

ONETORK AT Series Actuators



ONETORK AT Series pneumatic actuators provide a rugged solution for quarter-turn valve actuation while maintaining a low cost alternative to scotch-yoke style actuators. Our rack and pinion design offers a constant reliable torque output and efficient performance. All actuator sizes have adjustable travel stops in both directions +/- 5°. The AT Series is a high quality, reliable and economic actuator, utilizing tried and tested methods of operation and the latest innovations in technology.

WORKING CONDITIONS

Supply Pressure:	40 PSI to 116 PSI (Max: 130 PSI)
Temperature Range:	-40°F to +176°F
Operating Media:	Dry or lubricated air, light oil, water or non-corrosive gas
Travel Stroke:	90° +/- 5°
Lubrication:	None, all moving parts have been lubricated for life of actuator
Air Connections:	1/4" NPT
Mounting Dimensions:	Top: VDI / VDE 3845 NAMUR Side: NAMUR / Direct Mount Bottom: ISO 5211

FEATURES

- 16 Different Sizes
- Industry Leading 2 Year Warranty*
- Rack & Pinion Design:
 - Double Acting and Spring Return
- Hard Anodized Extruded Aluminum Body, Polyester Powdered Coated End Caps and Stainless Fasteners
- Optimally Sized Piston Rack that Minimizes Backlash between the Rack and Pinion ensuring Precision Engagement
- NAMUR Standards Interface for Switchboxes and Positioners and NAMUR Solenoid Mounting Pad
- ISO5211 Valve Mounting Interface
- Standard Temperature range of -40°F to +176°F

* Warranty begins from ship date of product.

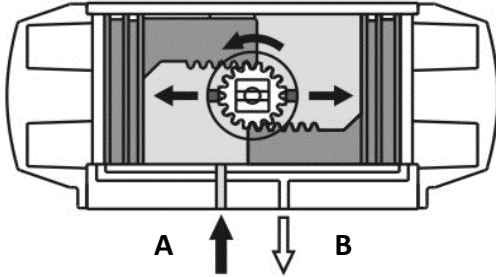
CONSTRUCTION MATERIALS LIST

Description:	Material:	Finish:
Cylinder Body	Extruded Aluminum Alloy	Gray Anodized
End Caps	Cast Aluminum Alloy	Dark Gray Anodized
Pistons	Cast Aluminum Alloy	Natural
Pinion	Carbon Steel	ENP
Piston Guide	Nylon 46	-----
O-Rings	Flourine Silicon	-----
Springs	Alloy Spring Steel	Epoxy Coated
Bolts / Nuts	Stainless Steel	Natural

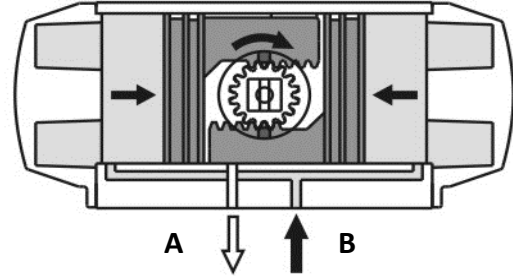
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FUNCTION

DOUBLE ACTING

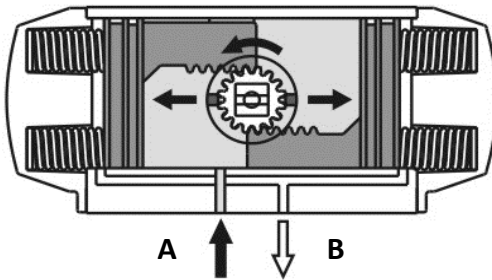


Pressure to Port "A" = CCW Rotation

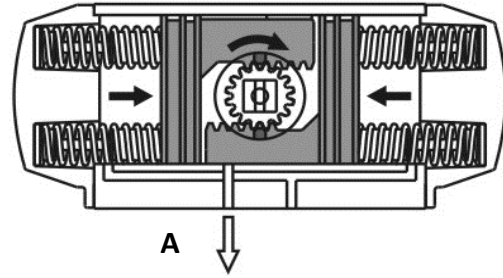


Pressure to Port "B" = CW Rotation

SPRING RETURN



Pressure to Port "A" = CCW Rotation

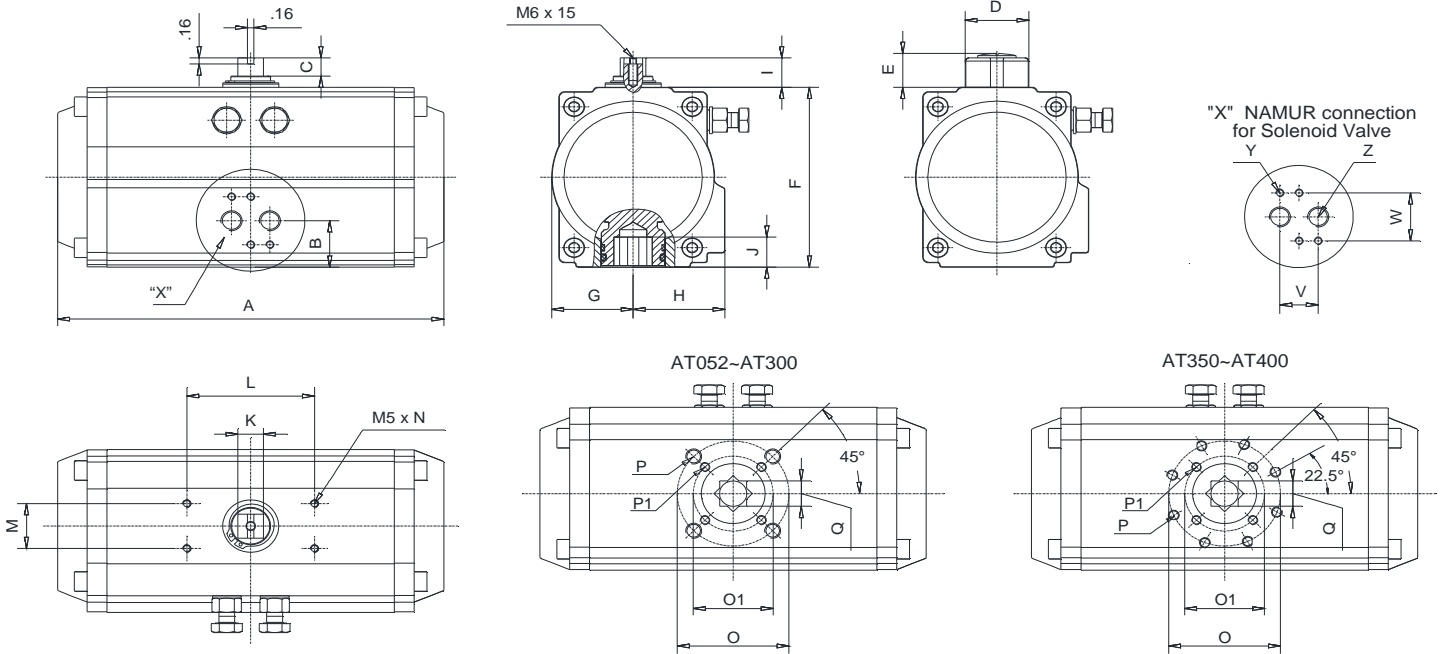


Remove Pressure on Port "A" = CW Rotation

SPECIFICATIONS

Model	Max Air Pressure	Rotation Angle	Standard Temps.	Cylinder Diameter	Volume: Cu/In		Cycle Time (Sec.)		Weight (Lbs)	
					Open	Close	Open	Close	DA	SR
AT052	116 PSI 8 BAR	90° +/- 5°	STD. -40°F to +176°F HI TEMP. +5°F to +300°F	52mm	6.11	12.21	0.3	0.3	2.5	3
AT063				63mm	12.21	18.31	0.3	0.4	4	4.5
AT075				75mm	18.31	30.52	0.4	0.5	6	7
AT083				83mm	30.52	48.82	0.5	0.6	7	8
AT092				92mm	42.72	67.13	0.7	0.9	10	11.5
AT105				105mm	73.23	109.85	1	1	13.5	16
AT125				125mm	91.54	140.35	1.5	1.5	21	25
AT140				140mm	146.46	231.89	1.5	2	30	36
AT160				160mm	189.17	299.02	2	2	45	54
AT190				190mm	262.41	421.07	2.5	2.5	68.5	79
AT210				210mm	360.05	579.73	3.5	4	92	105
AT240				240mm	610.24	927.56	4	4.5	138	165
AT270				270mm	884.85	1305.91	4.5	5	190	220
AT300				300mm	1147.25	1696.46	5	6	Consult Factory for Weights	
AT350				350mm	1519.49	2056.51	7	9		
AT400				400mm	1867.32	2447.05	9	11		

DIMENSIONS (continued)



MODEL	AT160	AT190	AT210	AT240	AT270	AT300	AT350	AT400
ISO5211	F10-F12	F14	F14	F16	F16	F16	F16-F25	F16-F25
A	17.72	19.96	22.13	25.43	28.43	32.48	34.09	39.61
B	1.71	2.30	2.52	2.83	2.91	3.35	3.74	9.17
C	0.47	0.79	0.79	0.79	0.79	0.79	1.38	1.38
D	2.17	3.15	3.15	3.15	3.15	3.15	3.74	3.74
E	0.87	1.30	1.30	1.30	1.30	1.30	2.13	2.13
F	7.76	9.06	10.04	11.42	12.60	13.94	16.14	18.39
G	3.41	4.06	4.45	5.08	5.75	6.38	7.48	10.24
H	3.44	4.06	4.45	5.08	5.75	6.81	7.68	10.24
I	0.79	1.18	1.18	1.18	1.18	1.18	1.97	1.97
Jmin	1.18	1.57	1.57	1.97	1.97	1.97	2.36	2.36
K	0.87	1.26	1.26	12.26	1.26	1.26	1.77	1.77
L	3.15	5.12	5.12	5.12	5.12	6.12	5.12	5.12
M	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
N	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
O1	4.02	/	/	/	/	/	6.50	6.50
O2	4.92	5.51	5.51	6.50	6.50	6.50	10.00	10.00
P1	4-M10	/	/	/	/	/	4-M20	4-M20
P	4-M12	4-M16	4-M16	4-M20	4-M20	4-M20	8-M16	8-M16
Q	1.06	1.42	1.42	1.81	1.81	1.81	2.17	2.17
V	0.94	0.94	0.94	1.57	1.57	1.57	1.57	1.57
W	1.26	1.26	1.26	1.77	1.77	1.77	1.77	1.77
Y	M5X8	M5X8	M5X8	M6X10	M6X10	M6X10	M6X10	M6X10
Z	1/4"	1/4"	1/4"	3/8"	3/8"	1/2"	1/2"	1/2"

TORQUE OUTPUT - DOUBLE ACTING (DA) IN/LBS

MODEL	AIR PRESSURE								
	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI	110 PSI	116 PSI
AT052-DA	104	130	156	182	208	234	260	285	301
AT063-DA	182	228	274	319	365	411	456	502	529
AT075-DA	302	377	453	528	603	679	754	830	875
AT083-DA	396	495	594	693	792	891	990	1,089	1,148
AT092-DA	567	709	851	993	1,135	1,277	1,419	1,561	1,646
AT105-DA	845	1,056	1,267	1,478	1,690	1,901	2,112	2,323	2,450
AT125-DA	1,497	1,871	2,245	2,619	2,993	3,367	3,742	4,116	4,340
AT140-DA	2,253	2,816	3,379	3,942	4,506	5,069	5,632	6,195	6,533
AT160-DA	3,433	4,291	5,149	6,008	6,866	7,724	8,582	9,440	9,955
AT190-DA	5,532	6,916	8,299	9,682	11,065	12,448	13,831	15,214	16,044
AT210-DA	7,603	9,504	11,405	13,306	15,207	17,107	19,008	20,909	22,050
AT240-DA	11,917	14,896	17,875	20,855	23,834	26,813	29,792	32,772	34,559
AT270-DA	16,758	20,948	25,137	29,327	33,516	37,706	41,896	46,085	48,599
AT300-DA	20,689	25,861	31,034	36,206	41,378	46,551	51,723	56,895	59,998
AT350-DA	30,976	38,720	46,464	54,209	61,953	69,697	77,441	85,185	89,831
AT400-DA	44,137	55,171	66,205	77,240	88,274	99,308	110,342	121,377	127,997

TORQUE OUTPUT - SPRING RETURN (SR) IN/LBS

MODEL	SPRING QTY	AIR PRESSURE						SPRING TORQUE	
		60 PSI		80 PSI		100 PSI		90°	0°
		0°	90°	0°	90°	0°	90°		
AT052-SR	6	114	98	166	150	-	-	57	42
	7	107	89	159	141	210	192	66	49
	8	100	79	152	131	203	182	76	56
	9	93	70	145	122	196	173	86	63
	10	-	-	138	112	189	163	95	70
	11	-	-	131	102	182	153	105	77
	12	-	-	124	93	175	144	114	83
AT063-SR	6	202	168	293	259	-	-	106	72
	7	190	151	281	242	372	333	123	84
	8	178	133	269	224	360	316	141	96
	9	166	115	257	207	348	298	158	108
	10	-	-	245	189	336	280	176	120
	11	-	-	233	172	324	263	193	132
	12	-	-	221	154	312	245	211	144
AT075-SR	6	345	288	496	439	-	-	164	108
	7	327	261	478	412	629	563	192	126
	8	309	234	460	385	611	535	219	144
	9	291	206	442	357	593	508	246	162
	10	-	-	424	330	575	481	274	180
	11	-	-	406	302	557	453	301	197
	12	-	-	388	275	539	426	328	215

TORQUE OUTPUT - SPRING RETURN (SR) IN/LBS

MODEL	SPRING QTY	AIR PRESSURE						SPRING TORQUE	
		60 PSI		80 PSI		100 PSI		90°	0°
		0°	90°	0°	90°	0°	90°		
AT083-SR	6	436	365	634	563	-	-	228	158
	7	410	327	608	525	806	723	267	184
	8	384	289	582	487	780	685	305	210
	9	357	251	555	449	753	647	343	236
	10	-	-	529	411	727	609	381	263
	11	-	-	503	373	701	571	419	289
	12	-	-	477	335	675	533	457	315
AT092-SR	6	620	530	904	814	-	-	321	231
	7	581	476	865	760	1149	1044	375	270
	8	543	423	827	707	1110	990	428	308
	9	504	369	788	653	1072	937	482	347
	10	-	-	750	599	1033	883	536	385
	11	-	-	711	546	995	830	589	424
	12	-	-	673	492	956	776	643	462
AT105-SR	6	850	778	1273	1200	-	-	489	417
	7	781	696	1203	1119	1625	1541	571	487
	8	711	615	1134	1037	1556	1460	652	556
	9	642	533	1064	956	1486	1378	734	626
	10	-	-	994	874	1417	1297	815	695
	11	-	-	925	793	1347	1215	897	765
	12	-	-	855	711	1278	1134	979	834
AT125-SR	6	1682	1399	2431	2147	-	-	846	562
	7	1589	1257	2337	2006	3085	2754	987	656
	8	1495	1116	2243	1865	2992	2613	1128	750
	9	1401	975	2150	1724	2898	2472	1270	844
	10	-	-	2056	1583	2804	2331	1411	937
	11	-	-	1962	1442	2710	2190	1552	1031
	12	-	-	1868	1300	2617	2049	1693	1125
AT140-SR	6	2395	1900	3522	3030	-	-	1476	984
	7	2231	1658	3358	2784	4484	3910	1722	1148
	8	2067	1412	3194	2538	4320	3664	1968	1312
	9	1904	1166	3030	2292	4156	3418	2214	1476
	10	-	-	2866	2046	3992	3173	2460	1640
	11	-	-	2702	1800	3828	2927	2705	1804
	12	-	-	2538	1554	3664	2681	2951	1965
AT160-SR	6	3632	2909	5348	4626	-	-	2240	1517
	7	3379	2536	5095	4253	6812	5969	2613	1770
	8	3126	2163	4843	3879	6559	5596	2986	2023
	9	2873	1790	4590	3506	6306	5222	3360	2276
	10	-	-	4337	3133	6053	4849	3733	2529
	11	-	-	4084	2759	5800	4476	4106	2782
	12	-	-	3831	2386	5547	4103	4480	3035

TORQUE OUTPUT - SPRING RETURN (SR) IN/LBS

MODEL	SPRING QTY	AIR PRESSURE						SPRING TORQUE	
		60 PSI		80 PSI		100 PSI		90°	0°
		0°	90°	0°	90°	0°	90°		
AT190-SR	6	5837	4599	8603	7365	-	-	3700	2462
	7	5426	3982	8192	6749	10959	9515	4316	2873
	8	5016	3366	7782	6132	10548	8898	4933	3283
	9	4605	2749	7372	5515	10138	8282	5549	3693
	10	-	-	6961	4899	9727	7665	6166	4104
	11	-	-	6551	4282	9317	7048	6783	4514
	12	-	-	6141	3666	8907	6432	7399	4924
AT210-SR	6	8253	6450	12055	10252	-	-	4955	3152
	7	7728	5624	11529	9426	15331	13228	5781	3677
	8	7702	4798	11004	8600	14806	12402	6606	4203
	9	6677	3973	10479	7774	14280	11576	7432	4728
	10	-	-	9953	6984	13755	10750	8258	5253
	11	-	-	9428	6123	13230	9924	9084	5779
	12	-	-	8903	5297	12704	9098	9910	6304
AT240-SR	6	13122	9414	19080	15372	-	-	8462	4754
	7	12329	8003	18288	13962	24246	19920	9872	5546
	8	11537	6593	17496	12552	23454	18510	11282	6338
	9	10745	5183	16703	11141	22662	17100	12693	7131
	10	-	-	15911	9731	21869	15690	14103	7923
	11	-	-	15120	8321	21077	14279	15513	8715
	12	-	-	14326	6911	20285	12869	16923	9508
AT270-SR	6	19410	14128	27789	22507	-	-	11010	5728
	7	18455	12293	26834	20672	35213	29051	12845	6682
	8	17500	10458	25880	18837	34259	27216	14680	7637
	9	16546	8623	24925	17002	33304	25381	16515	8592
	10	-	-	23970	15167	32349	23546	18350	9546
	11	-	-	23016	13332	31395	21711	20184	10501
	12	-	-	22061	11497	30440	19876	22019	11455
AT300-SR	6	22323	16933	32667	27277	-	-	14101	8711
	7	20871	14582	31216	24928	41560	35272	16451	10163
	8	19419	12323	29764	22577	40108	32921	18802	11615
	9	17967	9882	28312	20227	38657	30572	21153	13066
	10	-	-	26860	17876	37205	28220	23501	14518
	11	-	-	25408	15526	35753	25874	25856	15970
	12	-	-	23956	13176	34301	23521	28202	17422
AT350-SR	6	33685	26033	49173	41521	-	-	20432	12780
	7	31555	22627	47043	38115	62531	53603	23837	14910
	8	29426	19222	44915	34710	60401	50198	27243	17039
	9	27298	15817	42788	31305	58270	46793	30648	19169
	10	-	-	40653	27899	56142	43388	34053	21298
	11	-	-	38524	24494	54016	39982	37459	23429
	12	-	-	36391	21089	51880	36577	40864	25557
AT400-SR	6	46999	37436	69068	59505	-	-	28769	19206
	7	43798	32641	65867	54710	87935	76778	33564	22407
	8	40597	27847	62666	49915	84734	71983	38359	25608
	9	37396	23052	59465	45120	81533	67189	43154	28809
	10	-	-	56264	40325	78332	62394	47949	32010
	11	-	-	53063	35530	75131	57599	52743	35211
	12	-	-	49862	30736	71930	52804	57538	38412

PART NUMBERING MATRIX

Model	Size	Action	Rotation	Spring Qty	Seal Type	Cylinder Coating
AT	105	DA	090	10	LT	A
	052	DA = Double Acting	090 = 90°	6	LT = Standard Temp	A = Hardened
	063	SC = Spring CW	120 = 120°	7	-40°F ~ +176°F	Anodized
	075	SO = Spring CCW	180 = 180°	8	HT = High Temp.	B = + Teflon Coating
	083			9	+5°F ~ +300°F	
	092			10		
	105			11		
	125			12		
	140					
	160					
	190					
	210					
	240					
	270					
	300					
	350					
	400					