



# 180° Pneumatic Rack and Pinion Actuators

*Triac 180° actuators offer the same superior quality as our industry-proven quarter-turn pneumatic actuators. With torques from 370 in-lbs to 9300 in-lbs, our 180-AL Series Actuators are ideal for multi-port (3, 4, 5 way), ball valves, 3-way plug valves, conveyor diverters, bulk material diverters and any other application requiring reliable pneumatic torque over a 180° rotation.*

*The units feature hard anodized aluminum housings, die cast aluminum pistons with Delrin wear pads and nitrile seals. As in our famous Triac 90° actuators, the 180° units feature NAMUR accessory dimensions and ISO 5211 mounting. The addition of this series of actuators allows A-T Controls to offer the most complete valve automation capabilities in the market today.*



## Options and Accessories

- Solenoid Valves
- Limit Switches
- Positioners
- Filter Regulators
- Mounting Hardware Kits
- 3-position Control Circuits

Torque (In-Lbs)					
Model	40 psi	60 psi	80 psi	100 psi	120 psi
180-AL85DA	370	555	740	925	1110
180-AL105DA	624	937	1249	1561	1873
180-AL125DA	1214	1821	2429	3036	3643
180-AL140DA	2034	3051	4068	5085	6102
180-AL160DA	3102	4653	6204	7755	9306

Volume & Speed			
Actuator	Volume CCW (in³)	Volume CW (in³)	Speed (seconds)
180-AL85DA	25	34	0.6
180-AL105DA	57	72	1.2
180-AL125DA	90	113	1.8
180-AL140DA	148	195	3.2
180-AL160DA	223	307	4.8



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$$\text{Air consumption (scf per 180°)} = \frac{\text{Volume (cubic inches)}}{1728} \times \frac{\text{Supply Pressure (psig)} + 14.7}{14.7}$$



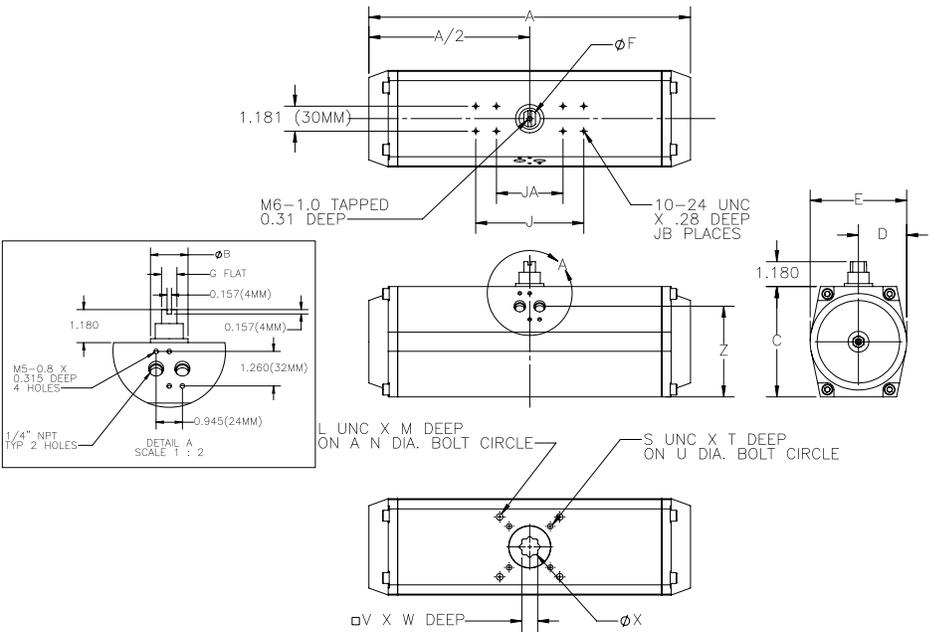
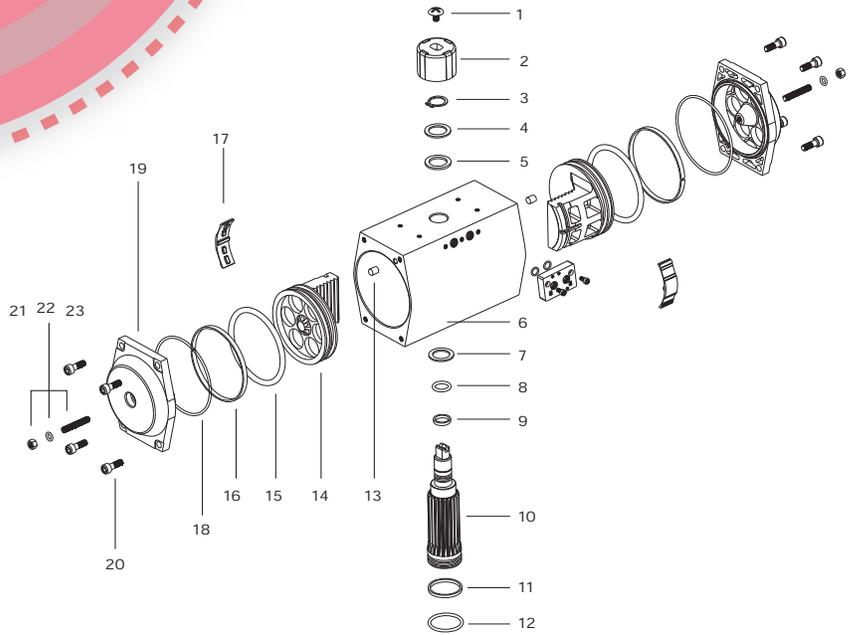
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REPAIR KIT		
TYPE	PART NUMBER	TEMPERATURE RANGE
NITRILE BUNA	RKB180-AL 85DA RKB180-AL 105DA RKB180-AL 125DA RKB180-AL 140DA RKB180-AL 160DA	-4°F - 176°F

Low temp and high temp kits available upon request

## MATERIALS LIST

NO.	PART NAME	QTY	MATERIAL
1	INDICATOR SCREW	1	PLASTIC (ABS)
2	INDICATOR	1	PLASTIC (ABS)
3	SNAP RING	1	AISI 316
4	THRUST WASHER	1	AISI 316
5	OUTSIDE WASHER	1	POLYOXYMETHYLENE
6	BODY	1	HARD ANODIZED ALUMINUM
7	INSIDE WASHER	1	POLYOXYMETHYLENE
8	O-RING (PINION TOP)	1	NBR (NITRILE BUNA)
9	BEARING (PINION TOP)	1	POLYOXYMETHYLENE
10	PINION	1	CARBON STEEL
11	BEARING (PINION BOTTOM)	1	POLYOXYMETHYLENE
12	O-RING (PINION BOTTOM)	1	NBR (NITRILE BUNA)
13	PLUG	2	NBR (NITRILE BUNA)
14	PISTON	2	DIE CAST ALUMINUM
15	O-RING (PISTON)	2	NBR (NITRILE BUNA)
16	BEARING (PISTON)	2	POLYOXYMETHYLENE
17	GUIDE (PISTON)	2	NYLON66
18	O-RING (END CAP)	2	NBR (NITRILE BUNA)
19	END CAP	2	DIE CAST ALUMINUM
20	END CAP SCREW	8	AISI 304
21	ADJUST SCREW	2	AISI 304
22	O-RING (ADJUST SCREW)	2	NBR (NITRILE BUNA)
23	NUT (ADJUST SCREW)	2	AISI 304



MODEL	A	B	C	D	E	F	G	J	JA	JB	L	M	N	S	T	U	V	W	X	Z	LBS
180-AL85DA	11.47	1.07	4.29	1.78	3.56	0.56	0.39	5.118	3.150	8	5/16"-18	0.50	2.756	1/4"-20	0.40	1.969	0.669	0.75	0.93	3.63	12
180-AL105DA	15.22	1.34	5.23	2.29	4.57	0.77	0.55	5.118	3.150	8	3/8"-16	0.63	4.016	5/16"-18	0.47	2.756	0.866	0.81	0.97	4.50	23
180-AL125DA	16.78	1.97	6.10	2.77	5.50	1.10	0.79	5.118	NA	4	3/8"-16	0.63	4.016	5/16"-18	0.47	2.756	0.866	0.81	1.20	5.49	34
180-AL140DA	22.25	1.97	6.75	2.97	5.94	1.10	0.79	5.118	NA	4	1/2"-13	0.65	4.921	3/8"-16	0.55	4.016	1.063	0.98	1.47	5.98	50
180-AL160DA	26.31	1.97	7.75	3.47	6.94	1.42	1.10	5.118	NA	4	1/2"-13	0.74	4.921	3/8"-16	0.58	4.016	1.063	0.98	1.47	6.98	78

