

ACTUATORS & CONTROLS



Extended Range Series Heavy Duty Pneumatic Actuators

Torque Range	In-lbs
Series B	115,254
Series XB	1,565,201



Air-con Offers the World's Largest Sized Rack and Pinion Pneumatic Actuators.

Automation - Flexibility & Specialization

www.airconinc.com

Pneumatic Actuators - Engineered to operate large diameter pipeline quarter - turn industrial valves

Air-Con's products are used in almost every energy related industry, including oil and gas production, both on and offshore, oil and gas transmission and petroleum refining. Other markets include chemical, petrochemical, pulp and paper, food and beverage, and water systems.

All actuator models have a totally enclosed housing that provides complete protection for all moving parts, minimizing the possibility of internal misalignment and reducing the chance of injury to operating personnel. External field-adjustable stops are provided to allow accurate adjustment and to assure complete opening and closing of the valve. All moving parts and bearing surfaces are supplied with a permanent lubricant, which also provides corrosion protection. All Air-Con actuators may be furnished to provide instant operation in the event of an emergency or linebreak when attendants are not available.

Air-Con's heavy duty rack and pinion actuators offer a broad range of torques to 1,565,800 in-lbs. These series are designed to operate ball, butterfly or any device that requires a quarter-turn movement for on-off or throttling service.

All Air-Con actuators are designed for on-off or modulating control of quarter-turn ball, butterfly, plug or damper style valves.

Series B

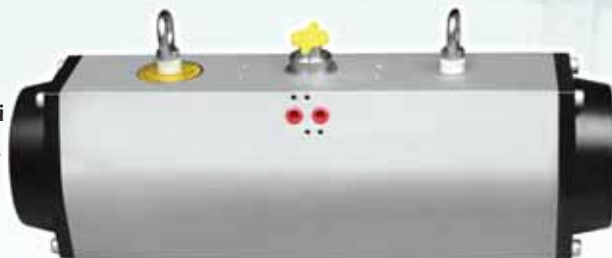


Series XB



Special Strokes Air-Con Actuator

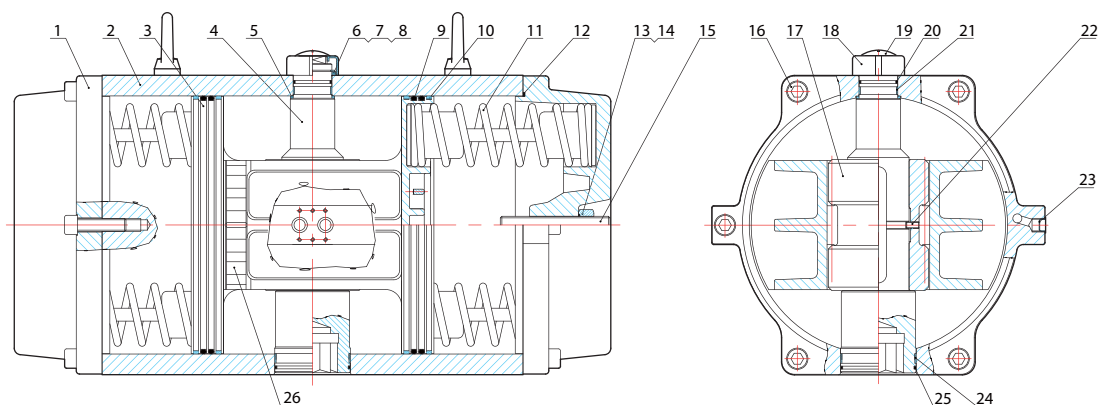
In order to meet special requirements of control and multi port valves, Air-Con provides special pneumatic actuators with different strokes, such as 60°, 120°, 145°, 180°, 360° and other special positions.



Components / Design Features: Series B

Rack & Pinion Design

Models:
B-300
B-350
B-400

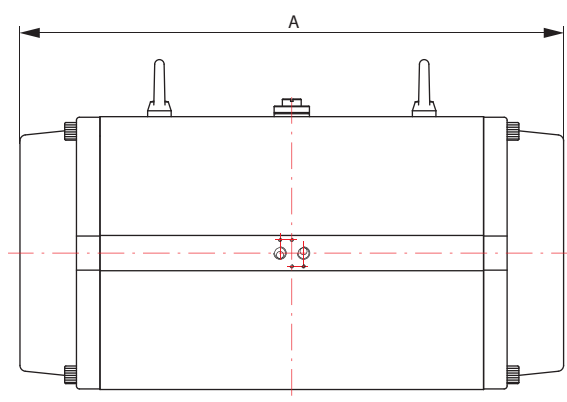


PARTS LIST

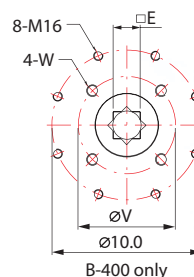
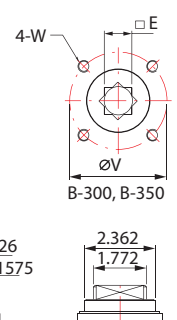
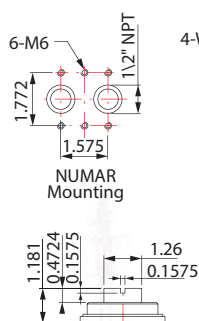
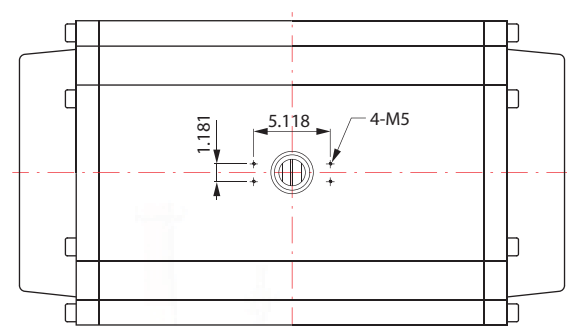
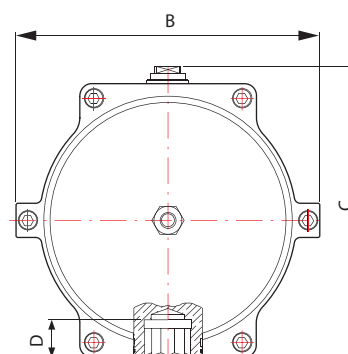
Item	Name	Material	Qty	Item	Name	Material	Qty
1	End Cap	Aluminum Alloy	2	14	Nut	SS304	2
2	Body	Aluminum Alloy	1	15	Adjust Screw	SS304	2
3	Piston	Cast Iron	2	16	End Cap Screw	SS304	2
4	Shaft	ASTM 1045	1	17	Gear Bushing	Steel	1
5	Inside Washer	Delrin	1	18	Indicator	Plastic	1
6	Outside Washer	Delrin	1	19	Indicator Screw	SS304	1
7	Thrust Washer	SS304	1	20	Shaft Top O-Ring	NBR/BUNA	1
8	Circlip	SS304	1	21	Shaft Top Bearing	Delrin	1
9	Piston O-Ring	NBR/BUNA	4	22	Screw	SS304	2
10	Piston Bearing	Delrin	4	23	Plug	NBR/BUNA	2
11	Spring	Spring Steel	16	24	Shaft Bottom O-Ring	NBR/BUNA	1
12	Cap O-Ring	NBR/BUNA	2	25	Shaft Bottom Bearing	Delrin	1
13	Adjust Screw O-Ring	NBR/BUNA	2	26	Guide Rod	Delrin	2

Actuators Built for High Torque Demanding Applications

Components / Design Features: Series B



Models:
B-300
B-350
B-400



Actuator Dimensions (inch)

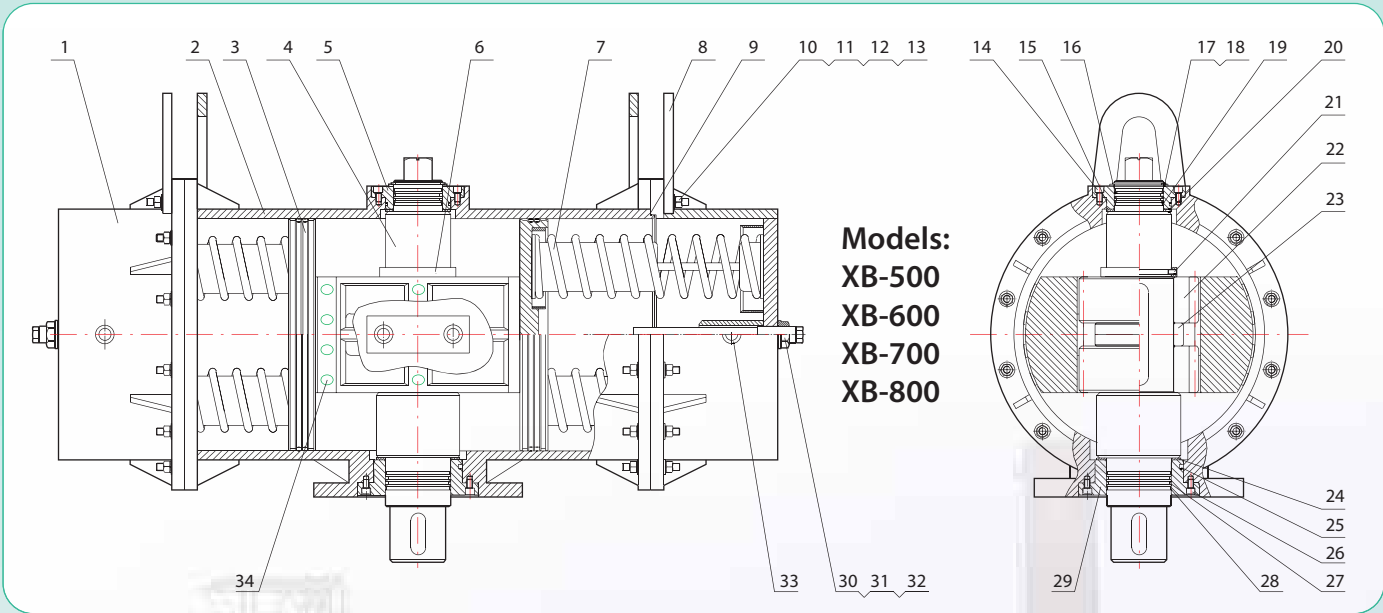
SIZE	A	B	C	D	E	V	W	SR Wgt (lb)	DA Wgt (lb)
B-300	29.2	12.8	14.9	2.36	1.811	F16/6.496	M20	287	243
B-350	33.9	15.0	17.2	2.36	1.811	F16/6.496	M20	517	411
B-400	36.6	20.3	20.1	2.36	2.165	F16/6.496	M20	795	637

Air Consumption (cubic inch)

Model	B-300	B-350	B-400
Opening	1452	2142	3210
Closing	1812	2825	2197

Air-Con II pneumatic actuators are also available with lower output torques in our C-Series range 50 through 42,859 in-lbs

Components / Design Features: Series XB



PARTS LIST

Item	Name	Material	Qty	Item	Name	Material	Qty
1	End Cap	ASTM 1025	2	18	Circlip	SS304	1
2	Body	ASTM 1025	1	19	Shaft Top Bearing	Delrin	2
3	Piston	Cast Iron	2	20	Shaft Top Inside Washer	Brass	1
4	Shaft	ASTM 1045	1	21	Bolt	SS304	1
5	Shaft Bush Top	ASTM 1025	1	22	Gear Bushing	ASTM 1045	2
6	Gear Circlip	Alloy Steel	1	23	Separated Space	ASTM 1045	1
7	Spring	Spring steel	0-8	24	Shaft Bottom Inside Washer	Brass	1
8	Lefting Lug	Carbon Steel	4	25	Shaft Bush Bottom O-Ring	NBR/BUNA	1
9	Cap O-Ring	NBR/BUNA	2	26	Bolt	Carbon Steel	8
10	Stud	Carbon Steel	24	27	Shaft Bottom O-Ring	NBR/BUNA	1
11	Nut	Carbon Steel	24	28	Shaft Bottom Bearing	Delrin	2
12	Spring Washer	Carbon Steel	24	29	Shaft Bush Bottom	ASTM 1025	1
13	Plain Washer	Carbon Steel	24	30	Adjusting Screw	ASTM 1045	2
14	Bolt	Carbon Steel	8	31	Nut	ASTM 1045	2
15	Shaft Bush Top O-Ring	NBR/BUNA	1	32	Adjust Screw O-Ring	NBR/BUNA	2
16	Shaft Top O-Ring	NBR/BUNA	2	33	Plug	NBR/BUNA	4
17	Outside Washer	Delrin	1	34	Guid Rod	PTFE	8

All models are supplied with lifting lug rings as standard.

• Air Supply Pressure:

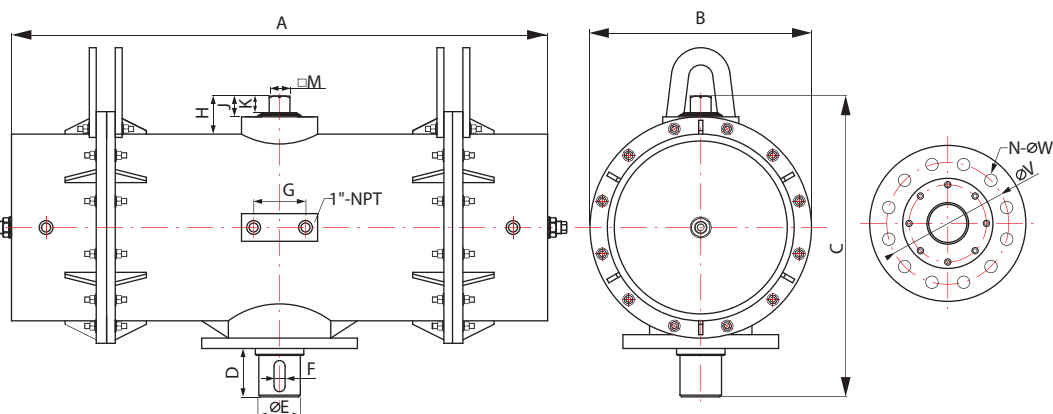
The minimum supply pressure is 30 psig.
The maximum supply pressure is 140 psig.

• Operating Temperature:

Standard (NBR O-ring): -4 °F to 175 °F.
Low Temperature (LNBR O-Ring): -39 °F to 175 °F.
High Temperature (Viton O-ring): 5 °F to 300 °F.

Components / Design Features: Series XB

Models:
XB-500
XB-600
XB-700
XB-800

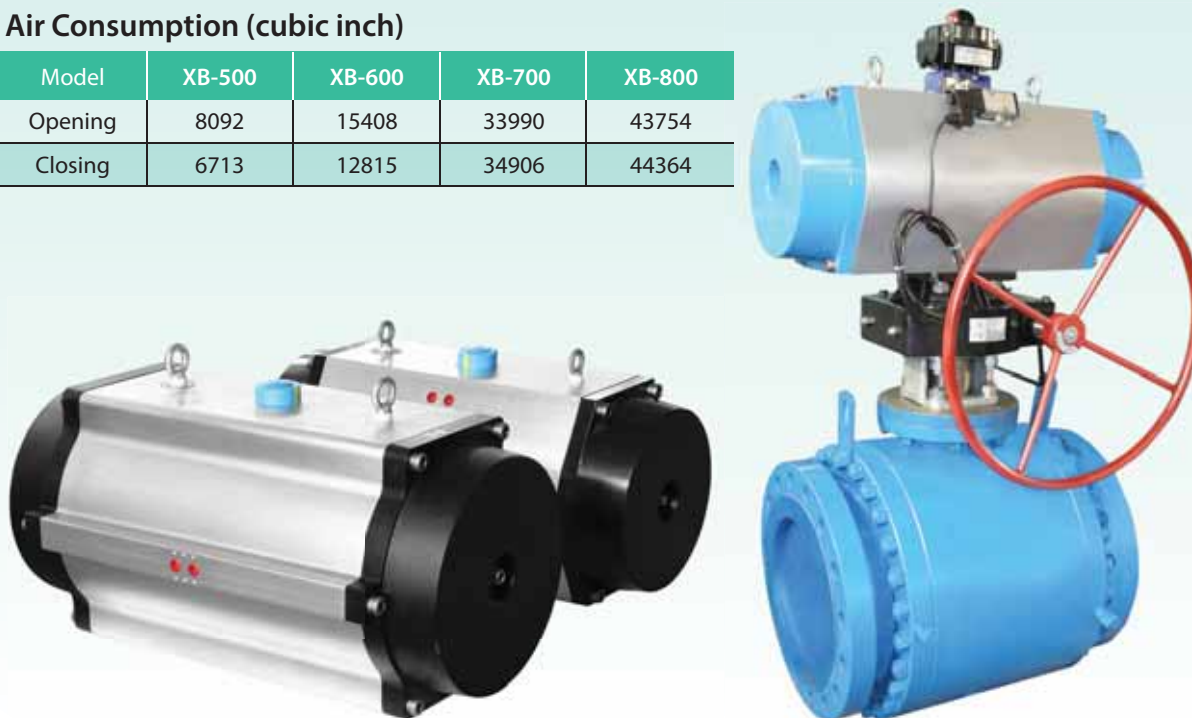


Actuator Dimensions (inch)

SIZE	A	B	C	D	E	F	G	H	J	K	M	N	V	W	SR Wgt (lb)	DA Wgt (lb)
XB-500	67.6	25.2	34.3	5.5	4.7	1.26	9.45	4.33	2.36	1.89	2.36	8	F35/14.0	1.30	2447	2161
XB-600	81.5	33.5	41.7	7.9	7.1	1.77	9.45	4.72	2.36	1.89	3.15	12	F48/19.0	1.57	4696	4354
XB-700	106.1	37.8	46.9	9.8	7.9	1.77	9.45	4.92	2.36	1.89	3.15	20	F60/23.75	1.57	8760	8060
XB-800	89.6	41.7	50.8	9.8	7.9	1.77	9.45	4.92	2.36	1.89	3.15	20	F60/23.75	1.57	C/F	11050

Air Consumption (cubic inch)

Model	XB-500	XB-600	XB-700	XB-800
Opening	8092	15408	33990	43754
Closing	6713	12815	34906	44364





Design & Performance Data

Torque Rating - Spring Return (in-lb)

Model	Spring Each Side	Air Supply																		Spring Return Output		
		30 psi		40 psi		50 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi				
		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	0° start	90° end	0° start	90° end	90° start	0° end	
SR-B300	5	6328	3071	9709	6452																9391	6461
	6	4898	991	8275	4372	12230	8131														11267	7753
	7			6833	2283	10715	5939	16958	12409												13143	9045
	8					9210	3745	15524	10320	18156	13914	22277	17073								1502	10338
	9							14090	8231	16988	12212	20844	14984	27597	21737						16896	11630
	10							12657	6151	15819	10517	19410	12904	26163	19658	31270	25090	39669	33164	18781	12922	
	11									14643	8815	17967	10816	24720	17569	29899	23106	38226	31075	20658	14214	
12										13474	7113	16533	8727	23286	15480	28537	21121	36793	28986	22534	15507	
SR-B350	5	8691	3478	13745	8532																15064	10382
	6	6381	133	11435	5187	17313	10752														18082	12462
	7			9125	1841	14888	7240	24295	17011												21091	14533
	8					12462	3726	21985	13666	26156	19375	32093	23773								24109	16613
	9							19684	10311	24280	16641	29792	20419	39899	30526						27119	18693
	10							17374	6966	22398	13914	27482	17073	37589	27181	45321	35432	57813	47405	30137	20764	
	11									20515	11188	25172	13728	35279	23835	43125	32253	55503	33951	33146	22844	
12										18639	8454	22870	10373	32978	20481	40939	29067	53202	40705	36164	24924	
SR-B400	7	10754	496	17949	7691																25490	16259
	8			15365	3638	23697	11384														29137	18587
	9					20994	7137	34403	21206												32774	20905
	10					18279	2891	31818	17162	37675	25730	46227	31571								36421	23224
	11							29234	13117	35569	22434	43643	27526	58052	41935						40058	25552
	12							26658	9072	33470	19137	41067	23481	55477	37890	66383	49676	84286	66699	43705	27871	
	13									31364	15833	38483	19427	52892	33836	63927	45825	81701	62646	47343	30199	
	14									29264	12537	35907	15383	50317	29792	61481	41982	79126	58601	50989	32518	
15									27158	9240	33323	11338	47732	25747	59025	38140	76541	54556	54627	34845		
16														45148	21702	56571	34297	73957	50511	58273	37164	
SR-XB500	4			45280	17321																77364	48520
	5					54496	16645														96703	60654
	6							77294	34031												116042	72780
	7							65159	14683	83682	43201	102678	52202								135390	84914
SR-XB600	8									73793	26783	90543	32863	128062	70381	157301	102504	203098	145418		154729	97048
	4			92906	35102																130487	76718
	5					112495	36616														163110	95898
	6							157384	70664												195734	115069
	7							135585	34412	169204	86748	207612	106439								228358	134248
SR-XB700	8									151444	57209	185821	70195	257858	142232	313399	203555	401930	286304		260982	153428
	6					262117	115581														298660	159101
	7							359367	196549	403926	271230	495615	332797								348436	185618
	8									404320	230661	469099	283020	605338	419260	704507	527733	877834	691756		398213	212135

Consult factory for spring return model XB-800.

Torque Rating - Double Acting (in-lb)

Model	Air Supply									
	30 psi	40 psi	50 psi	60 psi	70 psi	80 psi	90 psi	100 psi	110 psi	120 psi
DA-B300	13506	16887	21270	27012	30393	33766	40519	44900	49390	54025
DA-B350	20224	25278	31840	40448	45502	50555	60663	67240	73960	80887
DA-B400	28818	36014	45375	57627	64832	72036	86445	95800	105380	115254
DA-XB500	75037	93800	118180	150073	168837	187592	225110	249490	274430	300146
DA-XB600	144072	180086	226910	288145	324158	360172	432208	479030	526930	576281
DA-XB700	272488	340603	429170	544985	613100	681233	817472	906035	996610	1089969
DA-XB800	391300	489128	616290	782600	880428	978255	1173901	1301070	1431170	1565201

Operating Time (second)

Model	Double Acting							Spring Return						
	DA-B300	DA-B350	DA-B400	DA-XB500	DA-XB600	DA-XB700	DA-XB800	SR-B300	SR-B350	SR-B400	SR-XB500	SR-XB600	SR-XB700	SR-XB800
Opening	15	23.7	31	C/F	C/F	C/F	C/F	31.6	52.1	85.9	C/F	C/F	C/F	C/F
Closing	14.9	18.6	29	C/F	C/F	C/F	C/F	16.54	26.2	35.86	C/F	C/F	C/F	C/F

AIR-CON Automation



Air-Con III series utilizes a 316/304 series stainless steel body which is ideal for use in corrosive environments. It is available in both double acting and spring return versions.

**Torque range: up to 3600 lbf-in for SR
6500 lbf-in for DA**

Optional polished finishes for sanitary applications.



In addition to our complete stainless steel actuator, we can also offer a nickel infused body. This coating offers a uniquely effective low cost corrosion resistant actuator for use in aggressive environments under high humidity. Attractive "Silver-Nickel" long lasting surface finish.

Scotch Yoke Actuators, with output torque more than 1.5 million in-lbf for DA or 940,000 in-lbf for SR, fully conform to ISO5211 and NAMUR dimensions, are also available.

Consult factory for more information.



Air-Con has concentrated its design on modern actuator technology and has become an important partner of the valve industry to fulfill the requirements of end users and consulting engineers. Products have been designed to meet our customer's wide variety of applications. Air-Con Actuators can be found around the world in various industries .



P.O. Box 1293
Lumberton, NC 28359

Website: www.airconinc.com

**Aircon, Inc.
Flo-Tite, Inc.**
4815 West 5th Street
Lumberton, NC 28358

Tel: (910) 738-7664

Fax: (910) 739-1733

E-mail: info@airconinc.com

This brochure is general in nature and manufacturer reserves the right to alter dimensions, materials or to make design improvements

Revision No: 01
Last Review/Update: 04/21/22