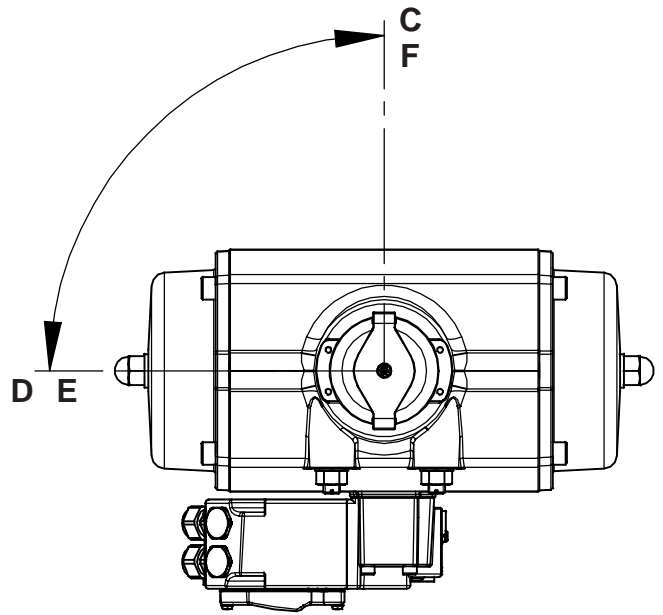
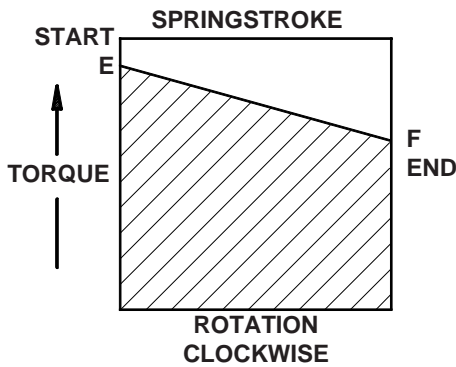
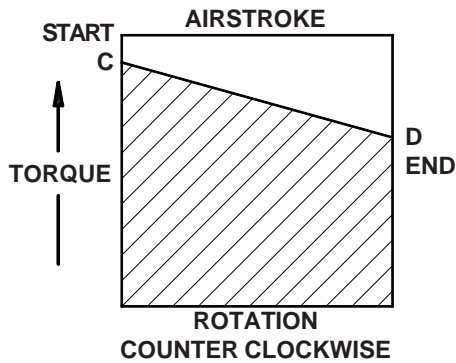


## Spring Return actuator torque (Nm.)

### Spring return torque diagram



**Note:**

1. When sizing, add a minimum of 20% safety factor to the valve torque.
2. When emergency shut down or infrequently used valves are being sized, additional safety factors may be required due to potential increases in the valve torques.
3. If in doubt, or you require any assistance with sizing actuators, do not hesitate to contact your nearest Emerson's Valve Automation Division representative.

Spring set nr.	Actuator Size	Air Torque (Nm)																Spring Torque (Nm)	
		Supply pressure (in bar g)																	
		3		3.5		4		4.5		5		5.5		6		7			
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	E	F	
QS 40	3	12	4	17	8	21	13	26	17	31	22	35	27	40	31	49	40	20	12
	4	-	-	-	-	17	5	21	10	26	14	30	19	35	23	44	32	26	17
	5	-	-	-	-	-	-	-	-	21	7	26	11	30	16	39	25	33	21
	6	-	-	-	-	-	-	-	-	-	-	21	4	25	8	34	17	40	25
QS 100	3	29	10	39	20	49	30	59	40	70	51	80	61	90	71	110	91	44	27
	4	-	-	-	-	39	13	49	24	59	34	69	44	79	54	100	75	58	36
	5	-	-	-	-	-	-	-	-	49	17	59	27	69	38	89	58	73	46
	6	-	-	-	-	-	-	-	-	-	-	48	11	59	21	79	41	88	55
QS 200	3	61	19	84	41	106	64	129	86	151	109	173	131	196	153	240	198	98	61
	4	-	-	-	-	83	26	105	49	127	71	150	93	172	116	217	160	131	82
	5	-	-	-	-	-	-	-	-	104	33	126	56	149	78	193	123	163	102
	6	-	-	-	-	-	-	-	-	-	-	103	18	125	41	170	85	196	123
QS 350	3	101	30	140	68	179	107	217	146	256	185	295	224	334	263	412	340	174	112
	4	-	-	-	-	136	41	175	80	214	118	252	157	291	196	369	274	232	149
	5	-	-	-	-	-	-	-	-	171	52	210	91	248	130	326	207	289	186
	6	-	-	-	-	-	-	-	-	-	-	167	24	206	63	283	141	347	223
QS 600	3	179	54	245	120	311	186	377	252	443	318	509	384	575	450	707	582	292	183
	4	-	-	-	-	240	74	306	140	372	206	438	272	504	338	636	470	389	245
	5	-	-	-	-	-	-	-	-	302	94	368	160	434	226	566	358	487	306
	6	-	-	-	-	-	-	-	-	-	-	298	48	364	114	496	246	584	367
QS 950	3	272	82	371	181	469	279	568	378	666	476	765	575	863	673	1060	870	434	269
	4	-	-	-	-	366	113	465	211	563	310	662	408	760	507	957	704	579	359
	5	-	-	-	-	-	-	-	-	460	143	559	242	657	340	854	537	724	448
	6	-	-	-	-	-	-	-	-	-	-	455	75	554	174	751	371	869	538
QS 1600	3	445	144	608	307	771	470	934	633	1097	796	1260	959	1423	1121	1748	1447	711	449
	4	-	-	-	-	599	198	762	361	925	523	1088	686	1251	849	1576	1175	947	598
	5	-	-	-	-	-	-	-	-	753	251	916	414	1079	577	1405	903	1184	748
	6	-	-	-	-	-	-	-	-	-	-	744	142	907	305	1233	630	1421	897