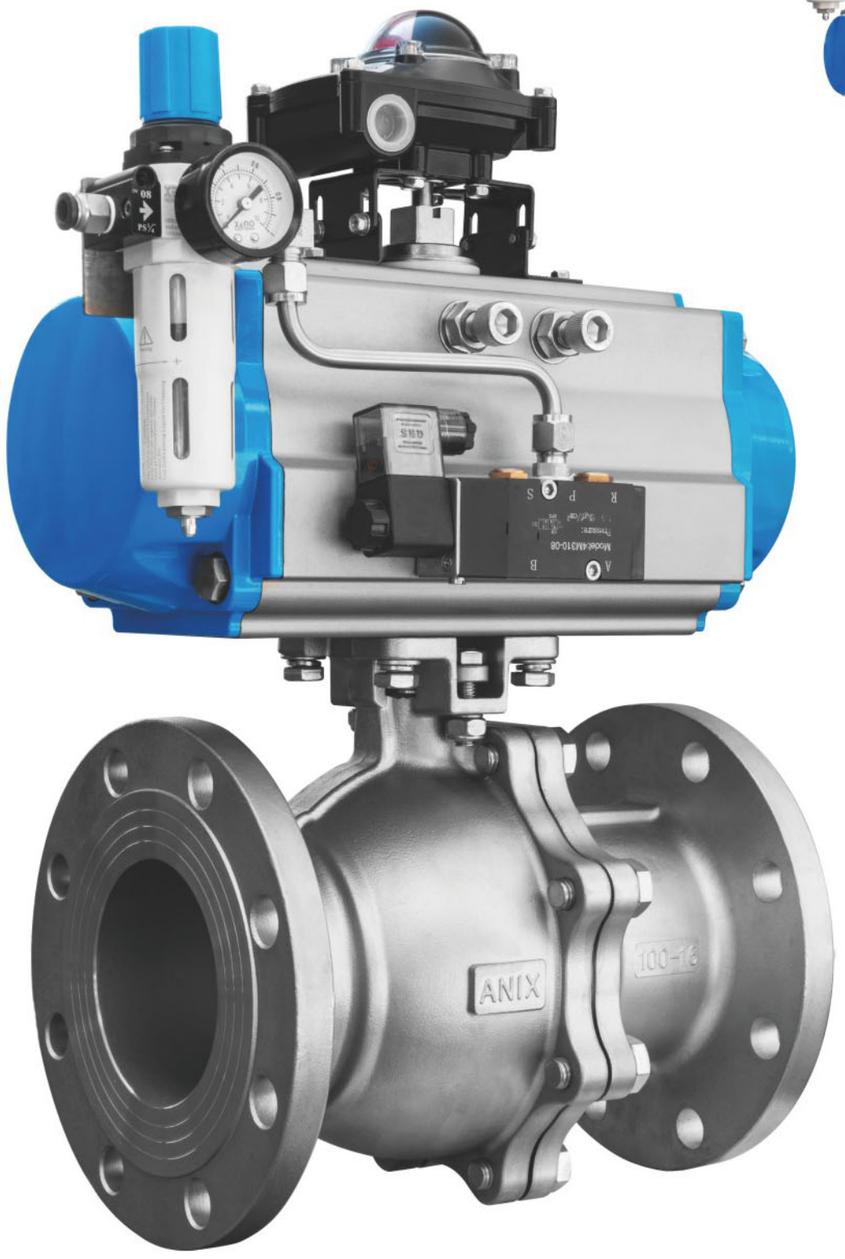
We ensure high product quality and product safety standards;
to ensure that meet customer requirements.

Material: Aluminium alloy

Colour Assortment:



AN 050

AN 063

AN 075

AN 115

AN 090

AN 145

AN 125-180°

AN 125

AN 050

AN 090

AN 100

AW083

Pneumatic flanged ball valves

Pneumatic butterfly valve

Pneumatic flange ball valve

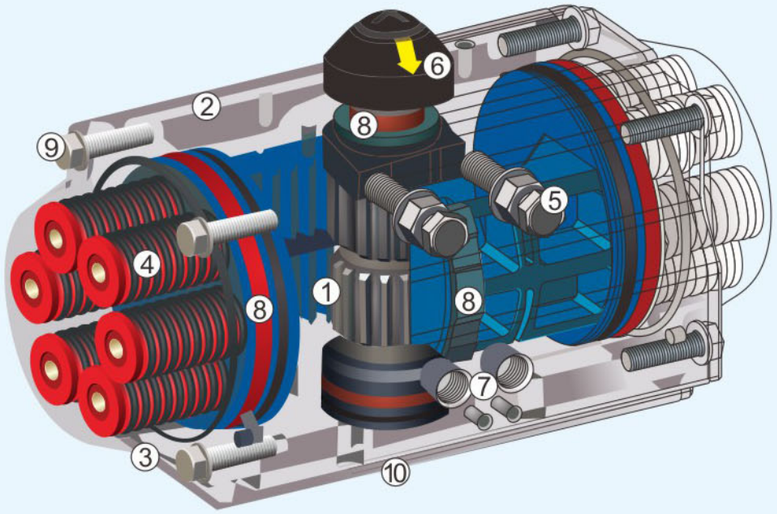
Three-piece pneumatic ball valve

PRO Valve
Tel:400-633-5118

Products applicable to petroleum, chemical, natural gas, light industry, electric power, pharmaceuticals, dyes, metallurgy, fiber, leather, textile, food, military, construction, refrigeration, water supply and other industries.

ANIX®
AT RANGE OF PNEUMATIC ACTUATORS

The new AT pneumatic rack and pinion actuators have been innovated and optimally designed through CAD, Cinema, Mastercam three-dimensional model, incorporating the latest technology at home and abroad. The shape is beautiful and compact, and the style is modern. We adopt new practical materials, new processes to make the quality and the performance of the products more reliable; multi-standard selection is more affordable; the products fully meet the latest international standard technical specifications and the current and future needs.



1. Dual piston rack and pinion design of symmetric structure for fast and smooth action, high precision and high output power. Reverse rotation can be accomplished by simply changing the mounting position of the pistons.
2. Extruded high-quality aluminum alloy cylinder block, precisely processed inner hole and hard anodized outer surface (anodic oxidation under special circumstances + Teflon coating) extend the lifecycle and lower friction coefficient.
3. Uniform design utilizes identical cylinder body and end cap for all double acting and single acting actuators. It allows changing acting way easily by adding or removing springs.
4. Modular preloaded safe spring cartridges can install or remove springs easily and safely no matter in the process of mounting or in the field.
5. The two independent adjusting screws on the external side can precisely adjust the on/off location of valve, which has been installed with actuator. If full stroke adjustment is required, additionally instal longer adjusting screws on two end covers.
6. Multi-positioner and visual indicator comply with standard VID/VIE 3845 and NAMUR able to install and output all accessories.Such as limit switch, positioner and position sensor
7. Air port complies with NAMUR standard and can be directly mounted NUMAR standard solenoid valve.
8. The compound bearing bush and piston guide ring at the back of gear rack and bearing of outlet shaft prevent metal to metal friction. In addition, the increased lubricants help to reduce friction and extend the lifecycle.
9. All fasteners are made of stainless steel materials and long-term corrosion resistance.
10. Fully conformance to the latest specifications of ISO5211,DN3337 (F03-F25),Namur and make the installation interchangeable and versatile.

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MULTI-FUNCTIONAL NAMUR INTERFACE

Multi-functional indicator in the 4th generation actuator is the standard product, which can be applied to following occasions since it is made of compound materials.

1.Location indication

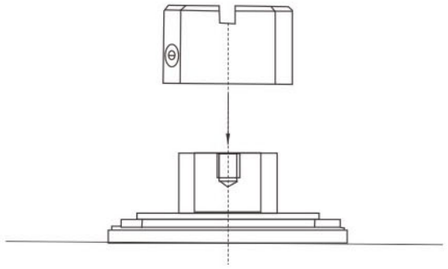
Indicating location of valve and actuator visually by a color insert and NAMUR standard trough.The indicator is suitable for all output shafts and two rotation directions of actuator.

2. Output accessories of actuator

NAMUR standard trough of location indicator can directly engaging output limit switch and locator.

3. Install proximity sensors directly

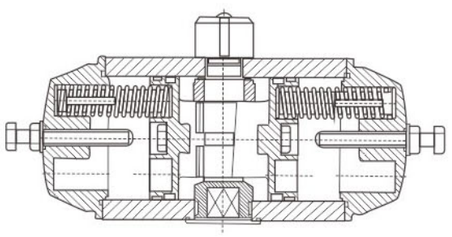
Indicator with metal insert can be mounted with numerous different proximity sensors conveniently and practically.



Attachment installed without multi-functional indicator

According to the requirement, replace standard indicator by stainless steel cap with NAMUR standard trough in 4th generation actuator to carry out following functions:

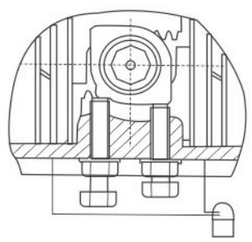
1.Attachment installation such as limit switch box and locator.
2.Indicating location of actuator by NUMAR standard trough.
3.Operable under high temperature.
4.Operate the actuator manually under emergency.



Required

Full stroke adjustment on 4th generation actuator

The stroke range is 0° to 90° plus or minus 4° . When a stroke less than 90° is required, such as 1° , 5° , 10° , 25° , 50° or 80° , you can add two special bolts adjustable or limitable at 0° to 90° at two end covers of actuator according to the requirement of customer. Full stroke adjustment is available in all 4th generation actuators.



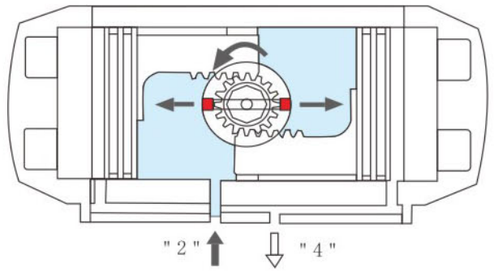
Locking function in fully open and fully closed position

When it is required to lock at complete on (90°) or complete off (0°), the 4th generation actuator offers practical and affordable method. Special bolt and locking device in the actuator can lock the actuator at each location forever. Using padlock, to avoid any uneccessary operation.

OPERATING PRINGCIPLE AND ROTATING DIRECTON

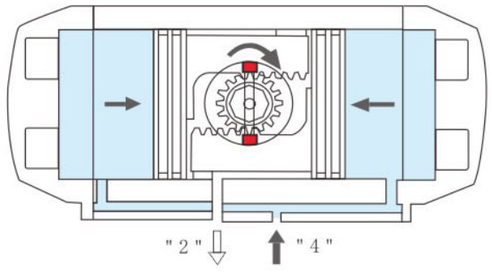
The standard rotating direction is clockwise, and can be anticlockwise when the air arrive the port 2.
The rotating direction of the actuators marked LF is anticlockwise, and can be clockwise when the air arrive the Port 2

Operating principle of double acting



CCW

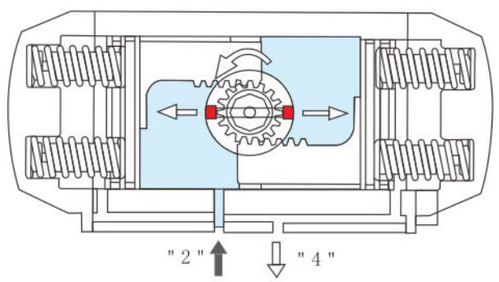
Air to Port 2 forces the pistons outwards to the two ends, causing the pinion to turn counterclockwise while the air is being exhausted from Port 4.



CW

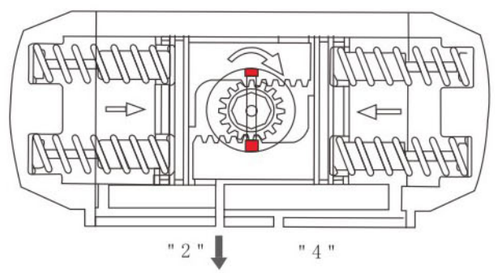
Air to Port 4 forces the pistons inwards to the middle, causing the pinion to turn clockwise while the air is being exhausted from Port 2.

Operatiing principle of single acting



CCW

Air to Port 2 forces the pistons outwards to the two ends, causing the springs to compress, The pinion turns counter -clockwise while air is being exhausted from Port 4.



CW

Loss of air pressure to the middle, the stored energy in the springs forces the pistons inwards to the middle, the pinion turns clockwise while air is being exhausted from Port 2

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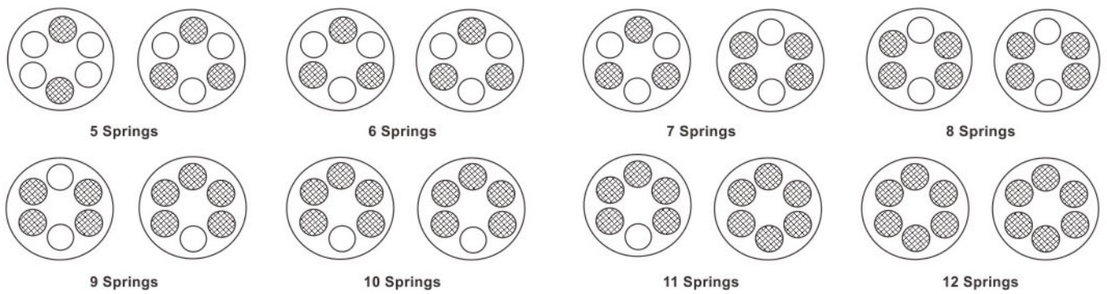
Springs mounting form for spring return actuators



How to select the actuator

The purpose of this reference data is helping how to select AN pneumatic actuator rightly. Before install the actuator to valve , take the following factors into consideration:

1. Valve's runing torque plus safty coefficient that recommended by manufacture/under operating condition
2. Actuator's air pressure
3. Type of actuator: D (double acting) or S (spring return) and the output torque under certain air pressure
4. Rotation of actuator and its failure mode(failure on or failure off)

Selection of actuator

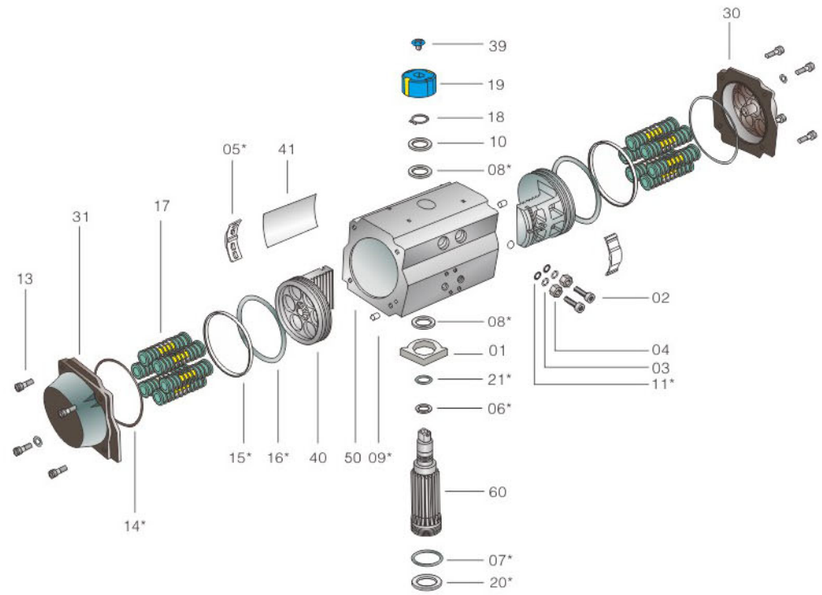
1. Increase safety coefficient to the torque of choosed valve when selecting pneumatic actuator.
2. Increase 25% safety coefficient to vapor or non-lubricating liquids.
3. Increase 25% safety coefficient to non-lubricating slurry liquids.
4. Increase 40% safety coefficient to non-lubricated dry gas.
5. Increase 60% safety coefficient to non-lubricated powdered and particles transported by air
6. Increase 20% safety coefficient to clean and low-friction lubricant (above recommended theoretically by us for reference only)

Example (double function actuator selection)

When controlling a ball valve with torque 200NM, air pressure is 4.5BAR and medium of non-lubricated water steam, we shall increase 25% safety coefficient for safety consideration. According to the torque list of double acting, check the air pressure that is of 5 bar, then follow this row vertical, look for equal or equivalent to this torque, its tell us to choose 277NM, then follow the same line again look for the left direction, we can find the right style of ACT125D.

Example (single function actuator selection)

When controlling a butterfly valve with 100NM torque, air pressure 4.5BAR and non-lubricated dry gas, we shall increase 40% safety coeffiecient for safety consideration, i.e. 140NM. Check the output torque list of spring return terminal and we can find out that the similar torque is 148NM. And then search for the left at the same line for the terminal torque of air pressure 4.5BAR and we can find out that it is 158NM. We have to take the balance of relative strength of air pressure torque and spring return torque into consideration. Finally, search for the left at the same line for model and quantity of spring, and we can find out that it is ACT145S with 9 springs.



No	Qty	Name	Standard material	Corrosinon prevention grade	Optional material
01	1	Octi-cam(Brake gear)	Stainless steel	·····	·····
02	2	Stopper bolt	Stainless steel	·····	·····
03	2	Thrust washer	Stainless steel	·····	·····
04	2	Screw cap	Stainless steel	·····	·····
05*	2	Bearing (Piston back)	Composite materials	·····	·····
06*	1	Bearing (Gear's top)	Nylon46	·····	·····
07*	1	Bearing (Gear's toot)	Nylon46	·····	·····
08*	2	Thrust bearing (Gear)	Composite materials	·····	·····
09*	2	Plunger	NBR	·····	Viton/Silicone
10	1	Thrust washer	Stainless steel	·····	·····
11*	2	O-ring (Stopper bolt)	NBR	·····	Viton/Silicone
13	8(C)	Cap screw	Stainless steel	·····	·····
14*		O-ring(End cap)	NBR	·····	Viton/Silicone
15*	2	Bearing (Piston head)	Composite materials	·····	·····
16*		O-ring(Piston)	NBR	·····	Viton/Silicone
17	5~12	Spring	Alloy spring steel	Epoxy resin coating	·····
18		Circlip(Gear)	Alloy spring steel	Nickel plated	Stainless steel
19	1	Position indicator	Composite materials	·····	·····
20*		O-ring(Gear's foot)	NBR	·····	Viton/Silicone
21*	1	O-ring(Gear's top)	NBR	·····	Viton/Silicone
30(D)		Right end cap	Cast aluminum alloy	Alkyd coating	·····
31(D)	1	Left end cap	Cast aluminum alloy	Alkyd coating	·····
39		Cap screw	Stainless steel	·····	·····
40	2	Piston	Cast aluminum alloy	Anodization	·····
41		Label of the actuator	Polyester aluminum	·····	·····
50	1	Cylinder body	Cast aluminum alloy	Anode hardening	·····
60		Output axis	Alloy steel	Nickel plated	Stainless steel

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HOW THE STYLE NUMBER MADE

AN 100-DL-10A-M-090°

- **Travel angle or Rotation**: 90° /120° /180° Travel angle or Rotation; 0° −90° /0° −180° Full stroke mechenic adjustment; 3P−0° −45° −90° /3P−0° −90° 180° Three positions
- **Output shaft hole size**: M= Prarllet to the bevel output hole; H= Parallet to the hole on side of the output; O= 2 keyway output hole
- **Quantities of Spring**: Both ends of the spring number 5-16pcs
- **Type of acting**: Double acting with clockwise; Double acting with counter clockwise; Single acting with clockwise; Single acting with couner clockwise
- **Dimension**: (Actuators's demensions 032-400)
- AN pneumatic actuator

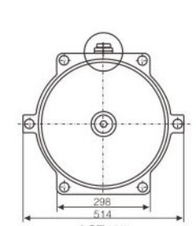
Technica data

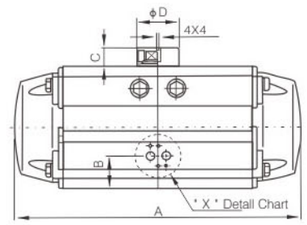
Model and Type	AN 050 D S	AN 063 D S	AN O75 D S	AN 090 D S	AN 100 D S	AN 115 D S	AN 125 D S	AN 145 D S	AN 160 D S	AN 190 D S	AN 210 D S	AN 240 D S	AN 270 D S	AN 300 D S	AN 350 D S	AN 400 D S
Diameter	50	63	75	90	100	115	125	145	160	190	210	240	270	300	350	400
Rotation required for 1 stroke adjustment	1/6	1/6	1/5	1/5	1/5	1/5	1/5	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
Opening cylinder volume (L)	0.1	0.2	0.3	0.5	0.7	1.2	1.5	2.4	3.1	4.3	5.9	10.0	14.5	25.0	35.1	52.6
Closing cylinder volume (L)	0.2	0.3	0.5	0.8	1.1	1.8	2.3	3.8	4.9	6.9	9.5	15.2	21.4	40.0	46.3	66.2
Opening time (S)	0.2 0.3	0.3 0.3	0.3 0.35	0.4 0.5	0.5 0.6	0.7 0.8	0.9 1.1	1.2 1.4	1.5 1.7	2 2.2	2.7 3.2	3.5 4	4 4.5	6.0 7.5	10.1 12.3	14.1 16.2
Closing time (S)	0.3 0.3	0.3 0.4	0.4 0.5	0.5 0.6	0.7 0.9	0.9 1.1	1.2 1.4	1.5 1.8	1.8 2.1	2.4 2.8	3.5 4	4.1 4.6	4.5 5	7.0 8.5	11.5 13.8	15.7 17.3
Estimated weight (Kg)	1.1 1.2	1.6 1.8	2.8 3.3	4.0 4.7	5.4 6.5	8.4 9.8	11 13.4	15.5 19.1	20.2 24.4	33 39.6	35.5 45.1	61.5 72.5	86 104	110 130	186 234	289 360

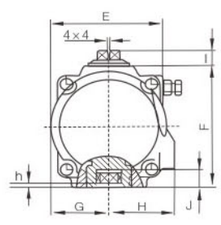
Power consumption depends on air pressure, switch stroke, the volume and frequency of action. Calculation is as follows:
Litre/Minute=cylinder volume(opening volume+closing volume)X{supplied gas pressure(Kpa)*101.3}Xtimes/minute

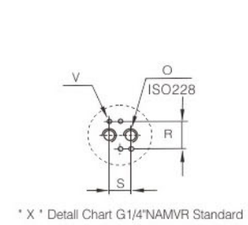
ANIX®

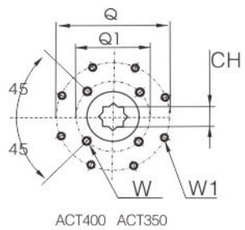
DIMENSION OF THE METRIC SYSTEM AND TECHNICAL DATA

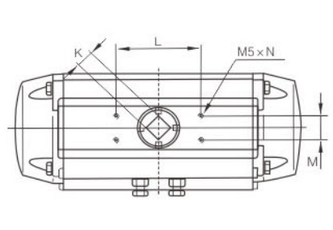


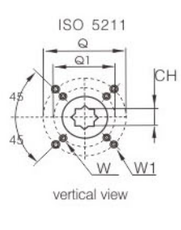


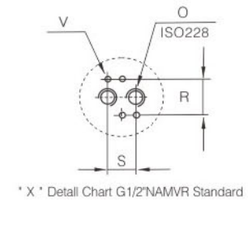












Model	AN 050	AN 063	AN 075	AN 090	AN 100	AN 115	AN 125	AN 145	AN 160	AN 190	AN 210	AN 240	AN 270	AN 300	AN 350	AN 400
A	154.5	168	219	249	274	315	354	417	452	539	600	671	723	857	935	1035
B	26.5	30	30.5	32.5	37.5	42.5	45	50	51.5	56	70	70	88	91	99	235
C	20	20	20	20	20	20	30	30	30	30	30	40	40	40	40	40
E	53	66	82	92.5	107	112	130	146.5	159	186	201	231	252.5	290	336	335
F	69	85	102.5	115	127.5	140	156.5	176	196	231	253.5	291	331.5	354	410	466
G	29	36.5	43	49	55.5	61.5	69.5	78.5	88	105	116	130.5	147	162	190	260
H	41	46.5	52.5	56.5	66.5	71	80.5	91	97	110	119.5	130.5	147	173	195	260
I	12	14	18	18	20	20	30	35	35	40	40	45	45	60	60	60
h	0.5	0.5	1	1	1	1	1.5	1.5	1.5	2	2	2	2	2.5	2.5	2.5
R	32	32	32	32	32	32	32	32	32	32	32	45	45	45	45	45
S	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40	40
H	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M6×10	M6×10	M6×10
O ISO 228	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 3/8 "	G 3/8 "	G 1/2 "	G 1/2 "	G 1/2 "
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
L	80	80	80	80	80	130	130	130	130	130	130	130	130	130	130	130
k	11	11	14	14	14	21	21	27	27	27	27	36	36	36	36	36
ISO 5211	F03/F05	F03/F05	F05/F07	F05/F07	F07/F10	F07/F10	F07/F10	F10/F12	F10/F12	F14	F14	F16	F16	F16	F16/F25	F16/F25
CH	11	14	17	17	22	22	27	27	27	36	36	46	46	46	46	46
Q	36	36	50	50	70	70	70	102	102	140	140	165	165	165	165	254
Q1	50	50	70	70	102	102	102	125	125							
W	M5	M5	M6	M6	M8	M8	M8	M10	M10	M16	M16	M20	M20	M20	M20	M20
W1	M6	M6	M8	M8	M10	M10	M10	M12	M12						M16	M16

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OUTPUT TORQUE OF SPRING RETURN ACTUATORS

Model	Spring Q.ty	output torque of air overcomes Spring force: Air Pressure 2.5Bar 0° Start	2.5Bar 90° End	3Bar 0° Start	3Bar 90° End	3.5Bar 0° Start	3.5Bar 90° End	4Bar 0° Start	4Bar 90° End	4.5Bar 0° Start	4.5Bar 90° End	5Bar 0° Start	5Bar 90° End	5.5Bar 0° Start	5.5Bar 90° End	6Bar 0° Start	6Bar 90° End	7Bar 0° Start	7Bar 90° End	8Bar 0° Start	8Bar 90° End	Spring's Rotation 90° Start	Spring's Rotation 0° End
AN-042	S05	2.5	0.8	3.5	1.8	4.4	2.7	5.4	3.7	6.3	4.6	7.2	5.5									3.9	2.2
	S06	2.0	0.1	3.0	1.1	3.9	2.0	4.9	3.0	5.8	3.9	6.7	4.8	7.7	5.8							4.6	2.7
	S07			2.5	0.4	3.4	1.3	4.4	2.3	5.3	3.2	6.2	4.1	7.2	5.1	8.2	6.1					5.3	3.2
	S08					2.9	0.6	3.9	1.6	4.8	2.5	5.7	3.4	6.7	4.4	7.7	5.4	9.5	7.2			6.0	3.7
	S09							3.4	0.9	4.3	1.8	5.2	2.7	6.2	3.7	7.2	4.7	9.0	6.5	11	8.5	6.7	4.2
	S10									3.8	1.1	4.7	2.0	5.7	3.0	6.7	4.0	8.5	5.8	10.5	7.8	7.4	4.7
	S11											4.2	1.3	5.2	2.3	6.2	3.3	8.0	5.1	10	7.1	8.1	5.2
	S12													4.7	1.6	5.7	2.6	7.5	4.4	9.5	6.4	8.8	5.7
AN-050	S05	4.3	3.0	5.9	4.6	7.3	6.0	8.8	7.5	10.3	9	11.7	10.4									4.3	3.0
	S06	3.8	2.2	5.4	3.8	6.8	5.2	8.3	6.7	9.8	8.2	11.2	9.6	12.7	11.1							5.1	3.5
	S07			4.8	2.9	6.2	4.3	7.7	5.8	9.2	7.3	10.6	8.7	12.1	10.2	13.6	11.7					6.0	4.1
	S08					5.5	3.4	7.0	4.9	8.5	6.4	9.9	7.8	11.4	9.3	12.9	10.8	15.9	13.8			6.9	4.8
	S09							6.4	4.0	7.9	5.5	9.3	6.9	10.8	8.4	12.3	9.9	15.3	12.9	18.2	15.8	7.8	5.4
	S10									7.4	4.7	8.8	6.1	10.3	7.6	11.8	9.1	14.8	12.1	17.7	15.0	8.6	5.9
	S11											8.2	5.2	9.7	6.7	11.2	8.2	14.2	11.2	17.1	14.1	9.5	6.5
	S12													9.0	5.8	10.5	7.3	13.5	10.3	16.4	13.2	10.4	7.2
AN-063	S05	8.1	5.5	10.7	8.1	13.3	10.7	16	13.4	18.6	16	21.1	18.5									7.5	4.9
	S06	7.1	4.0	9.7	6.6	12.3	9.2	15	11.9	17.6	14.5	20.1	17	22.7	19.6							9.0	5.9
	S07			8.7	5.1	11.3	7.7	14	10.4	16.6	13	19.1	15.5	21.7	18.1	24.4	20.8					10.5	6.9
	S08					10.3	6.2	13	8.9	15.6	11.5	18.1	14	20.7	16.6	23.4	19.3	28.6	24.5			12.0	7.9
	S09							12	7.4	14.6	10	17.1	12.5	19.7	15.1	22.4	17.8	27.6	23	32.8	28.2	13.5	8.9
	S10									13.6	8.5	16.1	11	18.7	13.6	21.4	16.3	26.6	21.5	31.8	26.7	15.0	9.9
	S11											15.2	9.2	17.8	11.8	20.5	14.5	25.7	19.7	30.9	24.9	16.8	10.8
	S12													16.8	10.7	19.5	13.4	24.7	18.6	29.9	23.8	17.9	11.8
AN-075	S05	16	10.5	21.1	15.6	26.3	20.8	31.5	26	36.7	31.2	41.9	36.4									15.4	9.9
	S06	14.1	7.4	19.2	12.5	24.4	17.7	29.6	22.9	34.8	28.1	40	33.3	45.2	38.5							18.5	11.8
	S07			17.2	9.5	22.4	14.7	27.6	19.9	32.8	25.1	38	30.3	43.2	35.5	48.3	40.6					21.5	13.8
	S08					20.5	11.6	25.7	16.8	30.9	22	36.1	27.2	41.3	32.4	46.4	37.5	56.7	47.8			24.6	15.7
	S09							23.7	13.7	28.9	18.9	34.1	24.1	39.3	29.3	44.4	34.4	54.7	44.7	65.1	55.1	27.7	17.7
	S10									26.9	15.8	32.1	21	37.3	26.2	42.4	31.3	52.7	41.6	63.1	52	30.8	19.7
	S11											30.2	17.9	35.4	23.1	40.5	28.2	50.8	38.5	61.2	48.9	33.9	21.6
	S12													33.4	20.1	38.5	25.2	48.8	35.5	59.2	45.9	36.9	23.6
AN-090	S05	24.4	15	32.6	23.2	40.7	31.3	48.8	39.4	57	47.6	65.1	55.7									25.7	16.3
	S06	21.1	9.8	29.3	18	37.4	26.1	45.5	34.2	53.7	42.4	61.8	50.5	70.3	59							30.9	19.6
	S07			26	17.9	34.1	21	42.2	29.1	50.4	37.3	58.5	45.4	67	53.9	75	61.9					36	22.9
	S08					31	15.9	39.1	24	47.3	32.2	55.4	40.3	63.9	48.8	71.9	56.8	87.9	72.8			41.1	26
	S09							35.7	18.8	43.9	27	52	35.1	60.5	43.6	68.5	51.6	84.5	67.6	100.6	83.7	46.3	29.4
	S10									40.6	21.8	48.7	29.9	57.2	38.4	65.2	46.4	81.2	62.4	97.3	78.5	51.5	32.7
	S11											45.5	24.9	54	33.4	62	41.4	78	57.4	94.1	73.5	56.5	35.9
	S12													50.8	28.2	58.8	36.2	74.8	52.2	90.9	68.3	61.7	39.1
AN-100	S05	36.7	24.2	48.5	36	60.3	47.8	71.8	59.3	84.3	71.8	95.9	83.4									35	22.5
	S06	32.2	17.1	44	28.9	55.8	40.7	67.3	52.2	79.8	64.7	91.4	76.3	103	87.9							42.1	27
	S07			39.4	22	51.2	33.8	62.7	45.3	75.2	57.8	86.8	69.4	98.4	81	110.8	93.4					49	31.6
	S08					46.8	26.8	58.3	38.3	70.8	50.8	82.4	62.4	94	74	106.4	86.4	129.5	109.5			56	36
	S09							53.7	31.2	66.2	43.7	77.8	55.3	89.4	66.9	101.8	79.3	124.9	102.4	149	126.5	63.1	40.6
	S10									61.7	36.7	73.3	48.3	84.9	59.9	97.3	72.3	120.4	95.4	144.5	119.5	70.1	45.1
	S11											68.8	41.3	80.4	52.9	92.8	65.3	115.9	88.4	140	112.5	77.1	49.6
	S12													75.9	45.9	88.3	58.3	111.4	81.4	135.5	105.5	84.1	54.1

ANIX®

OUTPUT TORQUE OF SPRING RETURN ACTUATORS

Model	Spring Q.ty	output torque of air overcomes Spring force: Air Pressure 2.5Bar 0° Start	2.5Bar 90° End	3Bar 0° Start	3Bar 90° End	3.5Bar 0° Start	3.5Bar 90° End	4Bar 0° Start	4Bar 90° End	4.5Bar 0° Start	4.5Bar 90° End	5Bar 0° Start	5Bar 90° End	5.5Bar 0° Start	5.5Bar 90° End	6Bar 0° Start	6Bar 90° End	7Bar 0° Start	7Bar 90° End	8Bar 0° Start	8Bar 90° End	Spring's Rotation 90° Start	Spring's Rotation 0° End
AN-115	S05	58.7	36.9	78.5	56.7	97	75.2	116.5	94.7	135.5	113.7	154.5	132.7									58.3	36.5
	S06	51.4	25.2	71.2	45	89.7	63.5	109.2	83	128.2	102	147.2	121	166.2	140							70	43.8
	S07			63.9	33.4	82.4	51.9	101.9	71.4	120.9	90.4	139.9	109.4	158,9	128.4	178.9	148.4					81.6	51.1
	S08					75.1	40	94.6	59.5	113.6	78.5	132.6	97.5	151.6	116.5	171.6	136.5	209.6	174.5			93.5	58.4
	S09							87.3	48	99	67	125.3	86	144.3	105	164.3	125	202.3	163	240.3	201	105	65.7
	S10										55.4	118	74.4	137	93.4	157	113.4	195	151.4	233	189.4	116.6	73
	S11											110.7	63	129.7	82	149.7	102	187.7	140	225.7	178	128	80.3
	S12													122.3	70.3	142.3	90.3	180.3	128.3	218.3	166.3	139.7	87.7
AN-125	S05	76.3	50	101.3	75	125.9	99.6	150.9	124.6	174.9	148.6	199.8	173.5									73	46.7
	S06	67	35	92	60	116.6	84.6	141.6	109.6	165.6	133.6	190.5	158.5	215.5	183.5							88	56
	S07			82.6	45.7	107.2	70.3	132.2	95.3	156.2	119.3	181.1	144.2	206.1	169.2	230.1	193.2					102.3	65.4
	S08					97.8	55.1	122.8	80.1	146.8	104.1	171.7	129	196.7	154	220.7	178	270.5	277.8			117.5	74.8
	S09							113.6	65.9	137.6	89.9	162.5	114.8	187.5	139.8	211.5	163,8	261.3	213.6	310.3	262.6	131.7	84
	S10									128.1	74.6	153	99.5	178	124.5	202	148,5	251.8	198.3	300.8	247.3	147	93.5
	S11											143.5	85.5	168.5	110.5	192.5	134,5	242.3	184.3	291.3	233.3	161	103
	S12													159.5	95.5	183.5	119.5	233.3	169.3	282.3	218.3	176	112
AN-145	S05	120	78	159	117	197	155	237	195	275	233	314	272									115	73
	S06	105	55	144	94	182	132	222	172	260	210	299	249	337	287							138	88
	S07			130	72	168	110	208	150	246	188	285	227	323	265	362	304					160	102
	S08					153	87	193	127	231	165	270	204	308	242	347	281	425	359			183	117
	S09							178	104	216	142	255	181	293	219	332	258	410	336	487	413	206	132
	S10									201	118	240	157	278	195	317	234	395	312	472	389	230	147
	S11											226	135	264	173	303	212	381	290	458	367	252	161
	S12													249	150	288	189	366	267	443	344	275	176
AN-160	S05	153	105	202	154	253	205	304	256	354	306	404	356									148	100
	S06	133	76	182	125	233	176	284	227	334	257	384	307	435	358							177	120
	S07			162	95	213	146	264	297	314	247	364	297	415	348	466	399					207	140
	S08					193	116	244	267	294	217	344	267	395	318	446	369	546	469			237	160
	S09							224	138	274	188	324	238	375	289	426	340	526	440	628	542	266	180
	S10									254	159	304	209	355	260	406	311	506	411	608	513	295	200
	S11											284	179	335	230	386	281	486	381	588	483	325	220
	S12													315	200	366	251	466	351	568	453	355	240
AN-190	S05	306	215																			258	167
	S06	273	163	367	257	462	352															310	200
	S07	240	112	334	206	429	301	523	395	618	490											361	233
	S08			300	154	395	249	489	343	584	438	679	533	773	627							413	267
	S09							456	292	551	387	646	482	740	576	834	670					464	300
	S10							422	240	517	335	612	430	706	524	800	618	990	808	1178	996	516	334
	S11											579	379	673	473	767	567	957	757	1145	945	567	367
	S12											546	327	640	421	734	515	924	705	1112	893	619	400
AN-210	S05	359	271																			317	229
	S06	313	208	431	326	549	444															380	275
	S07	267	145	385	263	503	381	621	499	738	616											443	321
	S08			339	200	457	318	575	436	692	553	809	670	928	789							506	367
	S09							529	393	646	490	763	607	882	726	999	843					569	413
	S10							484	309	601	426	718	543	837	662	954	779	1190	1015	1426	1251	633	458
	S11											672	480	791	599	908	716	1144	952	1380	1188	696	504
	S12											626	417	745	536	862	653	1098	889	1334	1125	759	550
AN-240	S05	580	427	765	612	949	796	1134	981	1318	165	1502	1349									495	342
	S06	511	328	696	513	880	697	1065	882	1249	1066	1433	1250	1618	1435							594	411
	S07			627	413	811	597	996	782	1180	966	1364	1150	1549	1335	1734	1520					694	480
	S08					743	499	928	684	1112	868	1296	1052	1481	1237	1666	1422	2034	1790			792	548
	S09							859	585	1043	769	1227	953	1412	1138	1597	1323	1965	1691			891	617
	S10									975	670	1159	854	1344	1039	1529	1224	1897	1592	2335	2061	990	685
	S11											1091	755	1296	940	1461	1125	1829	1493	2267	1962	1089	753
	S12													1207	841	1392	1026	1760	1394	2199	1863	1188	822

送样稿 13400666 5118

OUTPUT TORQUE OF SPRING RETURN ACTUATORS

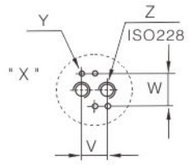
Model	Spring Q.ty	Air Pressure 2,5Bar 0° Start	2,5Bar 90° End	3Bar 0° Start	3Bar 90° End	3.5Bar 0° Start	3.5Bar 90° End	4Bar 0° Start	4Bar 90° End	4.5Bar 0° Start	4.5Bar 90° End	5Bar 0° Start	5Bar 90° End	5.5Bar 0° Start	5.5Bar 90° End	6Bar 0° Start	6Bar 90° End	7Bar 0° Start	7Bar 90° End	8Bar 0° Start	8Bar 90° End	Spring's Rotation 90° Start	Spring's Rotation 0° End
AN-270	S05	939	647																			666	474
	S06	744	514	1007	777	1270	1040															799	569
	S07	650	381	913	644	1176	907	1438	1169	1701	1432											932	663
	S08			818	510	1081	773	1343	1035	1606	1298	1868	1560	2131	1823							1066	758
	S09					986	640	1248	902	1511	1165	1773	1427	2036	1690	2299	1953	2730				1199	853
	S10							1153	769	1416	1032	1678	1294	1941	1557	2204	1820		2346	3254	2870	1332	948
	S11									1322	899	1584	1161	1847	1424	2110	1687	2636	2213	3160	2737	1465	1042
	S12											1489	1028	1752	1291	2015	1554	2541	2080	3065	2604	1598	1137
AN-300	S05	1115	804	1476	1165																	997	686
	S06	978	604	1339	965	1699	1325															1197	823
	S07	840	405	1201	766	1561	1126	1721	1486													1396	961
	S08					1424	927	1784	1287	2145	1648	2504	2007									1595	1098
	S09							1647	1088	2008	1449	2367	1808	2728	2169	3089	2530					1794	1235
	S10							1510	887	1871	1248	2230	1607	2591	1968	2952	2329	3672	3049	4393	3770	1995	1372
	S11									1733	1049	2090	1408	2453	1769	2814	2130	3534	2850	4255	3571	2194	1510
	S12											1955	1209	2316	1570	2677	1931	3397	2651	4118	3372	2393	1647
AN-350	S05	1553	946																			1702	1173
	S06	1292	586	1863	1157	2432	1738															2043	1408
	S07	1031	208	1602	779	2171	1360	2745	1922													2383	1642
	S08			1341	401	1910	980	2484	1544	3053	2117	3626	2686									2724	1877
	S09							2224	1165	2792	1739	3366	2307	3934	2881	4508	3449					3064	2112
	S10							1963	787	2531	1361	3105	1929	3673	2503	4247	3071	5390	4212	6532	5356	3405	2346
	S11									2270	983	2844	1551	3412	2125	3986	2693	5129	3836	6271	4978	3745	2581
	S12											2584	1172	3151	1747	3726	2314	4869	3457	6011	4599	4086	2816
AN-400	S07	2117	1136																			2707	1726
	S08	1869	749	2639	1518	3406	2286															3094	1974
	S09			2392	1131	3160	1899	3929	2668													3481	2220
	S10			2145	744	2913	1512	3682	2281	4451	3050	5219	3818									3868	2467
	S11							3435	1895	4204	2664	4972	3432	5741	4201	6510	4970					4254	2714
	S12									3958	2276	4726	3044	5495	3813	6264	4582	7800	6118	9338	7656	4642	2960
	S13											4479	2658	5248	3427	6017	4196	7553	5732	9091	7270	5028	3207
	S14											4232	2271	5001	3040	5770	3809	7306	5345	8844	6883	5415	3454
	S15											3986	1884	4755	2653	5524	3422	7060	4958	8598	4690	5802	3700
	S16													4508	2266	5277	3035	6813	4571	8351	6109	6189	3947

Output torque of double acting actuators(Nm)

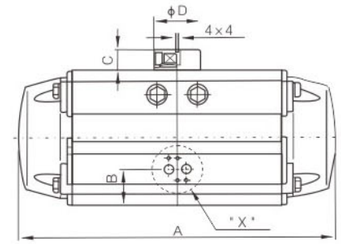
Model \ Air Pressure	2.5Bar	3Bar	3.5Bar	4Bar	4.5Bar	5Bar	5.5Bar	6Bar	7Bar	8Bar
AN-042D	4.7	5.7	6.6	7.6	8.5	9.4	10.4	11.4	13.2	15.2
AN-050D	7.3	8.9	10.3	11.8	13.3	14.7	16.2	17.7	20.7	23.6
AN-063D	13.0	15.6	18.2	20.9	23.5	26.0	28.6	31.3	36.5	41.7
AN-075D	25.9	31.0	36.2	41.4	46.6	51.8	57.0	62.1	72.4	82.8
AN-090D	40.7	48.9	57.0	65.1	73.3	81.4	89.9	97.9	113.9	130
AN-100D	59.2	71.0	82.8	94.3	106.8	118.4	130	142.4	165.5	189.6
AN-115D	95.2	115	133.5	153	172	191	210	230	268	306
AN-125D	123	148	172.6	197.6	221.6	246.5	271.5	295.5	345.3	394.3
AN-145D	193	232	270	310	348	387	425	464	542	619
AN-160D	253	302	353	404	454	504	555	606	706	808
AN-190D	473	567	662	756	851	946	1040	1134	1324	1512
AN-210D	588	706	824	942	1059	1176	1295	1412	1648	1884
AN-240D	922	1107	1291	1476	1660	1844	2029	2214	2582	2952
AN-270D	1313	1576	1839	2101	2364	2626	2889	3152	3678	4202
AN-300D	1801	2162	2522	2882	3243	3602	3963	4324	5044	5765
AN-350D	2856	3427	3998	4570	5141	5712	6283	6854	7997	9139
AN-400D	3843	4612	5380	6149	6918	7686	8455	9224	10760	12298

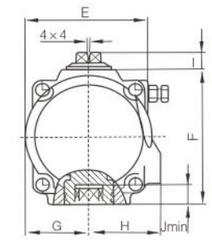
TECHNICAL DATA AND METRIC SYSTEM DIMENSION OF 120°AND 180°ROTATION ACTUATORS

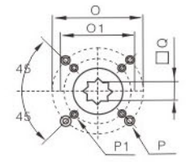
Connection Standard NAMUR



Connection Standard ISO5211/VDI/VDE3845







1. Offer other type actuator upto request
2. Different stroke actuators are available,such as 140, 160 etc.

Model	AN 50	AN 63	AN 75	AN 90	AN 100	AN 115	AN 125	AN 145	AN 160	AN 190	AN 210	AN 240	AN 270	AN 300
	Size(mm)													
ISO flange	-	F03-F05	F05-F07	-	F07-F10	-	F07-F10	-	F10-F12	-	F14	-	-	-
A(120°)	-	183	243.5	-	309	-	397	-	504	-	622	-	-	-
A(180°)	-	225	305	-	385	-	498	-	630	-	755	-	-	-
B	-	30	30.5	-	37.5	-	45	-	52	-	62.5	-	-	-
C	-	20	20	-	20	-	30	-	30	-	50	-	-	-
φD	-	40	40	-	40	-	56	-	65	-	80	-	-	-
E	-	72	84.5	-	111	-	136	-	169	-	213	-	-	-
F	-	85	102	-	127	-	157	-	196	-	245	-	-	-
G	-	36	42.5	-	56	-	69.5	-	88	-	110	-	-	-
H	-	47	52	-	67	-	82	-	99	-	112	-	-	-
I	-	14.5	14.5	-	14.5	-	24.5	-	24.5	-	44.5	-	-	-
Jmin	-	16	16	-	19	-	24	-	29	-	38	-	-	-
K	-	11	17	-	17	-	27	-	27	-	36	-	-	-
L	-	80	80	-	80	-	80	-	80	-	130	-	-	-
M	-	30	30	-	30	-	30	-	30	-	30	-	-	-
N	-	8	8	-	8	-	8	-	8	-	8	-	-	-
ϕO1	-	50	50	-	70	-	70	-	102	-	140	-	-	-
ϕO	-	-	70	-	102	-	102	-	125	-	-	-	-	-
P1	-	4-M6	4-M6	-	4-M8	-	4-M8	-	4-M10	-	4-M16	-	-	-
P	-	-	4-M8	-	4-M10	-	4-M10	-	4-M12	-	-	-	-	-
ϕQ	-	14	17	-	22	-	27	-	27	-	36	-	-	-
ϕR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	-	24	24	-	24	-	24	-	24	-	24	-	-	-
W	-	32	32	-	32	-	32	-	32	-	32	-	-	-
Y	-	M5×8	M5×8	-	M5×8	-	M5×8	-	M5×8	-	M5×8	-	-	-
Z	-	1/8 "	1/8 "	-	1/4 "	-	1/4 "	-	1/4 "	-	1/4 "	-	-	-

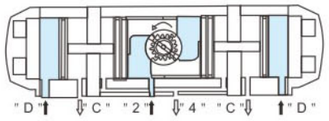
	Model type	AN 050D x120° x180°		AN 063 D x120° x180°		AN 075 D x120° x180°		AN 090 D x120° x180°		AN 100 D x120° x180°		AN 125 D x120° x180°		AN 160 D x120° x180°		AN 210 D x120° x180°	
Metric system	Cylinder diameter	ϕ (mm)		50	50	63	63	75	75	88	88	100	100	125	125	160	160	210	210
	Stroke adjustment	1° Numbers of rotation required		1/6turn	1/6turn	1/6turn	1/6turn	1/8turn	1/6turn	1/5turn	1/5turn	1/5turn	1/5turn	1/4turn	1/4turn	1/4turn	1/4turn	1/4turn	1/4turn
	Opening cylinder volume	(L)		0.11	0.17	0.2	1.29	0.39	0.56	0.63	0.92	0.9	1.3	1.9	2.8	3.9	5.7	7.4	-
	Closing cylinder volume	(L)		0.18	0.27	0.32	0.47	0.61	0.88	0.97	1.4	1.4	2	2.9	4.2	6.2	8.8	11.8	-
	Opening time	S (Sec.)		0.28	0.31	0.33	0.39	0.39	0.47	0.52	0.063	0.65	0.79	1.17	1.41	1.95	2.36	3.51	-
	Closing time	S (Sec.)		0.33	0.39	0.39	0.47	0.52	0.63	0.65	0.79	0.91	1.10	1.56	1.88	2.34	2.83	4.55	-
	Estimated weight	(Kg)		1.2	1.5	2	2.5	3.4	4.4	4.6	6	6.6	8.1	12.3	15.4	24.6	29.5	44	-

Actuator Actuating time was tested under the condition below:
1)room temperature 2) 120 and 180 stroke 3)solenoid valve diameter 4MM, flow power is Qn400L/min
Interior diameter of pipe 8MM 5) clean air 6)air pressure is 5.5bar(79.75Psi) 7)

*Notes: On-site using one or more different parameters , acting time will be changed
*120 and 180 stroke actuator only is the type of double acting
Except stroke 120 and 180, different stroke actuator (such as stroke 135) can be supplied by request.

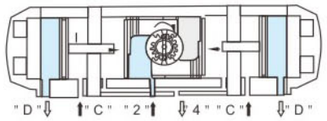
PRC Valve 送审稿 Tel:400-633-5118

Three-position AN actuator provides an operation of 0°,45°,90°,or 0°,90°,180°,The midway position is achieved by a mechanical stop of movement on the 2 auxiliary pistons. This midway stop positions is adjustable, for Example: 90°actuator can provide 20°, 30°, 50° , 75°, and 95° , 120°, 130°, 150° , 175°etc. Following is the principle of operation：



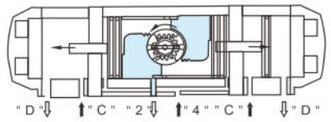
1, midway position

From chart 2 we can see that this position is obtained when air is supplied to port 2 and port D, meantime, port 4 and port C are in the state of exhaust air. In fact that the midway position is achieved by a mechanical stop of movement on the two auxiliary pistons



2, fully opened position

From chart 2 we can see that this position is obtained when air is supplied to port 2 and port C, meantime, port 4 and port D are in the state of exhaust air.

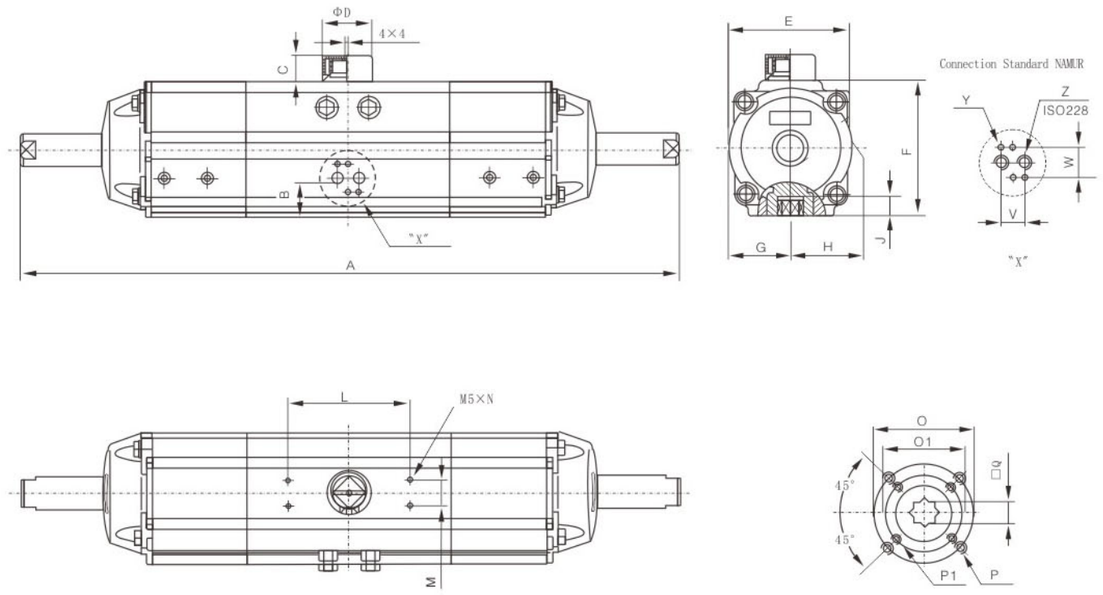


3, fully closed position

From chart 1 we can see that this position is obtained when air is supplied to port 4 and port 2 is in the state of exhaust air.

SC0°-45°-90°type single acting output torque(spring return) (Nm)

Actuator Model	Spring Qty	Air pressure torque 2.5bar 0° Start	2.5bar 90° End	3.0bar 0° Start	3.0bar 90° End	3.5bar 0° Start	3.5bar 90° End	4.0bar 0° Start	4.0bar 90° End	4.5bar 0° Start	4.5bar 90° End	5.0bar 0° Start	5.0bar 90° End	5.5bar 0° Start	5.5bar 90° End	6.0bar 0° Start	6.0bar 90° End	7.0bar 0° Start	7.0bar 90° End	8.0bar 0° Start	8.0bar 90° End	spring return torque 0° Start	spring return torque 90° End
AN 063S	05	9.1	6.2	12	9.1	15	12	17.9	15	20.8	17.9	23.7	20.8									8.5	5.5
	06	8	4.5	10.9	7.4	13.8	10.3	16.8	13.3	19.7	16.2	22.6	19.1	25.6	22.1							10.2	6.7
	07			9.8	5.7	12.7	8.7	15.7	11.6	18.6	14.5	21.5	17.4	24.5	20.4	27.4	23.3					11.8	7.8
	08					11.6	7	14.6	9.9	17.5	12.8	20.4	15.8	23.3	18.7	26.3	21.6	32.1	27.5			13.5	8.9
	09							13.4	8.2	16.4	11.1	19.3	14.1	22.2	17	25.2	19.9	31	25.8	36.9	31.6	15.2	10
	10									15.3	9.4	18.2	12.4	21.1	15.3	24.1	18.2	29.9	24.1	35.8	29.9	16.9	11.1
	11											17.1	10.7	20	13.6	22.9	16.5	28.8	22.4	34.7	28.2	18.6	12.2
	12													18.9	11.9	21.8	14.8	27.7	20.7	33.5	26.6	20.3	13.3
AN 075S	05	18	11.7	23.8	17.6	29.6	23.4	35.4	29.2	41.2	35	47.1	40.8									17.3	11.1
	06	15.8	8.3	21.6	14.1	27.4	19.9	33.2	25.7	39	31.5	44.8	37.3	50.7	43.2							20.8	13.3
	07			19.4	10.6	25.2	16.4	31	22.3	36.8	28.1	42.6	33.9	48.4	39.7	54.3	45.5					24.2	15.5
	08					23	13	28.8	18.8	34.6	24.6	40.4	30.4	46.2	36.2	52	42	63.7	53.7			27.7	17.7
	09							26.6	15.3	32.4	21.1	38.2	27	44	32.8	49.8	38.6	61.5	50.2	73.1	61.8	31.1	19.9
	10									30.2	17.7	36	23.5	41.8	29.3	47.6	35.1	59.2	46.7	70.9	58.4	34.6	22.1
	11											33.8	20	39.6	25.8	45.4	31.7	57	43.3	68.7	54.9	38.1	24.3
	12													37.4	22.4	43.2	28.2	54.8	39.8	66.4	51.4	41.5	26.5
AN 100S	05	41.1	27	54.4	40.3	67.7	53.6	81	66.8	94.2	80.1	108	93.4									39.4	25.3
	06	36.1	19.1	49.3	32.4	62.6	45.7	75.9	58.9	89.2	72.2	103	85.5	116	98.8							47.3	30.4
	07			44.3	24.5	57.6	37.8	70.8	51.1	84.1	64.3	97.4	77.6	111	90.9	124	104					55.2	35.4
	08					52.5	29.9	65.8	43.2	79.1	56.5	92.3	69.7	106	83	119	96.3	146	123			63.1	40.5
	09							60.7	35.3	74	48.6	87.3	61.9	101	75.1	114	88.4	140	115	167	142	71	45.5
	10									68.9	40.7	82.2	54	95.5	67.3	109	80.5	135	107	162	134	78.8	50.6
	11											77.2	46.1	90.5	59.4	104	72.7	130	99	157	126	86.7	55.6
	12													85.4	51.5	98.7	64.8	125	92	152	118	94.6	60.7
AN 125S	05	85.9	55.9	114	84	141	111	169	139	197	167	224	194									82.5	52.5
	06	75.4	39.4	103	67	131	95	158	122	186	150	214	178	241	205							98.9	62.9
	07			92.6	50.6	120	78	148	106	176	134	203	161	231	189	259	217					115	73.4
	08					110	62	137	89.4	165	117	193	145	221	173	248	200	304	256			132	83.9
	09							127	72.9	155	101	182	128	210	156	238	184	293	239	348	294	148	94.4
	10									144	84	172	112	200	140	227	167	283	233	338	278	165	105
	11											161	95.3	189	123	217	151	272	206	327	261	181	115
	12													179	107	206	134	262	190	317	245	198	126
AN 160S	05	171	117	228	174	258	231	341	287	398	344	455	401									166	112
	06	149	84	206	141	262	197	319	245	376	311	432	367	489	424							199	135
	07			183	108	240	164	296	221	353	278	410	334	466	391	523	448					233	157
	08					217	131	274	188	331	244	387	301	444	358	501	414	614	528			266	179
	09							252	154	308	211	365	268	422	324	478	381	592	494	705	608	299	202
	10									286	178	343	235	399	291	456	348	569	461	683	575	332	224
	11											320	201	377	258	433	315	547	428	660	541	365	247
	12													354	225	411	281	524	395	638	503	399	269
AN 210S	05	319	216	425	323	532	429	638	535	744	641	850	748									315	212
	06	277	153	383	260	489	366	595	472	702	578	808	685	914	791							378	255
	07			340	197	447	303	553	409	659	515	765	622	872	728	978	834					441	297
	08					404	240	510	346	617	452	723	559	829	665	935	771	1148	984			505	340
	09							468	283	574	389	680	496	787	602	893	708	1105	921	1318	1133	567	382
	10									532	326	638	433	744	539	850	645	1063	858	1275	1070	630	425
	11											595	370	702	476	808	582	1020	795	1233	1007	693	467
	12													659	413	766	519	978	732	1191	944	756	510



AN Actuator table size

Model	Dimension(mm) A 0°-45°-90°	A 0°-90°-180°	B	C	ΦD	E	F	G	H	J	L	M	N	O1	O	P1	P	K	V	W	Y	Z
AN 063S	390	440	30	20	40	72	85	36	47	16	80	30	8	50		4-M6		14	24	32	M5×8	1/8"
AN 075S	480	570	30.5	20	40	84.5	102	42.5	52	16	80	30	8	50	70	4-M6	4-M8	14	24	32	M5×8	1/8"
AN 100S	600	710	37.5	20	40	111	127	56	67	19	80	30	8	70	102	4-M8	4-M10	17	24	32	M5×8	1/4"
AN 125S	720	910	45	30	56	136	157	69.5	82	24	80	30	8	70	102	4-M8	4-M10	22	24	32	M5×8	1/4"
AN 160S	915	1130	52	30	65	169	196	88	99	29	80	30	8	102	125	4-M10	4-M12	27	24	32	M5×8	1/4"
AN 210S	1155	1400	62.5	50	80	213	245	110	112	38	130	30	8	140		4-M16		36	24	32	M5×8	1/4"

Double acting output torque

Model	2.5bar	3.0bar	3.5bar	4.0bar	4.5bar	5.0bar	5.5bar	6.0bar	7.0bar	8.0bar
AN 063S	14.7	17.6	2.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
AN 075S	29.1	34.9	40.7	46.5	52.3	58.2	64.0	69.8	81.0	93.0
AN 100S	66.5	79.7	93.0	106	120	133	146	160	186	213
AN 125S	138	166	194	221	249	277	304	332	387	443
AN 160S	283	340	397	453	510	567	623	680	739	907
AN 210S	531	638	744	850	956	1063	1169	1275	1488	1700

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