

**Spring Return Torque Outputs - Metric Units Nm**

Actuator Model	Position of air OR spring return stroke	Pressure (bar)											
		1.7	2.0	2.4	2.8	3.1	3.5	3.8	4.1	4.5	4.8	5.2	5.5
01-120	Start						1.5		1.7		1.9		2.3
	Finish						0.9		1.1		1.5		1.8
02-120	Start						3.0	3.4	3.6	3.8	4.2	4.4	4.7
	Finish						1.4	1.7	2.0	2.4	2.8	3.3	3.7
03-120-5600	Start	2.8	3.4	4.1	4.8	5.3	5.7						
	Finish	2.1	2.8	3.5	4.2	4.8	5.1	5.1	5.1	5.1	5.1	5.1	5.1
03-120	Start						6.3	6.9	7.5	8.1	8.9	9.5	10.3
	Finish						4.1	4.7	5.5	6.4	7.2	7.8	8.7
05-120	Start						13.0	14.1	15.3	16.4	18.1	19.2	20.9
	Finish						8.5	9.6	11.3	13.0	14.7	15.8	17.5
07-120-4000	Start	9.0	11.9	15.3	18.6	22.0							
	Finish	5.1	8.5	11.9	15.3	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
07-120	Start						30.5	33.9	37.3	40.7	43.5	46.9	50.8
	Finish						19.8	23.7	27.1	30.5	34.4	38.4	42.4
08-120	Start						52.7	57.2	61.7	67.2	72.7	77.0	81.3
	Finish						36.8	41.3	45.8	51.4	56.9	61.2	65.5
09-120-4200	Start	26.0	31.6	37.3	44.1	50.8							
	Finish	14.7	21.5	28.2	35.0	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
09-120	Start						61.0	67.8	74.6	81.9	89.3	96.6	104.0
	Finish						50.3	56.5	63.8	71.2	79.1	86.4	93.8
10-120-5800	Start	56.0	65.0	77.0	89.0	97.0	108.0						
	Finish	41.8	52.0	64.0	77.2	86.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10-120	Start						107.0	115.5	124.0	136.0	145.0	155.9	164.0
	Finish						78.0	90.0	102.0	114.6	124.0	134.9	143.0
12-120-4300	Start	54.0	68.9	83.6									
	Finish	42.9	57.6	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
12-120-4400	Start			89.3	103.0	117.0	132.0	147.0	161.0	176.0	191.0		
	Finish			66.1	80.2	94.9	110.0	124.0	139.0	154.0	168.0	168.0	168.0
12-120	Start						145.0	160.0	176.0	191.0	206.0	221.0	238.0
	Finish						111.0	127.0	142.0	158.0	174.0	189.0	204.0
14-120-4900	Start	192.0	220.0	249.0	288.0	322.0	356.0	390.0	424.0	469.0	497.0	529.0	529.0
	Finish	119.0	158.0	186.0	220.0	254.0	288.0	322.0	356.0	390.0	418.0	447.0	447.0
14-120	Start						374.0	408.0	442.0	479.0	517.0	554.0	588.0
	Finish						249.0	290.0	330.0	367.0	406.0	443.0	478.0
14-120-5000	Start	172.0	208.0	237.0									
	Finish	140.0	174.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0
15-120	Start						614.0	680.0	752.0	801.0	848.0	914.0	962.0
	Finish						392.0	392.0	522.0	590.0	656.0	723.0	790.0
16-120-6100	Start	359.0	428.0	497.0									
	Finish	245.0	333.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0
16-120-6000	Start			514.0	583.0	652.0	722.0						
	Finish			404.0	492.0	580.0	668.0	668.0	668.0	668.0	668.0	668.0	668.0
16-120	Start						864.0	939.0	1004.0	1097.0	1165.0	1256.0	1321.0
	Finish						576.0	660.0	742.0	832.0	906.0	1002.0	1081.0
18-120-7000	Start	807.0	970.0	1182.0	1260.0								
	Finish	484.0	736.0	967.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0
18-120	Start				1457.0	1637.0	1875.0	2053.0	2206.0	2426.0	2585.0	2800.0	2954.0
	Finish				874.0	1036.0	1250.0	1441.0	1630.0	1840.0	2011.0	2234.0	2417.0
21-120-8000	Start	1621.0	1940.0	2325.0	2692.0								
	Finish	1025.0	1362.0	1763.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0
21-120-7300	Start				2788.0	3072.0	3471.0	3739.0	4023.0				
	Finish				1958.0	2271.0	2632.0	2983.0	3291.0	3291.0	3291.0	3291.0	3291.0
21-120	Start								4121.0	4514.0	4798.0	5181.0	5456.0
	Finish								3046.0	3423.0	3732.0	4133.0	4464.0
30-120-7600	Start	2433.0	2878.0	3466.0	4038.0								
	Finish	1622.0	2127.0	2696.0	3304.0	3304.0	3304.0	3304.0	3304.0	3304.0	3304.0	3304.0	3304.0
30-120-8300	Start				4112.0	4554.0	5113.0						
	Finish				3118.0	3542.0	4183.0	4183.0	4183.0	4183.0	4183.0	4183.0	4183.0
30-120-7800	Start						5237.0	5676.0	6072.0	6648.0			
	Finish						3871.0	4304.0	4844.0	5440.0	5440.0	5440.0	5440.0
30-120	Start									6771.0	7179.0	7772.0	8184.0
	Finish									5134.0	5598.0	6200.0	6696.0
60-120-8400	Start				8343.0	9506.0	10669.0						
	Finish				6965.0	7936.0	8907.0	8907.0	8907.0	8907.0	8907.0	8907.0	8907.0
60-120-8500	Start						10669.0	11763.0	12858.0	13996.0			
	Finish						8907.0	9821.0	10734.0		11684.0	11684.0	11684.0
60-120	Start									14001.0	15145.0	16313.0	17437.0
	Finish									11689.0	12644.0	13619.0	14558.0

Torque outputs identical for counter-clockwise models. *Italic* figures apply to spring end torque only - air end torque will be greater.

For double acting torques see page 6

## Spring Return Torque Outputs - English Units lbf ins

Actuator Model	Position of air OR spring return stroke	Pressure (psi)											
		25	30	35	40	45	50	55	60	65	70	75	80
01-120	Start						13		15		17		20
	Finish						8		10		13		16
02-120	Start						27	30	32	34	37	39	42
	Finish						12	15	18	21	25	29	33
03-120-5600	Start	25	30	36	42	47	50						
	Finish	19	25	31	37	42	45	45	45	45	45	45	45
03-120	Start						56	61	66	71	79	84	91
	Finish						37	41	49	56	64	69	77
05-120	Start						115	125	135	145	160	170	185
	Finish						75	85	100	115	130	140	155
07-120-4000	Start	80	105	135	165	195							
	Finish	45	75	105	135	160	160	160	160	160	160	160	160
07-120	Start						270	300	330	360	385	415	450
	Finish						175	210	240	270	305	340	375
08-120	Start						466	506	546	595	644	682	720
	Finish						326	366	406	455	504	542	580
09-120-4200	Start	230	280	330	390	450							
	Finish	130	190	250	310	370	370	370	370	370	370	370	370
09-120	Start						540	600	660	725	790	855	925
	Finish						445	500	565	630	700	765	830
10-120-5800	Start	500	587	683	760	886	953						
	Finish	366	472	568	645	780	847	847	847	847	847	847	847
10-120	Start						950	1025	1100	1190	1280	1365	1450
	Finish						690	795	900	1000	1100	1185	1270
12-120-4300	Start	480	610	740									
	Finish	380	510	640	640	640	640	640	640	640	640	640	640
12-120-4400	Start			790	910	1040	1170	1300	1430	1560	1690		
	Finish			585	710	840	970	1100	1230	1360	1490	1490	1490
12-120	Start						1280	1415	1555	1690	1825	1960	2110
	Finish						985	1125	1260	1400	1540	1670	1810
14-120-4900	Start	1700	1950	2200	2550	2850	3150	3450	3750	4150	4400	4680	4680
	Finish	1050	1400	1650	1950	2250	2550	2850	3150	3450	3700	3960	3960
14-120	Start						3310	3610	3915	4240	4580	4900	5200
	Finish						2205	2570	2920	3250	3595	3920	4230
14-120-5000	Start	1520	1840	2100									
	Finish	1240	1540	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
15-120	Start						5434	6018	6656	7089	7505	8090	8514
	Finish						3469	4098	4620	5222	5806	6399	6992
16-120-6100	Start	3178	3790	4401									
	Finish	2172	2950	3729	3729	3729	3729	3729	3729	3729	3729	3729	3729
16-120-6000	Start			4551	5163	5774	6386						
	Finish			3579	4357	5136	5914	5914	5914	5914	5914	5914	5914
16-120	Start						7646	8310	8885	9708	10310	11116	11691
	Finish						5098	5841	6567	7363	8018	8868	9567
18-120-7000	Start	7142	8585	10461	11151								
	Finish	4283	6514	8558	9204	9204	9204	9204	9204	9204	9204	9204	9204
18-120	Start				12894	14487	16594	18169	19523	21470	22877	24780	26143
	Finish				7735	9169	11063	12753	14426	16284	17797	19771	21390
21-120-8000	Start	14346	17169	20576	23824								
	Finish	9071	12054	15603	19497	19497	19497	19497	19497	19497	19497	19497	19497
21-120-7300	Start				24674	27187	30718	33090	35604				
	Finish				17328	20098	23293	26400	29125	29125	29125	29125	29125
21-120	Start								36471	39949	42462	45852	48286
	Finish								26957	30294	33028	36577	39506
30-120-7600	Start	16797	25470	30674	35736								
	Finish	9394	18824	23860	29240	29240	29240	29240	29240	29240	29240	29240	29240
30-120-8300	Start				36391	40303	45250						
	Finish				27594	31347	37020	37020	37020	37020	37020	37020	37020
30-120-7800	Start						46347	50233	53737	58835			
	Finish						34258	38090	42869	48144	48144	48144	48144
30-120	Start								59923	63693	68782	72428	
	Finish								45436	49542	54870	59260	
60-120-8400	Start				73841	84134	94428						
	Finish				61647	70240	78834	78834	78834	78834	78834	78834	78834
60-120-8500	Start						94428	104114	113800	123872			
	Finish						78834	86921	95007	103416	103416	103416	103416
60-120	Start									123872	134045	144379	154333
	Finish									103416	111909	120537	128847

Torque outputs identical for counter-clockwise models. *Italic* figures apply to spring end torque only - air end torque will be greater.

For double acting torques see page 6