

# E & P Series

## Pneumatic Actuator



The Assured Automation E and P Series pneumatic actuators offer a simple and cost effective solution for your valve automation needs. For use on quarter turn (90°) ball valves, plug valves, dampers, and resilient seated butterfly valves.

### FEATURES

- High duty cycle life, up to 1,000,000 cycles.
- Double acting and spring return models.
- Direct mounting to ball and butterfly valves, multiple ISO drillings on each actuator: NAMUR DVI/DVE 3845, DIN 3337, ISO 5211.
- NAMUR solenoid and limit switch mounting.
- Removable drive insert for diamond or square configuration.
- Visual position indicator (Open/Closed).

### MATERIALS OF CONSTRUCTION

#### Housing:

Anodized aluminum with dual component polyurethane coating.

#### Mounting and Shaft:

Zinc plated steel.

### ACCESSORIES

#### Solenoids:

NAMUR mount (voltages of 12 to 24 VDC, 24 to 220 VAC), NEMA-4, NEMA-7, intrinsically safe.

#### Limit Switches:

Mechanical, proximity, ASI, fieldbus; visual open and close indication.

#### Positioners:

Pneumatic (3 to 15 PSI control); electropneumatic (4 to 20 mA control).

### E SERIES MODEL NUMBERING

Model Number: \_\_\_\_\_ E X X X

Type: \_\_\_\_\_  
**D** = Double Acting  
**S** = Spring Return (Fail Closed)

Size: \_\_\_\_\_  
 (see Torque tables, pg. 2-3)  
**12 to 1600**

Spring Set: \_\_\_\_\_  
 (see Torque table, pg. 2)  
**2 to 6**

### P SERIES MODEL NUMBERING

Model Number: \_\_\_\_\_ P X X X

Type: \_\_\_\_\_  
**D** = Double Acting  
**S** = Spring Return (Fail Closed)

Size: \_\_\_\_\_  
 (see Torque tables, pg. 2-3)  
**2500 to 4000**

Spring Set: \_\_\_\_\_  
 (see Torque table, pg. 2)  
**8 to 14**

### TEMPERATURE RANGE

-4°F to 175°F

### SPECIFICATIONS

#### Supply Pressure:

20 to 120 PSI (double acting),  
40 to 120 PSI (spring return).

#### Output Torque:

Up to 40,000 in./lb. at 80 PSI supply pressure.

# E & P Series

## Pneumatic Actuator

(Double acting or spring return)

### TORQUE SPECIFICATIONS, SPRING RETURN

Actuator Size	Spring Set	Air Stroke										Spring Stroke		Model No.
		Air Supply: 40 PSI		Air Supply: 60 PSI		Air Supply: 80 PSI		Air Supply: 100 PSI		Air Supply: 120 PSI		Start	End	
		Start	End	Start	End	Start	End	Start	End	Start	End			
12	2	-	-	48	23	80	55	112	87	143	119	64	41	ES12-2
	3	49	8	107	66	166	126	225	185	284	243	94	58	ES25-3
25	4	-	-	85	31	144	90	202	149	261	208	125	78	ES25-4
	5	-	-	-	-	121	54	180	113	239	172	156	98	ES25-5
	6	-	-	-	-	99	18	157	77	216	136	188	117	ES25-6
	3	90	15	201	126	312	236	422	346	533	457	176	110	ES40-3
40	4	-	-	159	58	270	169	380	279	491	390	234	146	ES40-4
	5	-	-	-	-	228	101	338	212	449	322	293	183	ES40-5
	6	-	-	-	-	185	34	296	144	407	255	351	220	ES40-6
	3	129	10	297	178	466	347	634	515	802	683	279	175	ES65-3
65	4	-	-	230	72	398	240	566	408	735	576	372	234	ES65-4
	5	-	-	-	-	331	133	499	301	667	469	465	292	ES65-5
	6	-	-	-	-	264	26	432	195	601	363	558	351	ES65-6
	3	211	43	459	293	709	542	958	790	1,206	1,039	388	242	ES100-3
100	4	-	-	366	143	615	392	863	641	1,112	889	516	323	ES100-4
	5	-	-	-	-	522	244	771	492	1,019	741	646	403	ES100-5
	6	-	-	-	-	429	95	678	344	927	593	775	484	ES100-6
	3	448	73	994	620	1,539	1,165	2,085	1,711	2,630	2,256	868	543	ES200-3
200	4	-	-	786	287	1,332	833	1,878	1,378	2,423	1,924	1,157	723	ES200-4
	5	-	-	-	-	1,124	500	1,670	1,045	2,216	1,592	1,447	904	ES200-5
	6	-	-	-	-	916	167	1,462	713	2,008	1,259	1,736	1,085	ES200-6
	3	727	96	1,675	1,044	2,623	1,991	3,571	2,939	4,519	3,887	1,537	988	ES350-3
350	4	-	-	1,297	454	2,245	1,403	3,192	2,351	4,140	3,299	2,049	1,316	ES350-4
	5	-	-	-	-	1,867	813	2,815	1,763	3,762	2,710	2,561	1,645	ES350-5
	6	-	-	-	-	1,488	225	2,436	1,173	3,384	2,121	3,074	1,975	ES350-6
	3	1,298	193	2,908	1,804	4,520	3,415	6,131	5,026	7,742	6,637	2,584	1,623	ES600-3
600	4	-	-	2,287	813	3,898	2,425	5,509	4,036	7,120	5,647	3,447	2,165	ES600-4
	5	-	-	-	-	3,276	1,435	4,887	3,046	6,498	4,656	4,308	2,706	ES600-5
	6	-	-	-	-	2,654	444	4,265	2,055	5,876	3,666	5,170	3,247	ES600-6
	3	1,986	305	4,391	2,709	6,796	5,114	9,200	7,519	11,905	9,924	3,844	2,381	ES950-3
950	4	-	-	3,478	1,237	5,883	3,641	8,289	6,046	10,694	8,451	5,126	3,175	ES950-4
	5	-	-	-	-	4,972	2,168	7,376	4,573	9,781	6,978	6,407	3,968	ES950-5
	6	-	-	-	-	4,059	696	6,464	3,100	8,869	5,505	7,688	4,762	ES950-6
	3	3,245	579	7,220	4,554	11,195	8,530	15,171	12,505	19,147	16,481	6,289	3,970	ES1600-3
1600	4	-	-	5,699	2,145	9,675	6,120	13,650	10,095	17,625	14,071	8,385	5,293	ES1600-4
	5	-	-	-	-	8,153	3,710	12,129	7,686	16,105	11,662	10,481	6,616	ES1600-5
	6	-	-	-	-	6,633	1,301	10,609	5,277	14,583	9,252	12,578	7,939	ES1600-6
	8	5,251	1,781	11,245	7,775	17,239	13,769	23,233	19,763	29,227	25,758	9,351	5,868	PS2500-8
2500	10	-	-	9,615	5,277	15,609	11,272	21,603	17,266	27,597	23,260	11,689	7,335	PS2500-10
	12	-	-	7,985	2,780	13,979	8,774	19,973	14,768	25,967	20,763	14,026	8,803	PS2500-12
	14	-	-	-	-	12,349	6,277	18,343	12,271	24,337	18,265	16,364	10,270	PS2500-14
	8	8,949	3,096	19,111	13,257	29,272	23,418	39,434	33,580	49,595	43,741	15,780	9,905	PS4000-8
4000	10	-	-	16,359	9,042	26,521	19,204	36,682	29,365	46,844	39,527	19,725	12,381	PS4000-10
	12	-	-	13,608	4,827	23,770	14,989	33,931	25,150	44,092	35,312	23,670	14,857	PS4000-12
	14	-	-	-	-	21,018	10,774	31,180	20,936	41,341	31,097	27,615	17,333	PS4000-14

## E & P Series

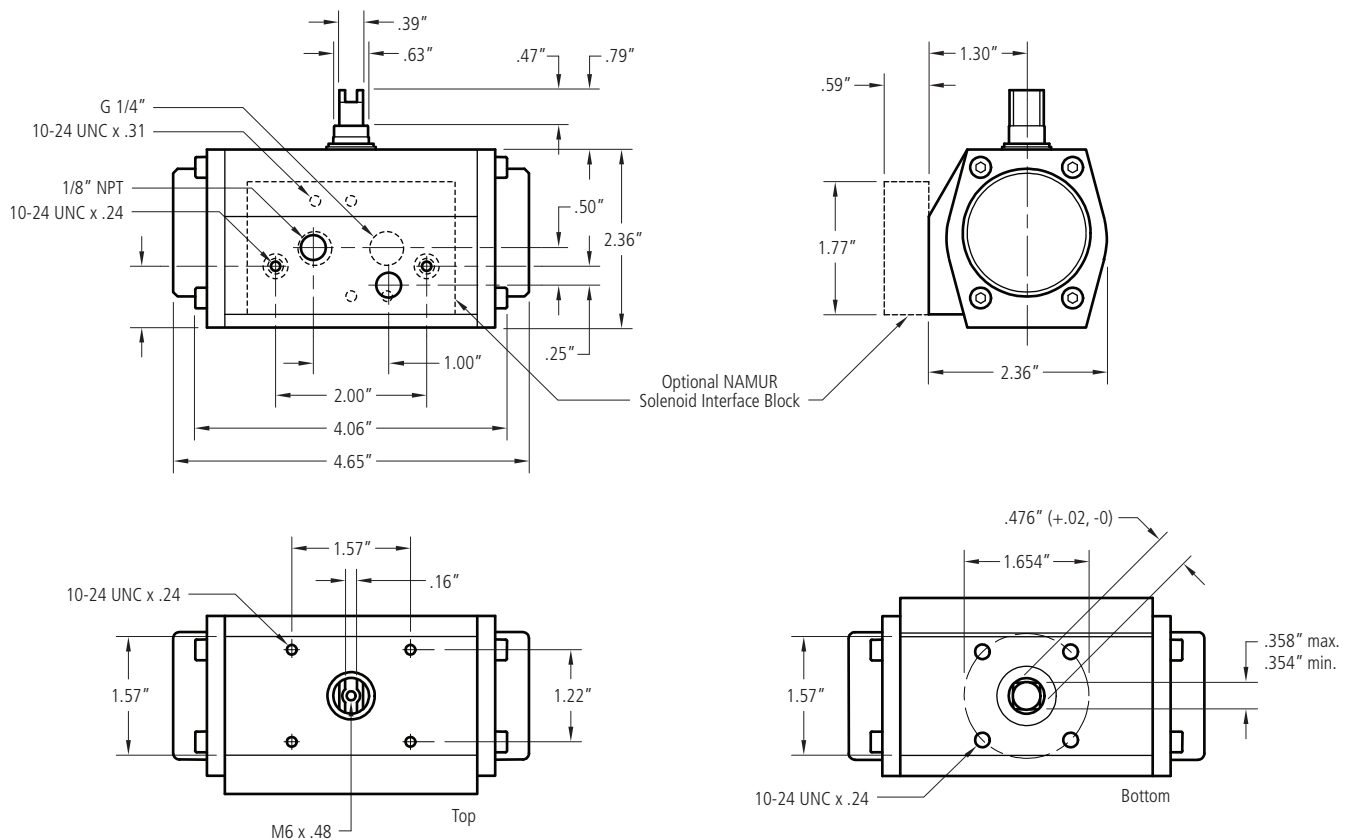
### Pneumatic Actuator

(Double acting or spring return)

#### TORQUE SPECIFICATIONS, DOUBLE ACTING

Actuator Size	Air Stroke													Model No.
	Air Supply (PSI)													
	30	35	40	45	50	55	60	70	75	80	90	100	120	
12	43.9	51.4	58.9	66.4	73.9	81.4	88.9	104	111	119	134	149	179	ED12
25	81.4	95.3	109	123	137	151	165	193	206	220	248	276	332	ED25
40	153	179	205	231	257	283	309	361	387	413	466	518	622	ED40
65	233	272	312	352	392	431	471	551	590	630	709	789	948	ED65
100	344	402	461	520	578	637	696	813	872	930	1,048	1,165	1,400	ED100
200	754	883	1,011	1,140	1,269	1,398	1,527	1,784	1,913	2,042	1,199	1,557	3,072	ED200
350	1,310	1,534	1,757	1,981	2,205	2,428	2,652	3,100	3,323	3,547	3,994	4,442	5,337	ED350
600	2,226	2,606	2,986	3,366	3,747	4,127	4,507	5,267	5,647	6,028	6,788	7,548	9,069	ED600
950	3,323	3,890	4,458	5,025	5,593	6,160	6,728	7,862	8,430	8,997	10,132	11,267	13,537	ED950
1600	5,493	6,431	7,369	8,307	9,245	10,183	11,121	12,998	13,936	14,874	16,750	18,626	22,379	ED1600
2500	8,774	10,273	11,825	13,270	14,768	16,267	17,847	20,858	22,363	23,869	26,880	29,891	35,912	PD2500
4000	14,874	17,414	19,962	22,495	25,035	27,576	30,127	35,210	37,751	40,293	45,375	50,458	60,623	PD4000

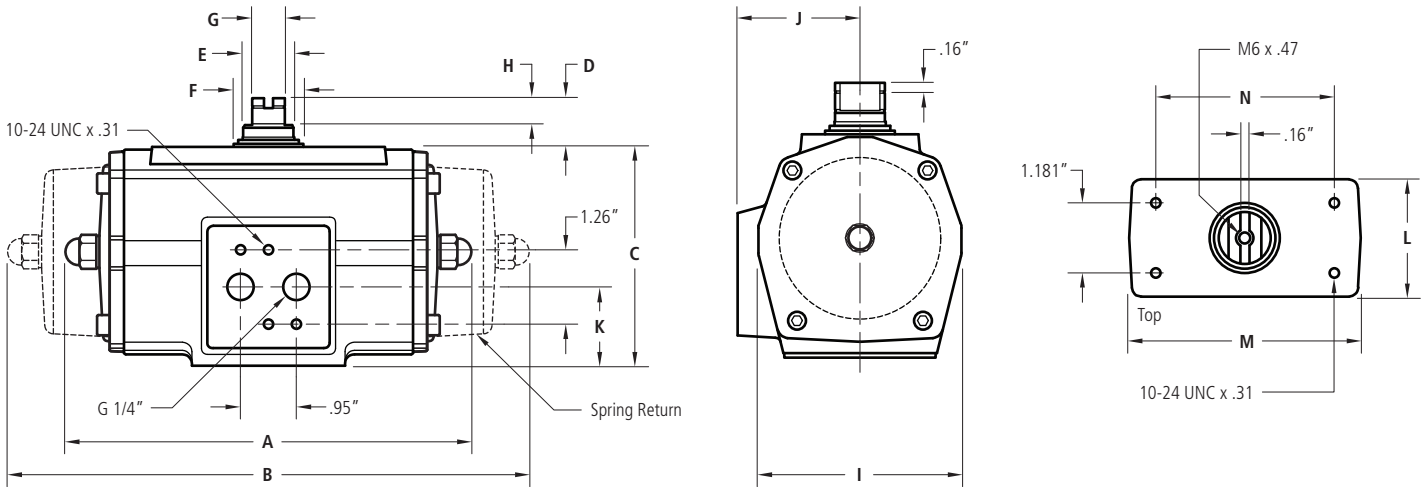
#### DIMENSIONS & SPECIFICATIONS (SIZE 12 ONLY)



## E & P Series

### Pneumatic Actuator

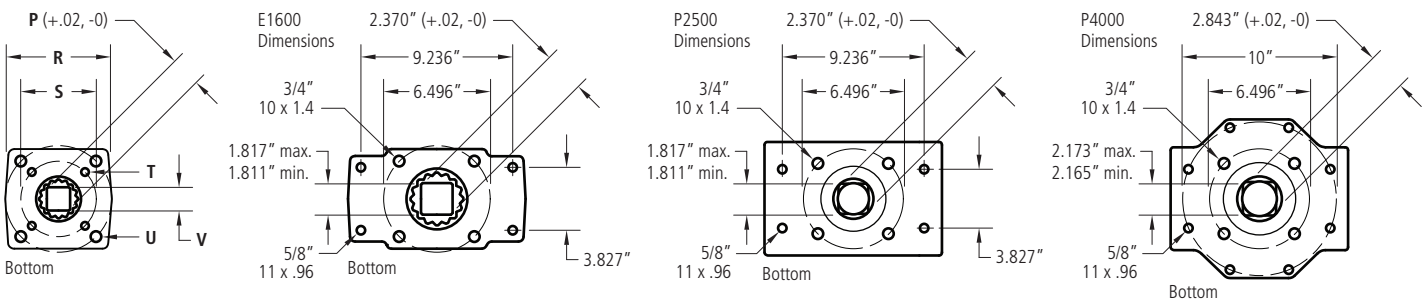
(Double acting or spring return)



### DIMENSIONS & SPECIFICATIONS

Actuator Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Model No.
25	6.26	6.77	3.15	.79	.63	.91	.39	.47	2.91	1.81	1.26	1.97	3.94	3.150	E⊙25
40	7.09	8.03	3.66	.79	.87	1.18	.55	.47	3.39	2.09	1.32	1.97	3.94	3.150	E⊙40
65	7.83	9.80	4.13	.79	.87	1.18	.55	.47	3.86	2.26	1.54	1.97	3.94	3.150	E⊙65
100	8.70	10.51	4.65	.79	.87	1.18	.55	.47	4.25	2.48	1.59	2.36	3.94	3.150	E⊙100
200	11.14	14.17	5.63	.79	1.42	1.77	.75	.47	5.04	2.87	1.99	2.36	3.94	3.150	E⊙200
350	12.01	15.24	7.13	.79	1.42	1.77	.75	.47	6.81	3.71	2.85	2.36	3.94	3.150	E⊙350
600	15.24	18.78	8.66	1.18	2.17	2.56	1.42	.39	8.15	4.45	3.33	3.54	6.69	5.118	E⊙600
950	16.69	20.35	10.20	1.18	2.17	2.56	1.42	.39	9.09	4.96	4.15	3.54	6.69	5.118	E⊙950
1600	20.31	25.08	11.69	1.18	2.52	2.95	1.42	.39	10.43	5.59	4.74	4.92	8.27	5.118	E⊙1600
2500	14.88	22.44	14.02	1.18	2.17	2.56	1.42	.39	13.78	7.28	7.01	6.30	9.65	5.118	P⊙2500
4000	19.76	32.83	14.96	1.18	2.52	3.15	1.42	.39	14.96	7.87	7.48	6.30	9.65	5.118	P⊙4000

⊙ Type: D = Double Acting; S = Spring Return.



### MOUNTING DIMENSIONS & SPECIFICATIONS

Actuator Size	P	R	S	T	U	V	
						max.	min.
25	.555	1.969	-	-	1/4" 20 x .39	.437	.433
40	.713	2.756	1.969	1/4" 20 x .39	5/16" 18 x .39	.556	.551
65	.713	2.756	1.969	1/4" 20 x .39	5/16" 18 x .39	.556	.551
100	.992	2.756	1.969	1/4" 20 x .39	5/16" 18 x .39	.753	.748

Actuator Size	P	R	S	T	U	V	
						max.	min.
200	1.110	4.016	2.756	5/16" 18 x .39	3/8" 16 x .63	.871	.866
350	1.425	4.016	2.756	5/16" 18 x .39	3/8" 16 x .63	1.068	1.063
600	1.425	4.921	4.016	3/8" 16 x .63	1/2" 13 x .79	1.067	1.063
950	1.898	5.512	4.016	3/8" 16 x .63	5/8" 11 x .98	1.424	1.417