PNEUMATIC ACTUATORS

RT SERIES

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AMESA

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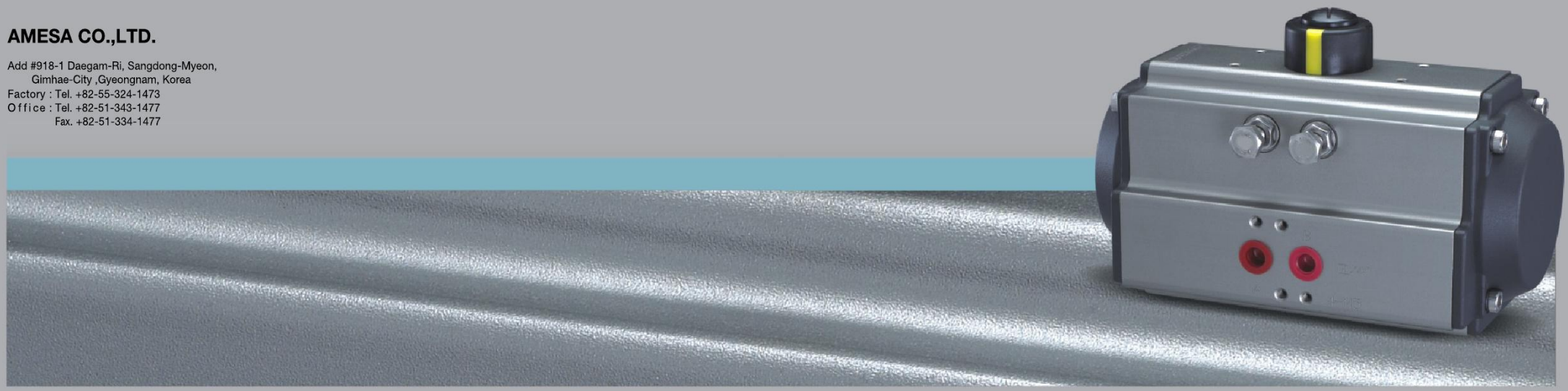

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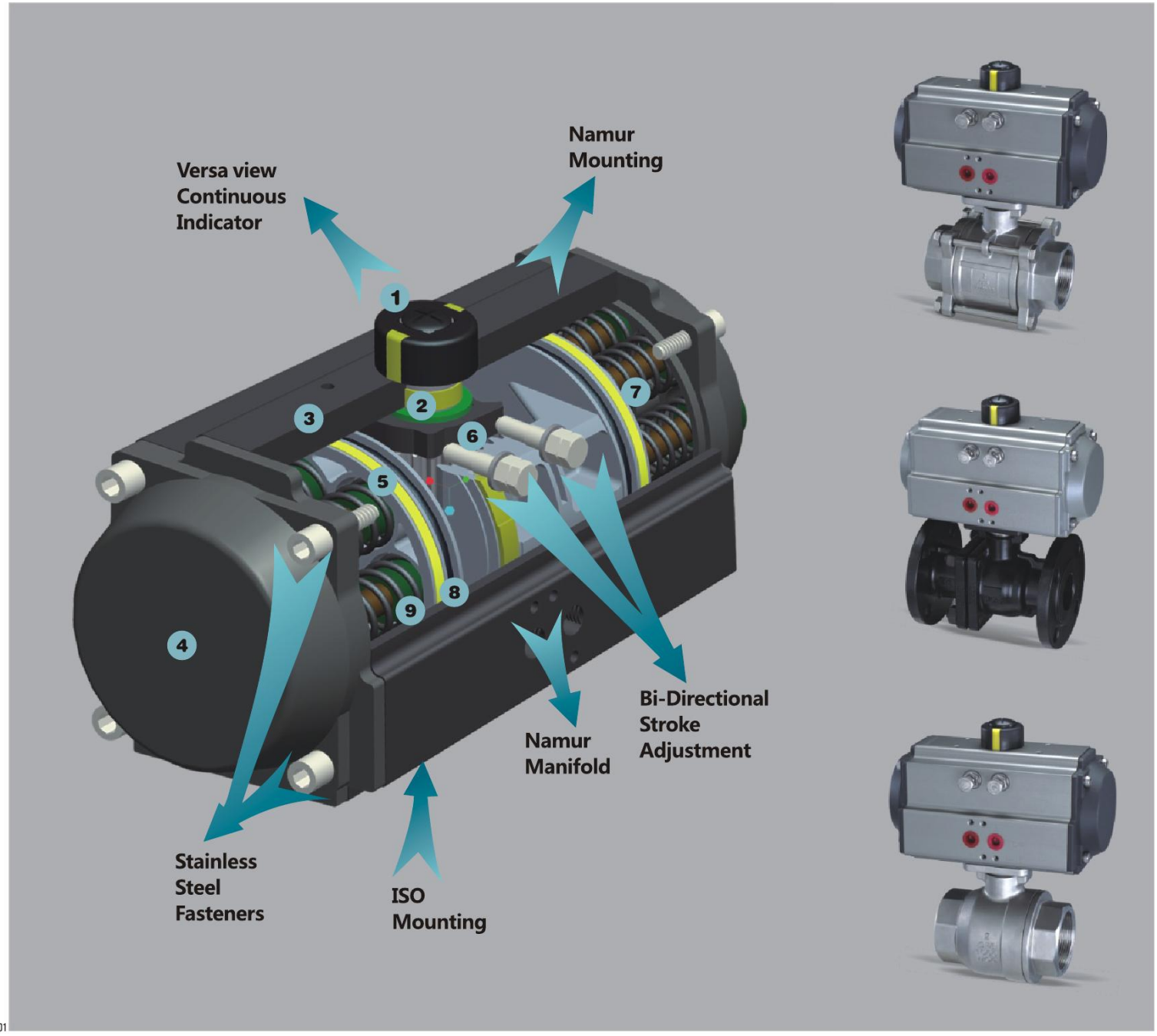
AMESA



PNEUMATIC ACTUATORS CONSTRUCTION

1、Indicator
Position indicator with NAMUR is convenient for mounting accessories such as Limit Switch box, positioner and so on.

2、Pinion
The pinion is high-precision and integrative, made form 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、Actuator Body
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、End caps
Die-casting aluminum powder polyester painted in different colours, PTFE or Nickel plated.

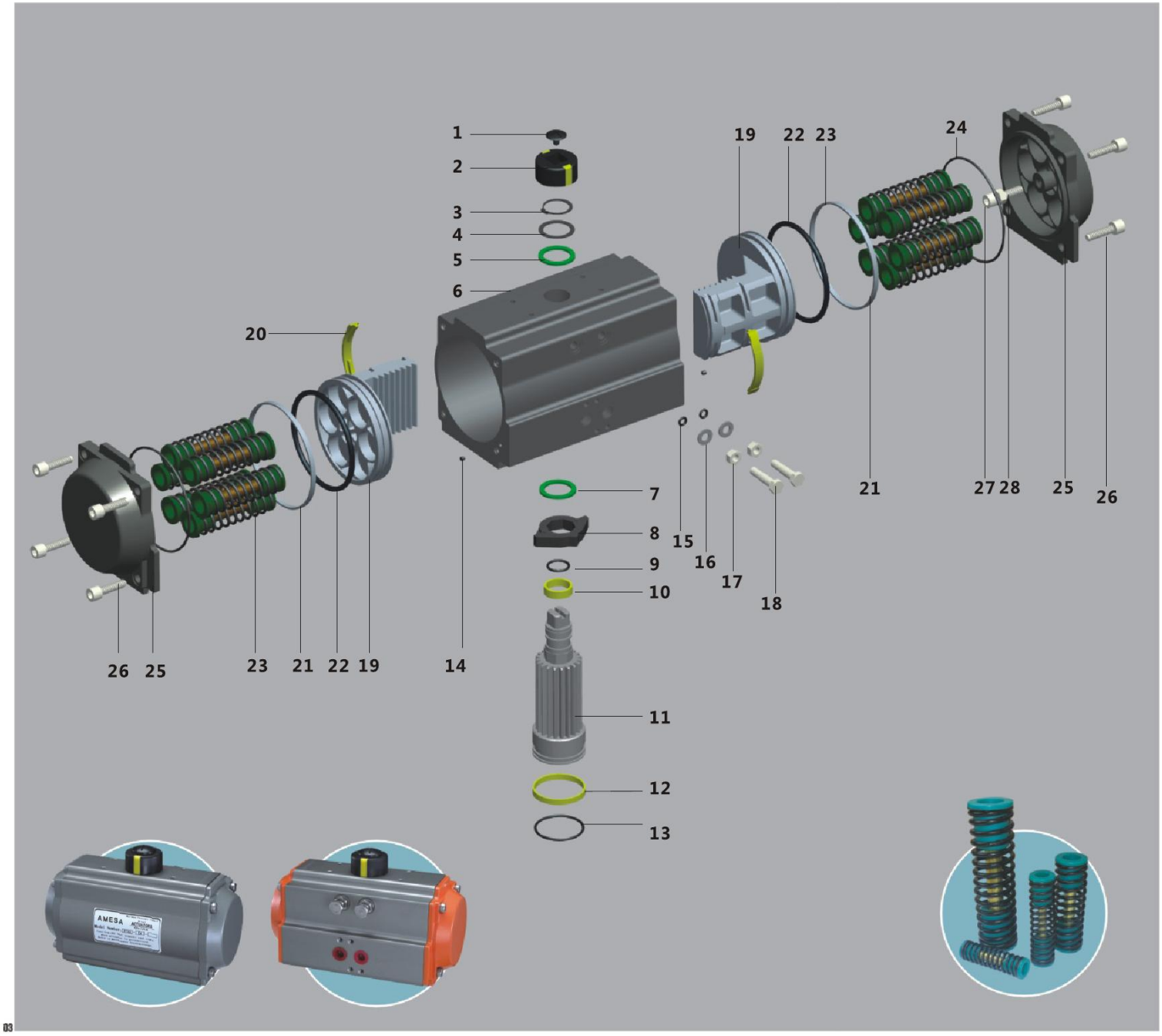
5、Pistons
The twin rack pistons are made form Die-casting aluminum treated with Hard anodized or made form Cast steel with galvanization. Symmetric mounting position, long cycle life and fast operation, reversing rotation by simply inverting the pistons.

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

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

8、Bearings & Guides
Made form low friction, long-life compound material, to avoid the direct contact between metals. The maintenance and replacement are easy and convenient.

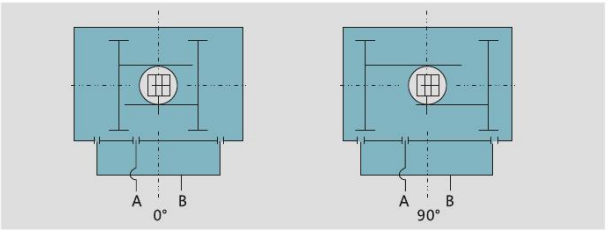
9、O-rings
NBR rubber O-rings provide trouble-free operation at standard temperature ranges. For high and low temperature applications Viton or Silicone.



PNEUMATIC ACTUATORS PARTS AND MATERIAL

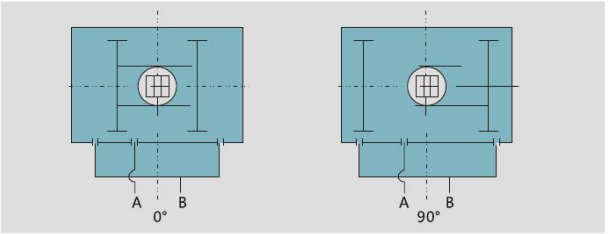
NO.	DESCRIPTION	QTY	STANDARD METERIAL	PROTECTION	OPTIONAL METERIAL
1	Indicator screw	1	Plastic		
2	Indicator	1	Plastic		
3	Spring clip	1	Stainless Steel		
4	Thrust washer	1	Stainless Steel		
5	Outside washer	1	Engineering plastics		
6	Body	1	Extruded aluminum alloy	Hard anodized etc	
7	Inside washer	1	Engineering plastics		
8	Cam	1	Alloy steel		
9	O ring (pinion top)	1	NBR		Viton/Silicone
10	Bearing(pinion top)	1	Engineering plastics		
11	Pinion	1	Alloy steel	Nickel plated	Stainless Steel
12	Bearing(pinion bottom)	1	engineering plastics		
13	O-ring pinion bottom)	1	NBR		Viton/Silicone
14	Plug	2	NBR		Viton/Silicone
15	O-ring(Adjust screw)	2	NBR		Viton/Silicone
16	Washer(Adjust screw)	2	Stainless Steel		
17	Nut(Adjust screw)	2	Stainless Steel		
18	Adjust screw	2	Stainless Steel		
19	Piston	2	Cast aluminum/Cast steel	anodized/Zinc galvanized	Stainless Steel
20	Guide(Piston)	2	engineering plastics		
21	Bearing(Piston)	2	engineering plastics		
22	O-ring(Piston)	2	NBR		Viton/Silicone
23	Spring	0~12	Spring steel	Dip coating	
24	O ring(End cap)	2	NBR		Viton/Silicone
25	End cap	2	Cast aluminum	Powder polyster painted etc	
26	Cap screw	8	Stainless Steel		
27	Stop screw	2	Stainless Steel		
28	Nut(stop screw)	2	Stainless Steel		

THE OPERATING PRINCIPLE OF DOUBLE ACTING ACTUATOR



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.



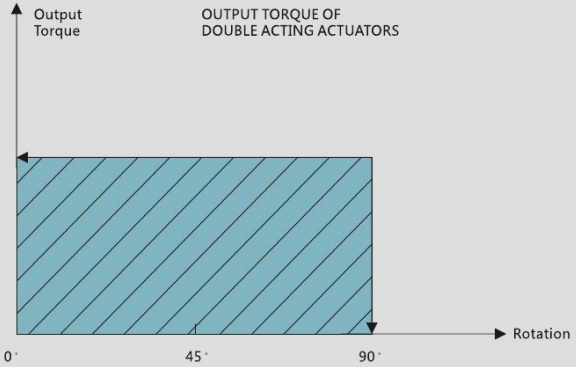
Air to Port A forces the pistons outwards, causing the pinion to turn clockwise while the air is being exhausted from Port B.

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

OUTPUT TORQUE OF DOUBLE ACTING ACTUATORS (Unit : N.m)

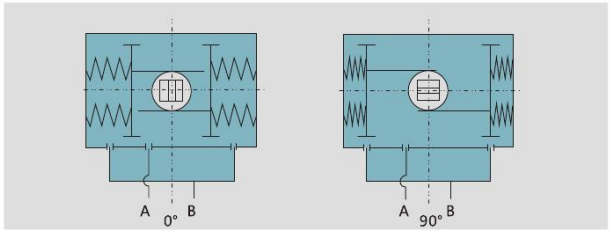
Model	Air supply pressure(Unit:bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
RT52DA	8.0	10.0	12.0	16.0	18.0	20.0	21.9	23.9	27.9	31.9
RT63DA	14.6	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
RT75DA	20.1	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
RT83DA	31.4	39.2	47.0	62.7	70.5	78.4	86.2	94.1	109.7	125.4
RT92DA	45.1	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158.0	180.6
RT105DA	66.1	82.7	99.2	132.2	148.8	165.3	181.8	198.4	231.4	264.5
RT125DA	100.3	125.4	150.5	200.6	225.7	250.8	275.9	301.0	351.1	401.3
RT140DA	171.0	213.8	256.5	342.0	384.8	427.5	470.3	513.0	598.5	684.0
RT160DA	266.0	332.5	399.0	532.0	598.5	665.0	731.5	798.0	931.0	1064.0
RT190DA	425.6	532.0	638.4	851.2	957.6	1064.0	1170.4	1276.8	1489.6	1702.4
RT210DA	532.0	665.0	798.0	1064.0	1197.0	1330.0	1463.0	1596.0	1862.0	2128.0
RT240DA	769.5	961.9	1154.3	1539.0	1731.4	1923.8	2116.1	2308.5	2693.3	3078.0
RT270DA	1169.6	1462.1	1754.5	2339.3	2631.7	2924.1	3216.5	3508.9	4093.7	4678.6

DOUBLE ACTING ACTUATOR SIZING GUIDE



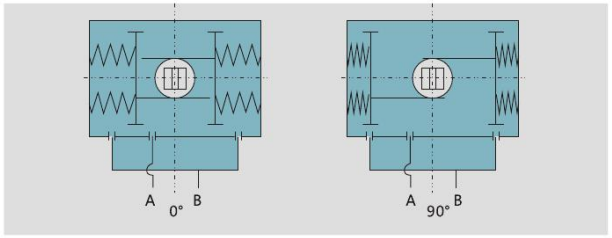
The suggested safety factor for double acting actuators under normal working conditions is 20%-30%.
Example:
The torque needed by valve=100N.m
The torque considered safety factor(1+30%)=130N.m
Air Supply=5Bar
According to the above table, we can choose the minimum model is RT105DA.

THE OPERATING PRINCIPLE OF SPRING RETURN ACTUATOR



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

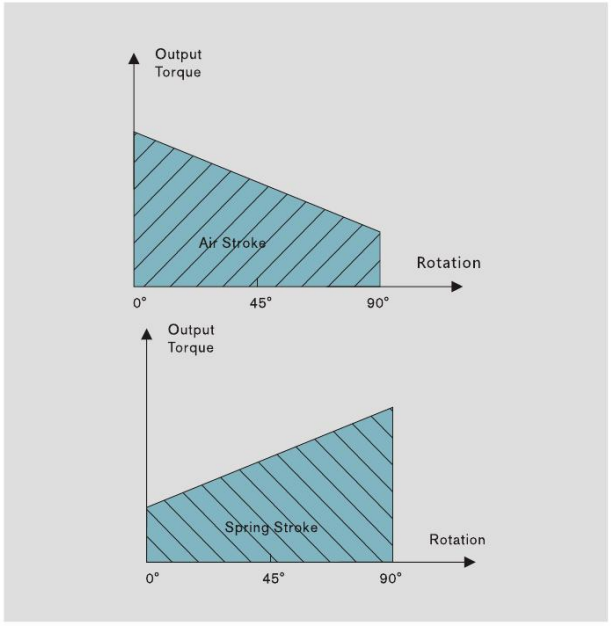
Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted from port A.



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

OUTPUT TORQUE OF SPRING RETURN ACTUATORS



NOTE

make sure that the torque necessary to operate the valve is compatible with the actuator torque(it depends on both actuator type and air supply).Please note that the requested torque depends not only on the valve, but on the working conditions and the safety margins of the plant in question, too!

OUTPUT TORQUE OF SPRING RETURN ACTUATORS

Output torque of air to springs																	Springs' output	
Air pressure		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar			
Model	Spring Q.ty	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
RT52SR	5	5.7	3.8	7.6	5.7											6.2	4.3
	6	4.9	2.5	6.9	4.5	10.9	8.5									7.4	5.0
	7	4.0	1.3	6.0	3.3	9.8	7.3	14.0	10.4							8.6	5.9
	8			5.2	2.0	9.2	6.0	13.2	9.1	17.2	14.1					9.9	6.7
	9			4.3	0.8	8.3	4.8	12.3	7.9	16.3	12.8	20.3	16.8			11.1	7.6
	10					7.4	3.6	11.5	6.7	15.5	11.6	19.5	15.6			12.4	8.5
	11					6.6	2.3	10.6	5.4	14.6	10.4	18.6	14.3	22.6	18.3	13.6	9.3
	12							9.7	4.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8	10.2
RT63SR	5	11.4	7.7	15.0	11.4	22.3	14.9									10.4	6.8
	6	10.1	5.7	13.6	9.3	20.9	16.6	28.3	23.9							12.5	8.2
	7	8.6	3.6	12.5	7.2	19.5	14.5	26.8	21.9							14.6	9.6
	8			10.9	5.1	18.2	12.4	25.5	19.8	32.8	27.0	40.1	34.3			16.7	10.9
	9					16.8	10.4	24.1	17.7	31.4	24.9	38.7	32.2			18.8	12.3
	10					1.4	8.2	22.8	15.6	30.0	22.8	37.3	30.1	44.7	37.4	20.9	13.7
	11							21.5	13.5	28.7	20.7	36.0	28.0	43.3	35.3	22.9	15.0
	12							20.0	11.4	27.3	18.6	34.6	25.9	41.9	33.3	25.0	16.4
RT75SR	5	14.5	10.6	19.4	15.5	29.5	25.7									14.5	10.5
	6	12.4	7.6	17.3	12.6	27.4	22.7	37.5	32.8							17.4	12.7
	7	10.4	4.8	15.2	9.7	25.3	19.9	35.4	29.9							20.3	14.8
	8			13.1	6.8	23.1	16.9	33.3	27.0	43.2	37.0	53.3	47.0			23.2	16.9
	9					21.0	14.1	34.2	24.1	41.1	34.1	51.2	44.2			26.1	19.0
	10					19.0	11.1	28.8	21.2	39.0	31.2	49.1	41.2	59.1	51.2	29.0	21.1
	11							27.0	18.3	37.0	28.3	47.0	38.4	57.0	48.4	31.9	23.2
	12							24.9	15.4	34.9	25.4	44.9	35.4	54.9	45.4	34.7	25.3
RT83SR	5	23.3	16.1	31.1	24.0	46.8	39.7									23.0	15.8
	6	20.1	11.5	28.0	19.3	43.7	35.1	59.4	50.7							27.6	19.0
	7	17.0	6.9	24.8	14.8	40.5	30.5	56.2	46.2							32.2	22.1
	8			21.7	10.1	37.4	25.8	53.1	41.5	68.8	57.2	84.5	72.9			36.8	25.3
	9					34.2	21.3	49.9	37.0	65.6	52.6	81.2	68.3			41.4	28.5
	10					31.0	16.6	46.7	32.3	62.4	48.0	78.1	63.7	93.8	79.3	46.0	31.6
	11							43.6	27.7	59.3	43.4	75.0	59.1	90.6	74.8	50.6	34.8
	12							40.4	23.2	56.1	38.9	71.7	54.5	87.4	70.2	55.2	38.0
RT92SR	5	33.1	22.0	44.2	33.2	66.8	55.9									34.4	23.3
	6	28.4	15.2	39.6	26.4	62.2	49.0	84.8	71.6							41.2	28.0
	7	23.8	8.2	34.9	19.4	57.5	42.1	80.2	64.7							48.1	32.7
	8			31.3	12.6	52.9	35.2	75.5	57.9	98.1	80.5	120.7	103.0			55.0	37.3
	9					48.2	28.4	70.9	51.0	93.5	73.6	116.0	96.1			61.9	42.0
	10					43.6	21.5	66.2	44.1	88.8	66.7	111.3	89.2	134.0	111.8	68.7	46.7
	11							61.5	37.2	84.1	59.9	106.6	82.4	129.2	105.0	75.6	51.4
	12							56.8	30.4	79.4	53.0	101.9	75.5	124.5	98.1	82.5	56.0
RT105SR	5	51.0	33.4	67.5	49.9	100.6	83.0									49.2	31.6
	6	44.7	23.5	61.1	40.0	94.2	73.2	127.3	106.2							59.1	38.0
	7	38.4	13.7	54.9	30.3	87.9	63.4	121.0	96.4							68.9	44.3
	8			48.5	20.4	81.6	53.5	114.7	86.5	147.7	119.6	180.8	152.7			78.7	50.6
	9					75.3	43.7	108.4	76.8	141.5	109.8	174.5	142.9			88.6	56.9
	10					68.9	33.4	102.0	66.5	135.1	99.6	168.2	132.6	201.2	165.7	98.4	63.3
	11							95.7	57.0	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6
	12							89.4	47.5	122.5	80.6	155.5	113.6	188.6	146.7	118.1	75.9

OUTPUT TORQUE OF SPRING RETURN ACTUATORS

Model	Spring Q.ty	Output torque of air to springs														Springs'output	
Air pressure		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar			
		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
RT125SR	5	73	47	98	72	148	122									79	52
	6	63	31	88	56	138	107	188	157							94	63
	7	52	15	77	40	127	90	178	141							110	73
	8			67	25	117	75	167	125	217	176	268	226			125	84
	9					107	59	157	109	207	159	257	210			141	94
	10					96	44	146	94	196	144	247	194	297	245	157	105
	11							136	78	186	128	236	178	286	228	173	115
	12							125	63	176	113	226	163	276	213	188	125
RT140SR	5	128	85	171	127	256	213									129	86
	6	111	59	154	102	239	187	325	273							155	103
	7	94	33	137	76	222	162	308	247							181	120
	8			120	50	205	136	291	221	376	307	462	392			206	137
	9					187	110	273	196	358	281	444	367			232	155
	10					170	84	256	169	341	255	427	340	512	426	258	172
	11							238	143	324	229	409	314	495	400	284	189
	12							221	118	307	203	392	289	478	374	310	206
RT160SR	5	193	124	259	191	392	324									208	140
	6	165	83	232	149	365	282	498	415							250	168
	7	137	41	203	107	336	240	469	373							292	196
	8			176	66	309	199	442	237	575	465	708	598			333	223
	9					280	157	413	290	546	423	679	556			375	251
	10					253	115	386	248	519	381	652	514	785	647	417	279
	11							358	207	491	340	624	473	757	606	458	307
	12							330	165	463	298	596	431	729	564	500	335
RT190SR	5	332	222	438	329	651	542									309	200
	6	292	161	398	267	611	480	824	693							371	240
	7	252	99	358	205	571	418	784	631							433	280
	8			318	143	531	356	744	569	957	782	1169	995			495	320
	9					491	295	704	507	917	720	1130	933			557	360
	10					451	233	664	446	877	658	1090	871	1302	1084	618	400
	11							624	384	837	597	1050	809	1263	1022	680	440
	12							584	322	797	535	1010	748	1223	960	742	480
RT210SR	5	390	285	523	418	789	684									380	275
	6	335	209	468	342	734	608	1000	874							456	330
	7	280	133	413	266	679	532	945	798							532	385
	8			358	190	624	456	890	722	1156	988	1422	1254			608	440
	9					569	380	835	646	1101	912	1367	1178			684	495
	10					514	304	780	570	1046	836	1312	1102	1578	1368	760	550
	11							725	494	991	760	1257	1025	1523	1292	836	605
	12							670	418	936	684	1202	950	1468	1216	912	660
RT240SR	5	552	409	744	600	1129	985									554	410
	6	470	297	662	489	1047	874	1432	1259							665	492
	7	388	187	580	379	964	764	1349	1149							775	575
	8			498	268	883	653	1267	1037	1652	1422	2037	1807			886	656
	9					800	542	1185	926	1569	1311	1954	1696			998	739
	10					718	431	1103	816	1488	1201	1872	1586	2257	1970	1108	821
	11							1021	705	1406	1090	1791	1474	2176	1859	1219	903
	12							939	594	1323	979	1708	1363	2093	1748	1330	985
RT270SR	5	903	675	1195	968	1779	1552									787	560
	6	790	519	1083	811	1667	1396	2252	1981							943	672
	7	679	361	972	654	1556	1238	2141	1823							1101	783
	8			860	497	1444	1081	2029	1666	2614	2252	3199	2836			1258	895
	9					1332	923	1917	1509	2502	2094	3087	2678			1416	1007
	10					1220	767	1805	1352	2390	1937	2974	2521	3560	3107	1572	1119
	11							1693	1194	2278	1779	2862	2364	3448	2949	1730	1231
	12							1582	1037	2167	1623	2751	2207	3336	2792	1887	1342

SPRING RETURN ACTUATOR SIZING GUIDE

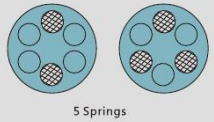
Spring Return Actuators
The suggested safety factor for spring return actuator under normal working conditions is 30-50%

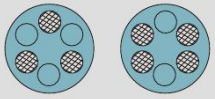
Example :
The torque needed by valve=80N.m
The torque consider safety factor (1+30%)=104 N.m
Air Supply=5Bar
According to the table of spring return actuators' output, we find output torque of RT140SR K7 is:
Air stroke 0°=308N.m
Air stroke 90°=247N.m
Spring stroke 90°=181N.m
Spring stroke 0°=120N.m
All the output torque is larger than we needed.

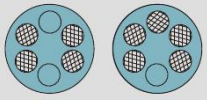
NOTE

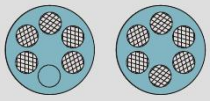
During the restoration, the spring return actuators' output torque will not be affected by the inputting air from the port B. On the contrary, it will help the restoration of springs.

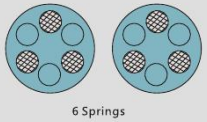
SPRING MOUNTING FORM FOR SPRING RETURN ACTUATORS

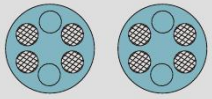

5 Springs

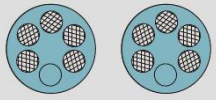

7 Springs

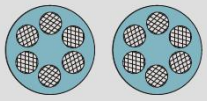

9 Springs


11 Springs


6 Springs


8 Springs

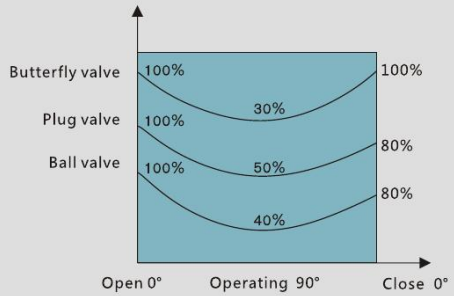

10 Springs


12 Springs

During selecting 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.

EXAMPLE :
The max torque needed by the butterfly valve=104N.mThe torque after opened (operating)104x30%=32N.m Air Supply =5Bar
We can select the RT125SR K11 output torque is:
- Air stroke 0°=136N.m >104N.m
- Air stroke 90°=78N.m >32N.m
- Spring stroke 90°=173N.m >32N.m
- Spring stroke 0°=115N.m >104N.m

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

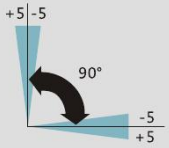


OPERATING CONDITIONS

1. Operating media

Dry or lubricated air, or the non-corrosive gases

The maximum particle diameter must less than 30μm



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:-35℃~+80℃ High temperature:-15℃~+150℃

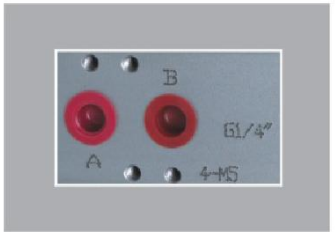
4. Travel adjustment Have adjustment range of ±5°for the rotation at 0° and 90°

5. Application Either indoor or outdoor

OPERATING TYPE

Double acting and spring return

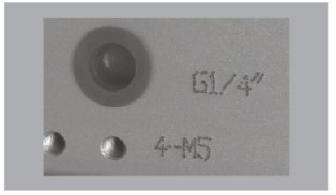
THE MOUNTING HOLES AND SERIAL NUMBER



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

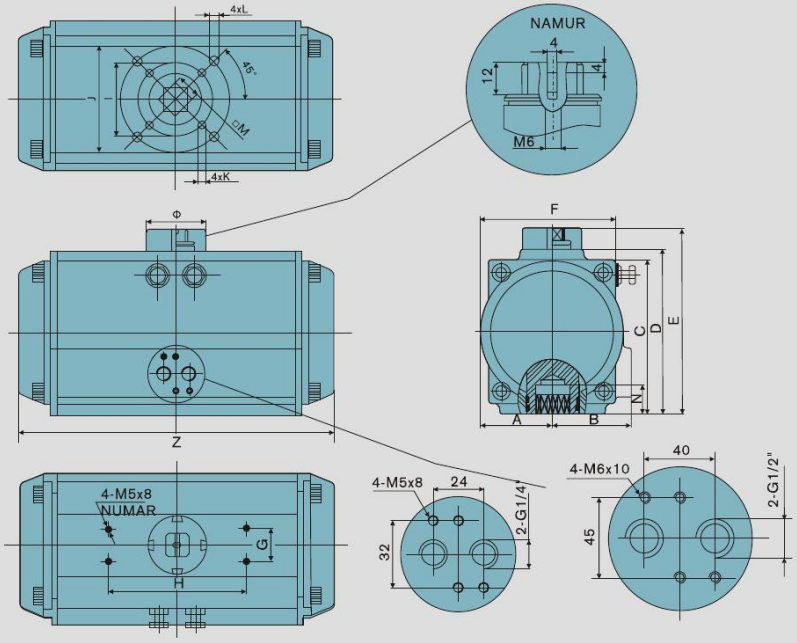
● The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limit switch box and positioner.

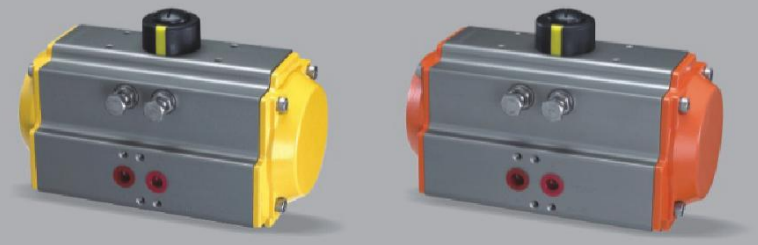
● Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.



● ach actuator is marked with a serial number, air connection and bottom mounting holes are marked for easy track and distinction.

PNEUMATIC ACTUATORS





Special actuators
Actuators with steel body
Actuators with stainless steel pinion and pistons
120° ,145° ,180° actuators
Three-positions actuator
Speedy or slow act actuators

DIMENSION TABLE

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	Air connection
RT52	30	41.5	65.5	72	92	65	30	80	F03	F05	M5×8	M6×10	11	14	147	Φ40	NAMUR G1/4"
RT63	36	47	81	87.5	107.5	72	30	80	F05	F07	M6×10	M8×13	14	18	168	Φ40	NAMUR G1/4"
RT75	42	53	94	99.5	119.5	81	30	80	F05	F07	M6×10	M8×13	14	18	184	Φ40	NAMUR G1/4"
RT83	46	57	98.5	108.7	128.7	92	30	80	F05	F07	M6×10	M8×13	17	21	204	Φ40	NAMUR G1/4"
RT92	50	58.5	111	116.8	136.8	98	30	80	F05	F07	M6×10	M8×13	17	21	262	Φ40	NAMUR G1/4"
RT105	57.5	64	122.5	133	153	109.5	30	80	F07	F10	M8×13	M10×16	22	26	268	Φ40	NAMUR G1/4"
RT125	67.5	74.5	145.5	155	175	127.5	30	80	F07	F10	M8×13	M10×16	22	26	296	Φ55	NAMUR G1/4"
RT140	75	77	160.75	171.5	191.5	137.5	30	80	F10	F12	M10×16	M12×20	27	31	390	Φ55	NAMUR G1/4"
RT160	87	87	184	197	217	158	30	80	F10	F12	M10×16	M12×20	27	31	454	Φ55	NAMUR G1/4"
RT190	103	103	216	230	260	189	30	130		F14		M16×25	36	40	525	Φ80	NAMUR G1/4"
RT210	113	113	235.5	255	285	210	30	130		F14		M16×25	36	40	532	Φ80	NAMUR G1/4"
RT240	130	130	264	288	318	245	30	130		F16		M20×25	46	50	610	Φ80	NAMUR G1/4"
RT270	147	147	299	326	356	273	30	130		F16		M20×25	46	50	722	Φ80	NAMUR G1/2" (NAMUR G1/4")

AIR CONSUMPTION

AIR VOLUME OPENING & CLOSING Unit:L

Model	Air volume opening	Air volume closing	Model	Air volume opening	Air volume closing
RT52	0.12	0.16	RT140	2.5	2.2
RT63	0.21	0.23	RT160	3.7	3.2
RT75	0.3	0.34	RT190	5.9	5.4
RT83	0.43	0.47	RT210	7.5	7.5
RT92	0.64	0.73	RT240	11	9
RT105	0.95	0.88	RT270	17	14
RT125	1.6	1.4			

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

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

Series	Model	Spring Q.ty	Options
RT□DA RT□SR□ RT□□Ni	52 63 75 83 92 105 125	K5 K6 K7 K8 K9 K10 k11 K12	120°,140°,180° for special degree operation SS Stainless Steel Pinion

Series	Model	Spring Q.ty	Options
RT□DA RT□SR□ RT□□Ni	140 160 190 210 240 270	K5 K6 K7 K8 K9 K10 k11 K12	120°,140°,180° for special degree operation SS Stainless Steel Pinion

WEIGHT TABLE

Model	(DA)	(SR)
RT52(Φ52)	1.38kg	1.45kg
RT63(Φ63)	2.03kg	2.05kg
RT75(Φ75)	2.7kg	2.9kg
RT83(Φ83)	3.13kg	3.6kg
RT92(Φ92)	4.6kg	5.22kg
RT105(Φ105)	6.77kg	6.85kg
Rt125(Φ125)	8.9kg	10.11kg

Model	(DA)	(SR)
RT140(Φ140)	13.25kg	15.55kg
RT160(Φ160)	20.14kg	24kg
RT190(Φ190)	31.3kg	35.25kg
RT210(Φ210)	46.8kg	54.8kg
RT240(Φ240)	67.28kg	80.2kg
RT270(Φ270)	96.9kg	118kg

HOW TO ORDER

- Pneumatic actuators: double action or spring return(normal-close or normal-open)
- The operating pressure of valve, the operating medium, the temperature of the operating environment, metal seal or soft seal.
- Solenoid: double control or sing control, operating voltage, explosion-proof or not.
- limit switch: mechanical or approachable, operating voltage, output current and explosion-proof or not.
- Positioner:pneumatic positioner or electric positioner, current signal, voltage signal, electric-pneumaticity switch, explosion-proof or not
- Three-unite of dealing with air supply
- Manual equipment
- Special making
- Nation-made or imported attachment should be told.

HIGH QUALITY QRODUCTS

- Each product has been tested and checked before it leave factory
- Each product has a Q.C. Passed tag.
- Each product is marked with NUMAR connection size, and mounting size.
- Each product is packaged in a special paper box, coated with product tag and statement.

ORDINARY TROUBLE AND IT'S SOLUTIONS

Trouble phenomena	Checking item	Solution
Pneumatic valve does not act	1、Does the solenoid work normally? is the circuit burned? Is the mandril of the solenoid blocked by impurity?	Replace the solenoid and/or circuit and clean out the impurity
	2、With air supplying the pneumatic actuator, are the O-rings or the cylinder broken?	Replace the broken O-rings and cylinder body.
	3、Is impurity blocking the valve?	Clean out the impurity, replace the broken parts
	4、Is the handle of the manual equipment at the manual state?	Put the handle to the pneumatic state
Acting slowly	Is the air supply pressure insufficient?	Improve the air pressure(0.4~0.7Mpa)
	2、Is the output torque of pneumatic actuator not enough?	Select a bigger model of the pneumatic actuator
	3、Is the valve stem or other parts assembled too tightened?	Reassemble and adjust the valve
	4、Is the air supply pipe blocked making the air flux too small?	Clean out the block, replace the filter element
The feedback has no signal	1、Is the power shorted out or stopped?	Check the circuitry
	2、Is the cam of the feedback in the incorrect position?	Adjust the cam to the correct position
	3、Is the jiggle on-off broken?	Replace the jiggle on-off

SOME PNEUMATIC PRODUCTS

ACTUATOR

SOLENOID VALVE

LIMIT SWITCH

FILTER
REGULATOR