作用2～8巴（Bar），单作用2～8巴（Bar）
3. 工作温度：标准型（使用丁腈橡胶O型圈）-20℃～+80℃
   低温型（使用低温丁腈胶O型圈）-40℃～+80℃
   高温型（使用氟橡胶O型圈）-15℃～+150℃
4. 行程调整：活塞在两端位置有±4°的可调范围；
5. 润　滑：在正常工作条件下，不需添加润滑剂；
6. 安　装：适合室内或室外安装；
7. 最高使用压力：输入气压不超过10巴。

1. Control Medium
   Dry or lubricated air, the non-corrosive gases or oil.
2. Control Pressure
   2～8 Bar
3. Ambient temperature Standard: -20℃～+80℃
   Low temperature: -40℃～+80℃
   High temperature: -15℃～+150℃
4. Travel adjustment
   Adjustable range of ±4° when the pistons at both ends
5. Lubrication
   Under normal operating condition, no lubricant is required
6. Application
   Either indoor or outdoor
7. Highest pressure
   The maximum input pressure is 10 Bar

耗气量计算 Air Consumption

αB 系列执行器开向体积和关向体积　αB Series Air volume opening & closing

Unit: L

型号 Model	开向体积（升）Volume Opening	关向体积（升）Volume Closing
αB-32DA	0.04	0.04
αB -45DA	0.08	0.11
αB-52DA	0.11	0.14
αB-63DA	0.20	0.23
αB-75DA	0.29	0.38
αB-83DA	0.41	0.55
αB-92DA	0.62	0.91
αB-105DA	0.94	1.18
αB-125DA	1.47	1.85

型号 Model	开向体积（升）Volume Opening	关向体积（升）Volume Closing
αB-140DA	2.43	3.20
αB-160DA	3.65	5.03
αB-190DA	5.9	7.9
αB-210DA	7.4	9.7
αB-240DA	10.7	14.3
αB-270DA	16.9	22.5
αB-300DA	23.8	29.7
αB-350DA	35.1	46.3
αB-400DA	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)

重量表 Weight Table

αB执行器系列 αB Series

Unit: kg

型号 Model	αB-32	αB-45	αB-52	αB-63	αB-75	αB-83	αB-92	αB-105	αB-125
Weight(SR)	-	1.12	1.23	1.95	2.43	3.15	5.05	6.95	9.25
Weight(DA)	0.75	1.05	1.10	1.80	2.16	2.85	4.30	6.15	8.80

型号 Model	αB-140	αB-160	αB-190	αB-210	αB-240	αB-270	αB-300	αB-350	αB-400
Weight(SR)	15.30	23.80	44.80	53.60	76.80	115.00	130.00	234.40	360.40
Weight(DA)	12.15	20.10	38.10	45.10	63.00	93.80	110.00	186.50	289.00

工作时间 Operation Time

气源压力 Air Pressure: 73 psi

Unit: s

规格 Size	32DA	45DA	52DA	63DA	75DA	83DA	92DA	105DA	125DA	140DA	160DA	190DA	210DA	240DA	270DA	300DA	350DA	400DA
0°-90°	0.5	0.5	0.6	0.7	0.8	0.9	1	1.5	2	2.5	4	5	5	6	8	12	14	15
90°-0°	0.5	0.5	0.6	0.7	0.7	0.8	1	1.5	2	2.5	3	4	4	6	8	12	14	15

气源压力 Air Pressure: 73 psi

Unit: s

规格 Size	45SR	52SR	63SR	75SR	83SR	92SR	105SR	125SR	140SR	160SR	190SR	210SR	240SR	270SR	300SR	350SR	400SR
0°-90°	2	2	2	2	2.5	3	3	4	4	4	5	6	12	15	18	20	25
90°-0°	0.5	0.5	1	1	1	1	1	1	1	1.5	3	3	4	6	8	10	12

执行器动作时间与电磁阀、减压阀、气管等配件的Cv值，气源压力，负载等因素有关。
我们可以根据客户要求定制气孔来改变执行器的动作时间。
The operating time of the actuators depends on the CV values of the solenoid valves, regulator valves, pipes. It depends on the air supply, operating load and so on.
We can custom the size of the holes to meet the require of the operating time of the actuators.

执行器选型 Selection of Actuator

双作用执行器的选型

双作用执行器的选型：
在正常工作条件下，双作用执行器的安全系数为20% – 30%
例如：
- 阀门力矩=885 lbf.in
- 安全力矩=885 lbf.in x（1+30%）=1151 lbf.in
- 气源压力=73psi

根据双作用执行器的力矩表，选配的最小型号为αB-105DA。

Actuator selection of double acting actuator:

Under normal working conditions, the safety factor of the double-acting actuator is 20% – 30%
For example:
- The valve torque=885 lbf.in
- The valve torque (with safety factor)
  =885 lbf.in x (1+30%)=1151 lbf.in
- Control pressure=73psi

According to the torque table of the double-acting actuator, the optional minimum model is αB-105DA.

单作用执行器的选型

在正常工作条件下，单作用执行器的安全系数为30% – 50%
例如：
阀门力矩=708 lbf.in
安全力矩=708 lbf.in x（1+30%）=920 lbf.in
气源压力=73psi
根据单作用执行器的力矩表，我们可以查到αB-140SR K7的输出力矩：
空气行程0°=2726 lbf.in
空气行程90°=2186 lbf.in
弹簧行程90°=1602 lbf.in
弹簧行程0°=1062 lbf.in
所有输出力矩都大于带安全系数的阀门力矩。

Selection of Spring Return Actuators

Under normal working conditions, the safety factor of the spring return actuator is 30% – 50%
Example:
The valve torque=708 lbf.in
The valve torque (with safety factor)
=708 lbf.in x (1+30%)=920 lbf.in
Control pressure=73psi
According to the torque table of the spring return actuator, we can check the output torque of αB-140SR K7:
Air travel 0° =2726 lbf.in
Air travel 90° =2186 lbf.in
Spring travel 90° =1602 lbf.in
Spring travel 0° =1062 lbf.in
All output torque is greater than the valve torque with safety factor.

单作用执行器的经济选型 Economical Selection of Spring Return Actuators

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。

例 如：

蝶阀原最大扭矩=920 lbf.in

打开后扭矩 920 lbf.inx30%=283 lbf.in

气源压力=73psi

我们可以选择 αB-125SR K11

- 空气行程0° =1193 lbf.in >920 lbf.in
- 空气行程90° =659 lbf.in >283 lbf.in
- 弹簧行程 90° =1526 lbf.in >283 lbf.in
- 弹簧行程 0° =1020 lbf.in >920 lbf.in

以上数据显示可以满足该蝶阀的正常启闭

Economical Selection of Spring Return Actuators

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

Example:

Example:

The max torque of the butterfly valve=920 lbf.in

The torque after opened (operating)920 lbf.inx30%=283 lbf.in

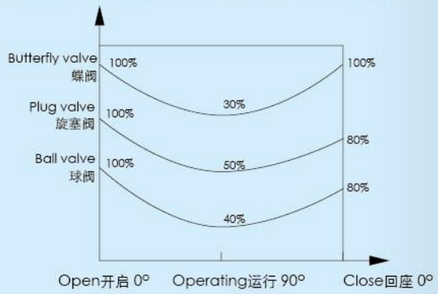
Air Supply=73psi

We can select the aB-125SR K11

The output torque is:

- Air stroke 0° =1193 lbf.in >920 lbf.in
- Air stroke 90° =659 lbf.in >283 lbf.in
- Spring stroke 90° =1526 lbf.in >283 lbf.in
- Spring stroke 0° =1020 lbf.in >920 lbf.in

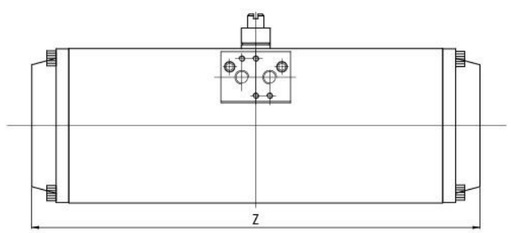
The above datas show the actuator's torque can satisfy the requirement of the butterfly valve.



特殊行程执行器简介 Introduction of Special Travel 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60° 、120° 、145° 、180° 、360° 等)的阿尔法气动执行器。双作用特殊行程阿尔法气动执行器的输出扭矩和安装尺寸可参照对应的阿尔法标准系列执行器参数表。

To meet the requirements of the different types of valves and mechanical automation, we can produce special strokes ALPHA actuators on costumer request (e.g. 60° ,120° ,145° ,180° ,360° etc.). The output torque and mounting size of double acting special stroke alpha pneumatic actuator can be referred to the corresponding alpha standard series actuator parameter table.



Length of DAx180°

Size	αB-52	αB-63	αB-75	αB-83	αB-92	αB-105	αB-125	αB-140	αB-160	αB-190	αB-210	αB-240	αB-270
Z(mm)	330	355	376	378	432	520	594	733	840	1034	1034	1027	1170

If you enquire any further information of spring return actuators, please do not hesitate to contact us.

订购 How to Order

UNIT	1		2	3	4	5	6	Product code
CONTENT	Material	–	Model	Acting Type	Spring Quantity	Travel	Custom-tailor	αB-52SR-K10
EXAMPLE	Aluminum Alloy	–	52	Spring Acting	10 PCS	None	None	
CODE	αB			SR	K10			

αA	Stainless Steel
αB	Aluminum Alloy

52
63
75
.....

DA	Double Acting
SR	Spring Acting

K8	8 PCS
K9	9 PCS
K10	10 PCS
.....	.....

None	90° Rotation
120	120° Rotation
135	135° Rotation
180	180° Rotation

None	Standard
FC	Failure Close
FO	Failure Open
HC	High Cycle
C	Custom

Accessories
附件

Certification
资质认证