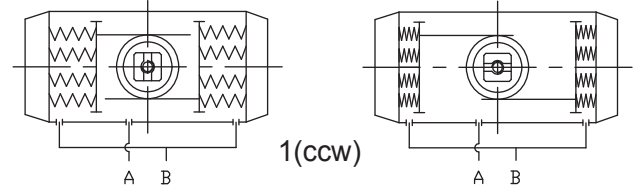


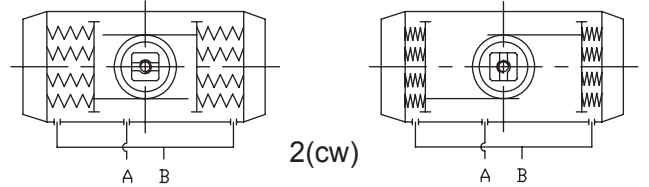
10



**1. A Bağlantı Noktasına giden hava, pistonları dışarı doğru zorlar, yayların sıkışmasına neden olur, hava B bağlantı Noktasından dışarı atılırken pinyon saat yönünün tersine döner.**  
A portunda hava basıncı kaybı, yaylarda depolanan enerji pistonları içeri doğru zorlar. Hava, A portundan dışarı atılırken pinyon saat yönünde döner.

*1. Air to Port A forces the pistons outwards, causing the springs to compress, the pinion turns counterclockwise while the air is being exhausted from Port B.*

*Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted from port A*



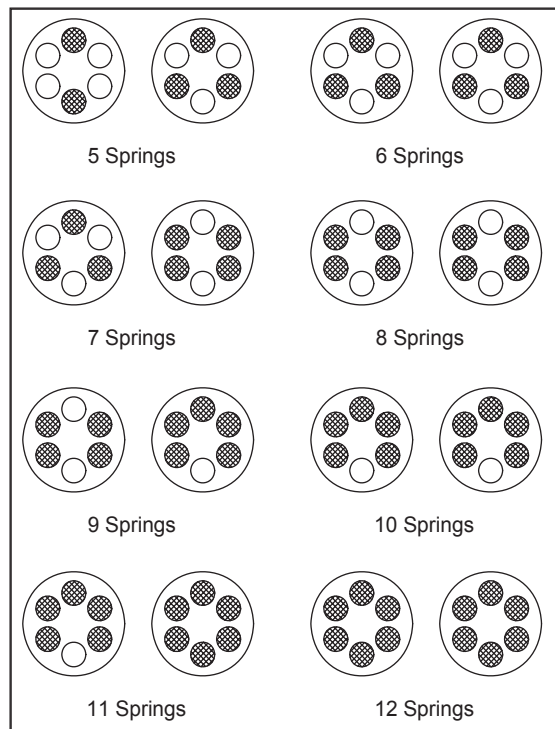
**2. A Bağlantı Noktasına giden hava, pistonları dışarı doğru zorlar, yayların sıkışmasına neden olur, hava B Bağlantı noktasından dışarı atılırken pinyon saat yönünde döner.**

A portunda hava basıncı kaybı, yaylarda depolanan enerji pistonları içeri doğru zorlar.

Hava A portundan dışarı atılırken pinyon saat yönünün tersine döner.

*2. Air to Port A forces the pistons outwards, causing the springs to compress, the pinion turns clockwise while the air is being exhausted from Port B.*

*Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns counterclockwise while air is being exhausted from port A.*



### Yay Geri Dönüslü Aktüatör için Yay Montaj Formu

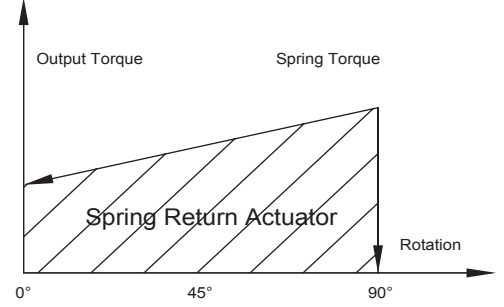
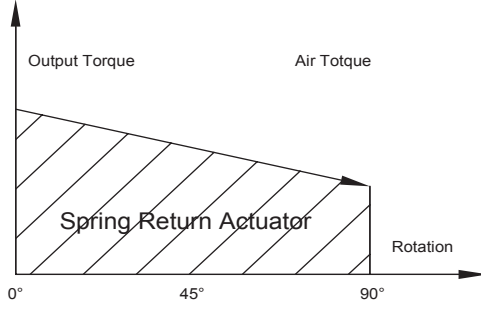
#### Spring Mounting Form For Spring Return Actuator



Önceden yüklenmiş yay kartuşu tasarımı, yaylı aktüatörün güvenli, verimli kullanımı için korozyon direnci, çift etkiliden yaylı geri dönüş ve tam tersine kolay saha dönüşümünü kolaylaştırır, ayrıca kararlı çıkış torku özelliğine sahiptir.

Preloaded spring cartridge design, corrosion resistance for safe, efficient use of spring actuator, facilitate easy field conversion from double acting to spring return & vice versa, also feature stable output torque .

**T-PA...TE**



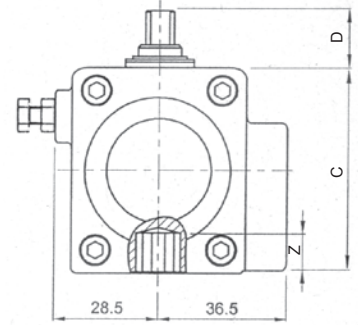
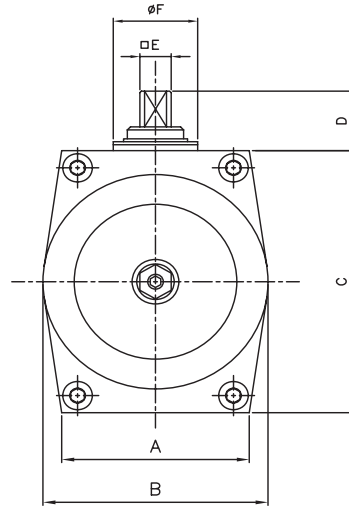
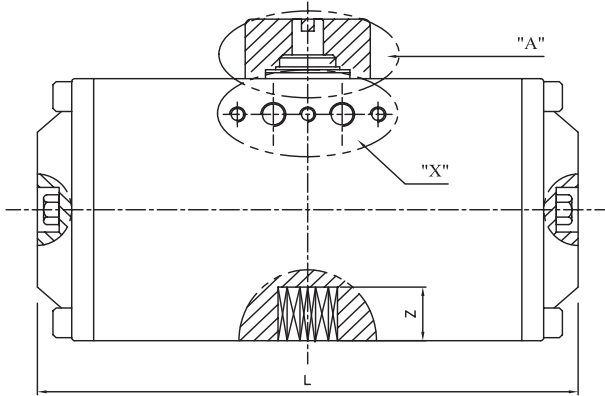
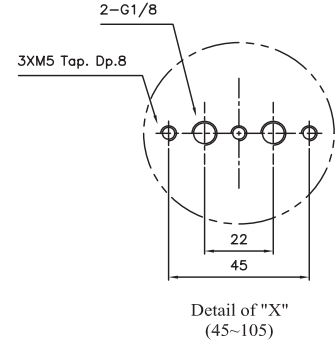
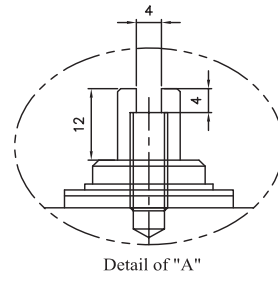
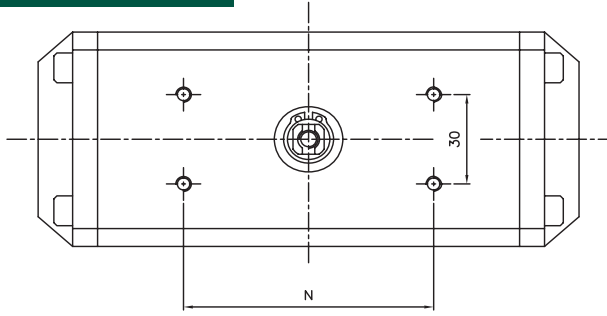
Geri dönüşlü aktüatörlerde yayın çıkış tork değeri (Nm) Output Torque Of Spring Return Actuator (Nm)																	
Air pressure		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		Springs' output	
Model	Spring Q.ty	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
T - PA 40 TE	5	4.6	2.8													4.6	2.9
	6	3.9	1.8	5.4	3.3											5.5	3.5
	7	3.3	0.8	4.8	2.3	7.8	5.3									6.5	4.1
	8			4.2	1.3	7.2	4.3	10.2	7.3							7.4	4.6
	9					6.6	3.4	9.6	6.4	12.6	9.4					8.3	5.2
	10					6.0	2.4	9.0	5.4	12.0	8.4	15.0	11.4	18.1	14.5	9.2	5.8
	11							8.4	4.4	11.4	7.4	14.4	10.4	17.5	13.5	10.1	6.4
	12							7.8	3.5	10.8	6.5	13.8	9.5	16.9	12.6	11.1	7.0
T - PA 52 TE	5	5.7	3.6													6.2	4.2
	6	4.8	2.3	6.8	4.3											7.4	5.1
	7	3.9	1.0	5.9	3.0	9.9	7.0									8.6	5.9
	8			5.0	1.7	9.0	5.7	13.1	9.8							9.9	6.8
	9					8.1	4.4	12.2	8.5	16.2	12.5					11.1	7.6
	10					7.2	3.1	11.3	7.2	15.3	11.2	19.3	15.2	23.4	19.3	12.4	8.5
	11							10.4	5.9	14.4	9.9	18.4	13.9	22.5	18.0	13.6	9.3
	12							9.5	4.6	13.5	8.6	17.5	12.6	21.6	16.7	14.8	10.1
T - PA 63 TE	5	10.6	6.8													10.4	6.8
	6	9.2	4.6	12.7	8.1											12.5	8.2
	7	7.7	2.4	11.2	5.9	18.3	13.0									14.6	9.6
	8			9.8	3.7	16.9	10.8	24	17.9							16.7	10.9
	9					15.4	8.6	22.5	15.7	29.6	22.8					18.8	12.3
	10					14.0	6.4	21.1	13.5	28.2	20.6	35.3	27.7	42.4	34.8	20.9	13.7
	11							19.7	11.3	26.8	18.4	33.9	25.5	41.0	32.6	22.9	15.0
	12							18.2	9.1	25.3	16.2	32.4	23.3	39.5	30.4	25.0	16.4
T - PA75 TE	5	14.1	10.0													14.5	10.5
	6	11.9	6.9	16.9	11.9											17.4	12.7
	7	9.7	3.9	14.7	8.9	24.8	19.0									20.3	14.8
	8			12.4	5.8	22.5	15.9	32.5	25.9							23.2	16.9
	9					20.3	12.9	30.3	22.9	40.4	33.0					26.1	19.0
	10					18.1	9.8	28.1	19.8	38.2	29.9	48.3	40.0	58.3	50.0	29.0	21.1
	11							25.9	16.8	36.0	26.9	46.1	37.0	56.1	47.0	31.9	23.2
	12							23.7	13.7	33.8	23.8	43.9	33.9	53.9	43.9	34.7	25.3
T - PA83 TE	5	21.9	14.3													23.0	15.8
	6	18.5	9.4	26.2	17.1											27.6	19.0
	7	15.2	4.6	22.9	12.3	38.3	27.7									32.2	22.1
	S			19.6	7.4	35.0	22.8	50.5	38.3							36.8	25.3
	9					31.6	18.0	47.1	33.5	62.5	48.9					41.4	28.5
	10					28.3	13.2	43.8	28.7	59.2	44.1	74.6	59.5	90.0	74.9	46.0	31.6
	11							40.5	23.8	55.9	39.2	71.3	54.6	86.7	70.0	50.6	34.8
	12							37.1	19.0	52.5	34.4	67.9	49.8	83.3	65.2	55.2	38.0

**T-PA...TE**

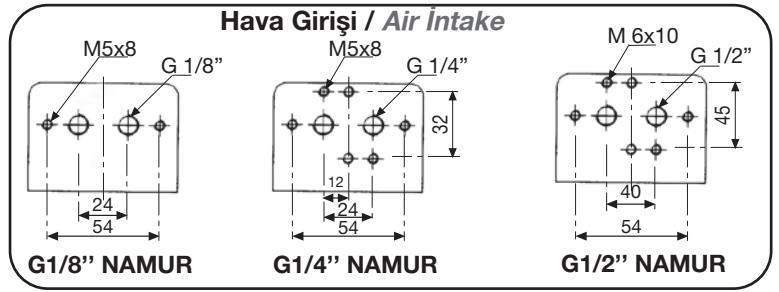
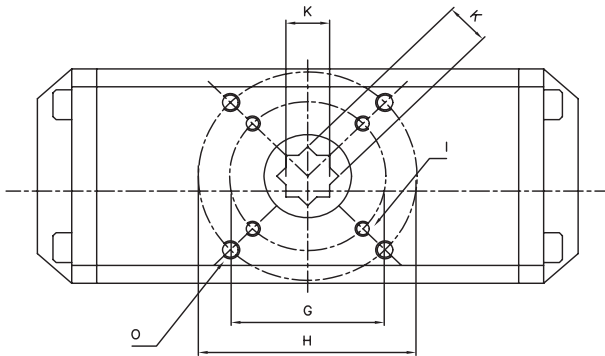
Output Torque Of Spring Return Actuator (Unit: Nm)																	
Air pressure		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		Springs' output	
Model	Spring Q.ty	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
T - PA92 TE	5	32.2	20.6													34.4	23.3
	6	27.3	13.4	38.7	24.8											41.2	28.0
	7	22.4	6.1	33.8	17.5	56.5	40.2									48.1	32.7
	8			28.9	10.3	51.6	33.0	74.3	55.7							55.0	37.3
	9					46.7	25.8	69.4	48.5	92.1	71.2					61.9	42.0
	10					41.8	18.5	64.5	41.2	87.2	63.9	110.0	86.7	132.7	109.4	68.7	46.7
	11							59.5	34.0	82.2	56.7	105.0	79.5	127.7	102.2	75.6	51.4
	12							54.6	26.8	77.3	49.5	100.1	72.3	122.8	95.0	82.5	56
T - PA105 TE	5	48.9	30.4													49.2	31.6
	6	42.2	20.0	58.7	36.5											59.1	38.0
	7	35.6	9.7	52.1	26.2	85.0	59.1									68.9	44.3
	S			45.4	15.8	78.3	48.7	111.1	81.5							78.7	50.6
	9					71.7	38.4	104.5	71.2	137.4	104.1					88.6	56.9
	10					65.0	28.0	97.8	60.8	130.7	93.7	163.6	126.6	196.5	159.5	98.4	63.3
	11							91.1	50.4	124.0	83.3	156.9	116.2	189.8	149.1	108.3	69.6
	12							84.5	40.1	117.4	73.0	150.3	105.9	183.2	138.8	118.1	75.9
T - PA125 TE	5	72.9	45.5													78.4	52.4
	6	61.9	29.0	87.9	55.0											94.1	62.8
	7	50.8	12.5	76.8	38.5	127.8	89.5									109.7	73.3
	8			65.8	22.0	116.8	73.0	167.8	124.0							125.4	83.8
	9					105.8	56.5	156.8	107.5	208.8	159.5					141.1	94.2
	10					94.8	40.0	145.8	91.0	197.8	143.0	248.8	194.0	299.8	245.0	156.8	104.7
	11							134.8	74.5	186.8	126.5	237.8	177.5	288.8	228.5	172.4	115.2
	12							123.7	58.0	175.7	110.0	226.7	161.0	277.7	212.0	188.1	125.7
T - PA140 TE	5	128.7	83.3													129.0	85.8
	6	110.6	56.1	154.6	100.1											154.8	102.9
	7	92.6	29.0	136.6	73.0	224.6	161.0									180.5	120.1
	8			118.5	45.8	206.5	133.8	294.5	221.8							206.3	137.3
	9					188.5	106.7	276.5	194.7	363.5	281.7					232.1	154.4
	10					170.4	79.5	258.4	167.5	345.4	254.5	433.4	342.5	521.4	430.5	257.9	171.6
	11							240.3	140.4	327.3	227.4	415.3	315.4	503.3	403.4	283.7	188.7
	12							222.3	113.2	309.3	200.2	397.3	288.2	485.3	376.2	309.5	205.9
T - PA160 TE	5	187.0	114.7													208.3	139.7
	6	157.6	70.9	224.6	137.9											250	168
	7	128.2	27.0	195.2	94.0	329.2	228.0									292	196
	8			165.8	50.2	299.8	184.2	432.8	317.2							333	223
	9					270.4	140.3	403.4	273.3	537.4	407.3					375	251
	10					241	96.4	374.0	229.5	508.0	363.5	641.0	496.5	775.0	630.5	417	279
	11							344.6	185.6	478.6	319.6	611.6	452.6	745.6	586.6	458	307
	12							315.2	141.7	449.2	275.7	582.2	408.7	716.2	542.7	500	335
T - PA190 TE	5	327	212													293	190
	6	285	147	393	255											352	227
	7	243	82	351	190	566	405									410	265
	8			309	125	524	340	740	556							469	303
	9					482	275	698	491	913	706					527	341
	10					440	210	656	426	871	641	1087	857	1302	1072	586	379
	11							614	361	829	576	1045	792	1260	1007	645	417
	12							572	296	787	511	1003	727	1218	942	703	455

Output Torque Of Spring Return Actuator (Unit: Nm)																	
Air pressure		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		Springs' output	
Model	Spring	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
	Q.ty	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
T - PA210 TE	5	369	258													360	260
	6	311	178	442	309											432	313
	7	253	99	384	230	647	493									503	365
	8			326	150	589	413	853	677							575	417
	9					531	333	795	597	1058	860					647	469
	10					473	253	737	517	1000	780	1263	1043	1526	1306	719	521
	11							679	437	942	700	1205	963	1468	1226	791	573
	12							621	357	884	620	1147	883	1410	1146	863	625
T - PA240 TE	5	534	383													525	389
	6	448	266	642	460											630	467
	7	361	150	555	344	941	730									735	544
	8			469	227	855	613	1242	1000							840	622
	9					768	496	1155	883	1542	1270					945	700
	10					682	380	1069	767	1456	1154	1842	1540	2229	1927	1050	778
	11							983	650	1370	1037	1756	1423	2143	1810	1155	855
	12							896	533	1283	920	1669	1306	2056	1693	1260	933
T - PA270 TE	5	879	640													745	530
	6	761	475	1054	768											894	636
	7	644	309	937	602	1525	1190									1043	742
	8			819	437	1407	1025	1994	1612							1192	848
	9					1289	859	1876	1446	2463	2033					1341	954
	10					1171	694	1758	1281	2345	1868	2932	2455	3519	3042	1490	1060
	11							1640	1115	2227	1702	2814	2289	3401	2876	1639	1166
	12							1523	950	2110	1537	2697	2124	3284	2711	1788	1272
T - PA300 TE	5	1097	729													1061	730
	6	935	494	1316	875											1273	876
	7	772	258	1153	639	1916	1402									1485	1022
	8			991	403	1754	1166	2517	1929							1697	1168
	9					1592	930	2355	1693	3118	2456					1909	1314
	10					1430	695	2193	1458	2956	2221	3719	2984	4482	3747	2122	1460
	11							2030	1222	2793	1985	3556	2748	4319	3511	2334	1606
	12							1868	986	2631	1749	3394	2512	4157	3275	2546	1752
T - PA350 TE	5	1553	964													1702	1173
	6	1292	586	1863	1157											2043	1408
	7	1031	208	1602	779	2745	1922									2383	1642
	8			1341	401	2484	1544	3626	2686							2724	1877
	9					2224	1165	3366	2307	4508	3449					3064	2112
	10					1963	787	3105	1929	4247	3071	5390	4214	6532	5356	3405	2346
	11							2844	1551	3986	2693	5129	3836	6271	4978	3745	2581
	12							2584	1172	3726	2314	4869	3457	6011	4599	4086	2816
T - PA400 TE	7	2028	869													2880	1837
	8	1736	411	2550	1225											3292	2100
	9			2259	768	3887	2396									3703	2362
	10			1967	311	3595	1939	5223	3567							4115	2624
	11					3303	1482	4931	3110	6559	4738					4526	2887
	12					3012	1025	4640	2653	6268	4281	7895	5908	9523	7536	4938	3149
	13							4348	2195	5976	3823	7603	5450	9231	7078	5349	3412
	14							4057	1738	5685	3366	7312	4993	8940	6621	5761	3674
15							3765	1281	5393	2909	7020	4536	8648	6164	6172	3937	
16									5101	2452	6728	4079	8356	5707	6584	4199	

### T-PA...TE



**T - PA 40 CE**  
Kesit detayı



### Actuator Dimension Table - 90°

Unit: mm

Model	A	B	C	D	E	F	G	H	I	K	L	N	O	Z	Air Connection	Kg
T - PA 40 TE		65	60	20	10	22	Ø36	Ø50	M5 X 8	11	122	80	M6 X 9	14	G 1/8"	1.0
T - PA 52 TE	50	59	74	20	10	22	Ø36	Ø50	M5 X 8	11	150	80	M6 X 10	14	G 1/8"	1.2
T - PA 63 TE	60	72	88	20	10	27	Ø50	Ø70	M6 X 10	14	173	80	M8 X 13	18	G 1/8"	1.85
T - PA 75 TE	65	83	100	20	10	27	Ø50	Ø70	M6 X 10	14	187	80	M8 X 13	18	G 1/8"	2.4
T - PA 83 TE	67	91	110	20	10	27	Ø50	Ø70	M6 X 10	17	214	80	M8 X 13	21	G 1/8"	3.25
T - PA 92 TE	76	104	120	20	14	34	Ø50	Ø70	M6 X 10	17	265	80	M8 X 13	21	G 1/8"	5.1
T - PA 105 TE	84	114	132.5	20	14	34	Ø70	Ø102	M8 X 13	22	276	80	M10 X 16	26	G 1/8"	6.1
T - PA 125 TE	103	137	160	30	22	50	Ø70	Ø102	M8 X 13	22	306	130	M10 X 16	26	NAMUR G1/4"	10.4
T - PA 140 TE	107	150	170	30	22	50	Ø102	Ø125	M10 X 16	27	400	130	M12 X 20	31	NAMUR G1/4"	14.65
T - PA 160 TE	110	172	197	30	22	50	Ø102	Ø125	M10 X 16	27	465	130	M12 X 20	31	NAMUR G1/4"	21.9
T - PA 190 TE	115	206	226	30	32	72		Ø140		36	530	130	M16 X 25	40	NAMUR G1/4"	34.65
T - PA 210 TE	135	226	260	30	32	72		Ø140		36	535	130	M16 X 25	40	NAMUR G1/4"	43.9
T - PA 240 TE	155	256	290	30	32	72		Ø165		46	602	130	M20 X 25	50	NAMUR G1/4"	62
T - PA 270 TE	172	294	320	30	32	72		Ø165		46	715	130	M20 X 25	50	NAMUR G1/2"	88.75
T - PA 300 TE	196	324	350	30	32	72		Ø165		46	765	130	M20 X 25	60	NAMUR G1/2"	118
T - PA 350 TE	220	380	409	30	32	72	Ø165	Ø254	M20 X 25	46	880	130	6-M16 X 25	60	NAMUR G1/2"	204
T - PA 400 TE																