

AT Pneumatic Actuator

Uses and Charac Teristics

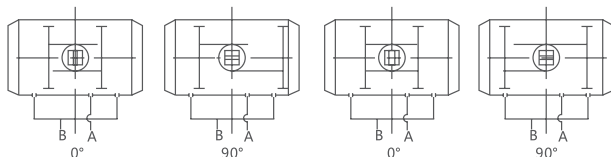


Outline And main Dimension Chart

The extruded aluminum alloy cylinder block has a hard surface texture and strong wear resistance after hard oxidation treatment. Compact double piston gear and rack structure, accurate meshing, stable transmission, symmetrical installation position and constant output torque. Both the fully open and fully closed positions can be adjusted by 0 degrees and 90 degrees plus or minus 5 degrees. The installation and connection holes of the output shaft have various shapes (square hole, shaft key hole and flat hole), which can be equipped with butterfly valve, ball valve, damper, baffle valve, plug valve, shutter valve, etc; Beautiful and exquisite appearance, light weight, with waterproof sealing structure; There are normal temperature type, high temperature type and low temperature type. Nitrile rubber is used under normal temperature working conditions, and fluororubber or silicone rubber is used at high or low temperature.

Working Principle

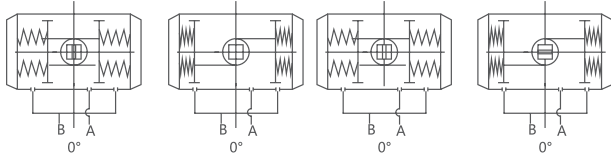
Double acting



Anticlockwise Rotation

Clockwise Rotation

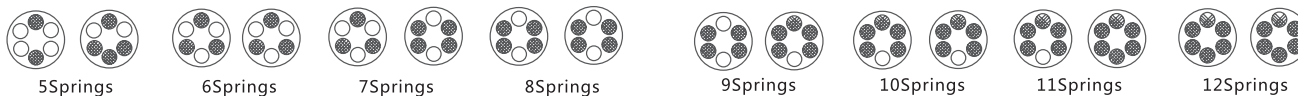
spring return



Counter Clockwise Rotation

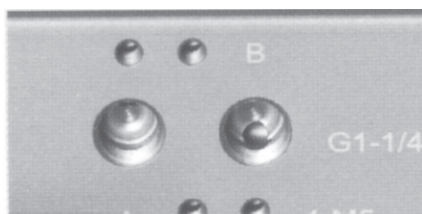
Clockwise Rotation

Actuator spring

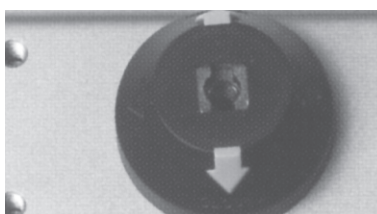


Action form

Double acting and spring return



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.

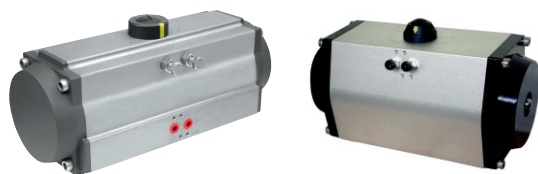
Main Connection Dimensions

Unit: mm

Model	A	B	C	D	E	F	G	H	ΦI	Φ0	Φ01	P1	P	Q	Z
AT052S/D	147	30	41.5	20	92	65	80	14	40	50	36	5x8	6x10	11	G1/4
AT063S/D	168	36	47	20	107	72	80	17	40	70	50	6x10	8x13	14	G1/4
AT075S/D	184	42	53	2	119	81	80	17	40	70	50	6x10	8x13	14	G1/4
AT083S/D	210	46	57	020	129	92	80	21	40	70	50	6x10	8x13	17	G1/4
AT092S/D	262	50	58.5	20	137	98	80	22	40	70	50	6x10	8x13	17	G1/4
AT105S/D	273	58	64	20	153	109	80	26	40	102	70	8x13	10x16	22	G1/4
AT125S/D	301	68	74	30	175	127	130	26	56	102	70	8x13	10x16	22	G1/4
AT140S/D	400	75	77	30	193	137	130	32	56	125	102	10x16	12x20	27	G1/4
AT160S/D	458	87	89	30	218	158	130	32	56	125	102	10x16	12x20	27	G1/4
AT190S/D	525	103	103	30	260	189	130	40	80	140	-	16x25	-	36	G1/4
AT210S/D	535	113	113	30	285	210	130	40	80	140	-	16x25	-	36	G1/4
AT240S/D	595	130	130	30	319	245	130	50	80	165	-	20x25	-	46	G1/4
AT270S/D	722	147	147	30	356	273	130	50	80	165	-	20x25	-	46	G1/2

Double Acting Actuator Output Torque

Model	Working air supply pressure (bar)						
	2	3	4	5	6	7	8
AT 52	8.5	12.7	17	21.2	25.4	29.7	34
AT 63	15	22.5	30	37.5	44.9	52.5	60
AT 75	25	37.1	49.5	61.9	74.2	86.5	99
AT 83	32.5	48.7	65	81.2	97.4	113	130
AT 92	46.5	69.8	93	116.3	140	162	186
AT 105	69.3	104	138.5	173.2	207.8	242	277
AT 125	122.7	184	245.5	306.8	368	430	490.8
AT 140	184.7	277	369.5	461.8	554	645	739
AT 160	281.5	422	563	704	844	985	1126
AT 190	453	680	907	1134	1361	1587	1814
AT 210	623	935	1246	1558	1870	2182	2493

GT Pneumatic Actuator
Uses and Charac Teristics

Double Acting Output Torque Meter

1. Compact double piston rack structure, accurate meshing, high efficiency and constant output torque.
2. Aluminum cylinder block, piston and end cover are the lightest compared with actuators of the same specification and structure.
3. The cylinder block is made of extruded aluminum alloy, which is hard anodized, with hard inner surface, high strength and hardness. The sliding bearing made of low friction material avoids direct contact between metals, has low friction coefficient, flexible rotation and long service life.
4. The connection between pneumatic actuator and valve shall comply with ISO5211 standard
5. The air supply hole complies with Namur standard.
6. The shaft assembly hole at the bottom of the pneumatic actuator (in accordance with ISO5211 standard) is double square to facilitate the linear or 45° angle installation of the valve with square rod.
7. The top and top holes of the output shaft comply with NAMUR standards.
8. The adjusting screws at both ends can adjust the opening angle of the valve.
9. The same specifications include double acting type and single acting type (spring return).
10. The direction can be selected according to the needs of the valve, clockwise or counterclockwise.
11. Install solenoid valve, positioner (opening indication), Messenger, various limit switches and manual operation devices according to the needs of users.

Performance Parameter

Item	Model					
	GT-50	GT-65	GT-80	GT-105	GT-125	GT-160
Weight	1.3	2.5	3.8	7.4	12.2	22.5
Opening time	0.3	0.5	1	2	3.4	4
Closing time	0.3	0.6	1.2	2.5	4	5
Opening air consumption	1.0	2.3	4.2	8.8	16.6	32.2
Closing air consumption	1.2	2.6	4.9	9.8	18.2	36

Model	Origin Pressure						
	2	3	4	5	6	7	8
GT40	3.9	5.8	7.7	9.6	11.5	13.3	15.2
GT52	8.32	12.48	16.64	20.8	24.96	29.1	33.2
GT63	12.2	18.3	24.4	30.5	36.3	42.8	48.9
GT83	29.6	44.4	59.2	74	88.8	103.6	118.4
GT110	74.5	111.7	149	186.2	223.5	260.5	298
GT127	119	178.5	238	297.9	357	416.5	476.5
GT160	236	354.6	472	591	709	827	945
GT190	444	667	889	1111	1334	1556	1778
GT210	488	733	977	1222	1466	1710	1955
GT255	1081	1621	2162	2702	3243	3783	4324
GT300	1662	2493	3326	4156	4987	5818	6650
GT350	2640	3960	5280	6600	7920	9240	10560

Single Acting Output Torque Meter

Model	Number of springs	Air source pressure						Spring return	
		3		4		5			
		Start	End	Start	End	Start	End	Start	End
GT40	10	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-
GT52	10	-	-	9.74	0.84	13.9	5	15.8	6.9
	12	-	-	-	-	12	1.9	18.9	8.2
GT63	10	-	-	14.2	1.3	20.3	7.4	23.1	10.2
	12	-	-	-	-	18.1	2.7	27.8	12.4
GT83	10	-	-	33.8	8.6	48.6	23.4	50.6	25.4
	12	-	-	-	-	44.1	13.8	60.2	29.9
GT110	10	-	-	89	13	126.2	50.2	136	60
	12	-	-	-	-	114.2	18.2	168	72
GT127	10	-	-	139.9	31.7	199.4	91.2	206.3	98.1
	12	-	-	-	-	182.5	52.5	245	115
GT160	10	-	-	299	86	418	205	386	173
	12	-	-	266	7	385	126	465	206
GT190	10	362	59	584	281	806	503	608	305
	12	-	-	529	168	751	390	721	360
GT210	10	368	147	612	391	857	636	586	365
	12	301	29	545	273	790	518	704	432
GT255	10	732	171	1271	713	1813	1253	1449	889
	12	-	-	1095	423	1635	963	1739	1067
GT300	10	1093	53	1926	886	2756	1716	2440	1400
	12	-	-	1646	397	2476	1227	2929	1680
GT350	10	-	-	3057	1232	4377	2552	4048	2223
	12	-	-	2612	422	3932	1742	4858	2668