




TERATORK



ACTUATORS ENGINEERED FOR QUARTER TURN APPLICATIONS



TERATORK Pneumatic Actuator
Model: T125S/8
Max. Rated Pressure: 8 bar(g)
Temperature: -20°C to +80°C
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Design Features

Robust construction for reliability

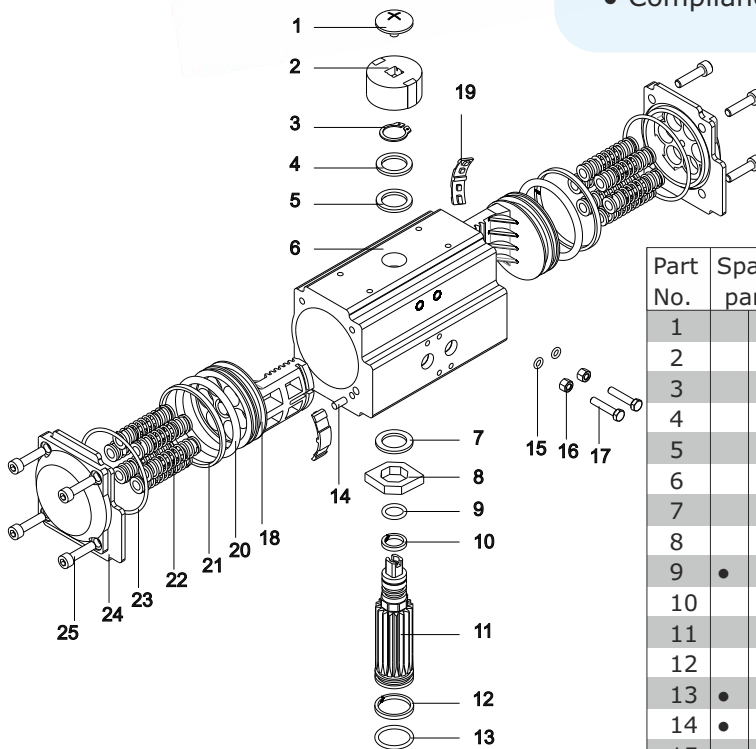
- Innovative rugged dual piston and pinion design
- High cycle life and fast operation
- Anti blow-out drive shaft
- Extruded hard anodized aluminium body
- Die cast aluminum alloy powder coated covers
- SS fasteners for long protection from corrosion

Precision for high performance

- Low friction due to multiple bearings and guides on rack and piston
- Modular pre-loaded corrosion resistant coated spring cartridge design
- Fully machined teeth for accurate positioning, low backlash and higher efficiency
- Easy conversion from double acting to spring return
- Two external travel stops for ± 5 degree adjustment

Wide application range

- Air supply pressure 2 to 8 bar
- Operating temperature from -20°C to $+80^{\circ}\text{C}$
- Low temperature version to -40°C
- High temperature version to $+150^{\circ}\text{C}$
- Compliance to ISO 5211 and NAMUR specifications



Part No.	Spare part	Part description	Material	Qty.
1		Indicator screw	ABS	1
2		Indicator	ABS	1
3		Snap ring	SS	1
4		Washer	SS	1
5	□	Outside washer	ABS	1
6		Body	Al. alloy-hard anodized	1
7	□	Inside washer	ABS	1
8		Cam	1040+ENP	1
9	● □	O-ring-top	NBR	1
10	□	Bearing-top	ABS	1
11		Pinion	1040+ENP	1
12	□	Bearing-bottom	ABS	1
13	● □	O-ring-bottom	NBR	1
14	● □	Plug	NBR	1
15	● □	O-ring-adjust screw	NBR	2
16		Nut	SS	2
17		Adjustable screw	SS	2
18		Piston die cast	Al. alloy-hard anodized	2
19		Guide-piston	ABS	2
20	● □	O-ring-piston	NBR	2
21	□	Bearing-piston	ABS	2
22		Springs	Spring steel	**
23	● □	O-ring end cap	NBR	2
24		End cap die cast	Al. alloy-powder coated	2
25		Screw-end cap	SS	8

● O-ring spare kit parts □ Spare kit parts

** Refer name plate for quantity

ABS - Acrylonitrile Butadiene Styrene

NBR - Nitrile Butadiene Rubber, Al.-Aluminium

Actuator Output Torque (Nm)



Double acting actuator

Model	Air pressure (bar)							
	2	3	4	5	5.5	6	7	8
DA-T32	3.1	4.6	6.1	7.6	8.4	9.2	10.7	12.2
DA-T45	6.0	9.1	12.1	15.1	16.6	18.1	21.1	24.2
DA-T52	8.1	12.1	16.1	20.2	22.2	24.2	28.2	32.3
DA-T63	14.2	21.3	28.4	35.5	39.1	42.6	49.7	56.8
DA-T75	20.1	30.2	40.3	50.3	55.4	60.4	70.5	80.5
DA-T83	30.8	46.2	61.6	77.1	84.8	92.5	107.9	123.3
DA-T92	45.4	68.2	90.9	113.6	125.0	136.3	159.1	181.8
DA-T105	65.8	98.7	131.6	164.4	180.9	197.3	230.2	263.1
DA-T125	103.0	154.0	205.0	256.0	282.0	308.0	359.0	410.0
DA-T140	175.0	263.0	351.0	439.0	482.0	526.0	614.0	702.0
DA-T160	267.0	401.0	535.0	668.0	735.0	802.0	935.0	1069.0
DA-T190	431.0	646.0	861.0	1077.0	1185.0	1292.0	1508.0	1723.0
DA-T210	526.0	789.0	1052.0	1316.0	1447.0	1579.0	1842.0	2105.0
DA-T240	773.0	1160.0	1546.0	1933.0	2126.0	2320.0	2706.0	3093.0
DA-T270	1174.0	1761.0	2349.0	2936.0	3229.0	3523.0	34110.0	4697.0
DA-T300	1526.0	2289.0	3052.0	3815.0	4197.0	4578.0	5341.0	6104.0
DA-T350	2285.0	3427.0	4570.0	5712.0	6283.0	6854.0	7997.0	9139.0
DA-T400	3256.0	4883.0	6511.0	8139.0	8953.0	9767.0	11394.0	13022.0
DA-T450	5076.0	7614.0	10153.0	12591.0	13960.0	15229.0	17768.0	20306.0
DA-T500	7162.0	10744.0	14325.0	17907.0	19697.0	21488.0	25069.0	28651.0
DA-T550	9750.0	14625.0	19500.0	24375.0	26813.0	29251.0	34125.0	39001.0
DA-T600	12893.0	19339.0	25786.0	32232.0	35455.0	38679.0	45125.0	51572.0
DA-T700	21058.0	31588.0	42117.0	52646.0	57911.0	63176.0	73705.0	84234.0
DA-T800	32089.0	48134.0	64178.0	80223.0	88246.0	96268.0	112313.0	128357.0

Single acting actuator

Model	Air pressure (bar)																	
	Spring Qty.	2		3		4		5		6		7		8		Spring Torque		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
SR-T45	5	3.0	1.2													4.6	2.9	
	6	2.3	0.2	4	3.3											5.5	3.5	
	7			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					6.1	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	
	SR-T52	5	3.7	1.6													6.2	4.2
		6	2.8	0.3	6.8	4.3											7.4	5.1
		7			5.9	3.0	9.9	7.0	14.0	11.1							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	
SR-T63		5	7.0	3.2													10.4	6.8
		6	5.6	1.0	12.7	8.1											12.5	8.2
		7			11.2	5.9	18.3	13.0	26.8	21.9							14.6	9.6
		8			9.8	3.7	16.9	10.8	24.0	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	15.4	
	12							18.2	9.1	25.3	16.2	32.4	23.3	39.5	30.4	25.0	16.4	
	SR-T75	5	9.0	4.9													14.5	10.5
		6	6.8	1.8	16.9	11.9											17.4	12.7
		7			14.7	8.9	24.8	19.0	35.4	29.9							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	29.1	21.1	
11								25.9	16.8	36	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	
SR-T83		5	14.2	6.6													23.0	15.8
		6	10.8	1.7	26.2	17.1											27.6	19.0
		7			22.9	12.3	3.8	27.7	56.2	46.2							32.2	22.1
		8			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	

Actuator Output Torque (Nm)



Single acting actuator

Model	Air pressure (bar)																	
	Spring Qty.	2		3		4		5		6		7		8		Spring Torque		
		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	
SR-T92	5	20	9														34	23
	6	15	2	38	24												41	28
	7			33	17	56	40	80	64								48	32
	8			28	10	51	33	74	55								55	37
	9					46	25	69	48	92	71						61	42
	10					41	18	64	41	87	63	110	86	132	109		68	46
	11							59	34	82	56	105	79	127	102		75	51
	12							54	26	77	49	100	72	122	95		82	56
SR-T105	5	32	14														49	31
	6	25	3	58	36												59	38
	7			52	26	85	59	121	96								68	44
	8			45	15	78	48	111	81								78	50
	9					71	38	104	71	137	104						88	56
	10					65	28	97	60	130	93	163	126	196	159		98	63
	11							91	50	124	83	156	116	189	149		108	69
	12							84	40	117	73	150	105	183	138		118	75
SR-T125	5	47	20														78	52
	6	36	4	87	55												94	62
	7			76	38	127	89	178	141								109	73
	8			65	22	116	73	167	124								125	83
	9					105	56	156	107	208	159						141	94
	10					94	40	145	91	197	143	248	194	299	245		156	104
	11							134	74	186	126	237	177	288	228		172	115
	12							123	58	175	110	226	161	277	212		188	125
SR-T140	5	84	39														129	85
	6	66	12	154	100												154	102
	7			136	73	224	161	308	247								180	120
	8			118	45	206	133	294	221								260	137
	9					188	106	276	194	363	281						232	154
	10					170	79	258	167	345	254	433	342	521	430		257	171
	11							240	140	327	227	415	315	503	403		283	188
	12							222	113	309	200	379	288	485	376		309	205
SR-T160	5	120	47														208	139
	6	90	3	224	137												250	168
	7			195	94	329	228	469	373								292	196
	8			165	50	299	184	432	317								333	223
	9					270	140	403	273	537	407						375	251
	10					241	96	374	229	508	363	641	496	775	630		417	279
	11							344	185	478	319	611	452	745	586		458	307
	12							315	141	449	275	582	408	716	542		500	335
SR-T190	5	220	105														293	190
	6	178	40	393	255												352	227
	7			385	190	566	405	784	631								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	1206	1007		645	417
	12							572	296	787	511	1003	727	218	942		703	455
SR-T210	5	237	126														360	260
	6	179	46	442	309												432	313
	7			384	23	647	493	908	754								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
SR-T240	5	341	190														525	389
	6	255	73	642	460												630	467
	7			555	344	941	730	1349	1149								735	544
	8			469	227	855	613	1242	1009								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	1698		1260	933

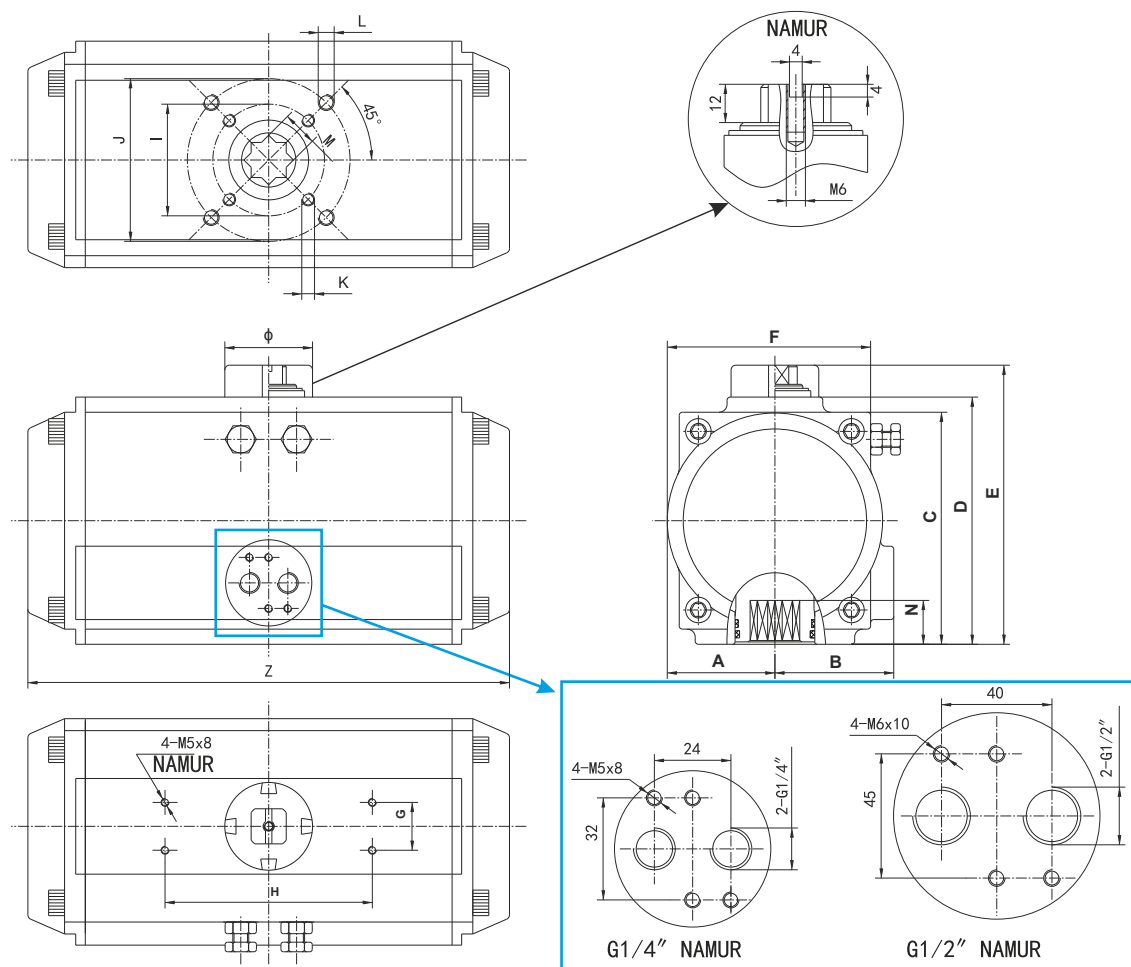
Actuator Output Torque (Nm)



Single acting actuator

Model	Air pressure (bar)																
		2		3		4		5		6		7		8		Spring Torque	
	Qty.	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-T270	5	585	346												745	530	
	6	467	181	1054	768										894	636	
	7			937	602	1525	1190	2141	1823						1043	472	
	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
SR-T300	5	715	347												1061	730	
	6	553	112	1316	875										1273	876	
	7			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
SR-T350	5	982	393												1702	1173	
	6	721	15	1863	1157										2043	1408	
	7			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							2804	1551	3986	2693	5129	3836	6271	4978	3745	2581
	12							2584	1172	3726	2314	4869	3457	6011	4599	4086	2816
SR-T400	7	1215	56												2880	1837	
	8			255	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	5658	3866	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	
SR-T450	4			4888	3235	7497	5844	10130	8452	12715	11061	15324	13670	17932	16279	4951	2937
	6			3420	2227	6028	3548	8637	6157	11246	8766	13855	11375	16464	13983	6886	4406
	8					4560	1252	7168	3861	9777	6470	12386	9079	14995	11688	9182	5875
	10							5698	1566	8307	4174	10916	6783	13525	9392	11478	7345
	12									6838	1879	9447	4488	12056	7096	13773	8814
SR-T500	4			7536	5985	11558	9010	15580	13032	19602	17054	23624	21076	27646	25098	7078	4530
	6			5271	2541	9293	5471	13315	9493	17337	13515	21359	17537	25381	21559	10617	6795
	8					7028	1932	11050	5954	15072	9976	19094	13998	23116	18020	14156	9060
	10							8785	2414	12807	6436	16829	10458	20851	14480	17696	11325
	12									10542	2897	14564	6919	18586	10941	21235	13590
SR-T600	4			11589	7670	17774	13855	23960	20041	30145	26226	36330	32410	42516	38596	10885	6966
	6			8106	4008	14290	8412	20476	14598	26661	20782	32846	26967	39032	33153	163328	10449
	8					10807	2968	16993	9154	23178	15339	29362	21524	35548	27710	21771	13933
	10							13509	3711	18694	9896	25879	16081	32065	22267	27214	17416
	12									16212	4454	22396	10639	28582	16825	32656	20899
SR-T700	4					26662	20783	39541	30062	45219	39340	54497	48618	63775	57896	16329	10450
	6					21436	12618	30715	21897	39993	31175	49271	40453	58549	49731	24494	15676
	8					16211	4453	25490	13732	34160	23010	44046	32288	53324	41566	32659	20901
	10							20264	5567	29542	14845	38820	24123	48098	33401	40824	26127
	12									24317	6681	33595	15959	42873	25237	48988	31352
SR-T800	4					46083	35922	62120	51958	78156	67994	94192	84031	110229	100068	28224	18062
	6					37051	21810	53088	37846	69123	53882	85160	69919	101197	85956	42336	27049
	8					28020	7698	44056	23734	60092	39770	76129	55807	92166	74844	56448	36126
	10							35024	9622	51060	25658	67096	41695	83133	57732	70560	45158
	12									42028	11546	58065	27583	74102	43620	84672	54189

Actuator Dimensions



Dimensions in mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	ϕ	Air Connection
T52	30.0	41.5	65.5	72.0	92.0	65.0	30	80	$\phi 36$	$\phi 50$	4-M5x8	4-M6x10	11	14	147	40	NAMUR G1/4"
T63	36.0	47.0	81.0	87.5	107.5	72.0	30	80	$\phi 50$	$\phi 70$	4-M6x10	4-M8x13	14	18	168	40	NAMUR G1/4"
T75	42.0	53.0	94.0	99.5	119.5	81.0	30	80	$\phi 50$	$\phi 70$	4-M6x10	4-M8x13	14	18	184	40	NAMUR G1/4"
T83	46.0	57.0	98.5	108.7	128.5	92.0	30	80	$\phi 50$	$\phi 70$	4-M6x10	4-M8x13	17	21	204	40	NAMUR G1/4"
T92	50.0	58.5	111.0	116.5	136.5	98.0	30	80	$\phi 50$	$\phi 70$	4-M6x10	4-M8x13	17	21	262	40	NAMUR G1/4"
T105	57.5	64.0	122.5	133.0	153.0	109.5	30	80	$\phi 70$	$\phi 102$	4-M8x13	4-M10x16	22	26	268	40	NAMUR G1/4"
T125	67.5	74.5	145.5	155.0	185.0	127.5	30	130	$\phi 70$	$\phi 102$	4-M8x13	4-M10x16	22	26	301	55	NAMUR G1/4"
T140	75.0	77.0	161.0	172.0	202.0	137.5	30	130	$\phi 102$	$\phi 125$	4-M10x16	4-M12x20	27	31	390	55	NAMUR G1/4"
T160	87.0	87.0	184.0	197.0	227.0	158.0	30	130	$\phi 102$	$\phi 125$	4-M10x16	4-M12x20	27	31	458	55	NAMUR G1/4"
T190	103.0	103.0	216.0	230.0	260.0	189.0	30	130	-	$\phi 140$	-	4-M16x25	36	50	525	80	NAMUR G1/4"
T210	113.0	113.0	235.5	255.0	255.0	210.0	30	130	-	$\phi 140$	-	4-M16x25	36	50	532	80	NAMUR G1/4"
T240	130.0	130.0	264.5	290.0	290.0	245.0	30	130	-	$\phi 165$	-	4-M20x25	46	60	602	80	NAMUR G1/4"
T270	147.0	147.0	299.0	330.0	330.0	273.0	30	130	-	$\phi 165$	-	4-M20x25	46	60	722	80	NAMUR G1/2"
T300	162.0	162.0	330.0	354.0	354.0	312.0	30	130	-	$\phi 165$	-	4-M20x25	46	60	820	80	NAMUR G1/2"
T350	190.0	190.0	383.0	410.0	440.0	362.0	30	130	-	$\phi 165$	-	4-M20x25	46	60	900	80	NAMUR G1/2"
T400	260.0	260.0	441.0	466.0	496.0	450.0	30	130	$\phi 165$	$\phi 254$	4-M20x25	4-M16x25	46	60	940	80	NAMUR G1/2"

Additional Technical Data

Model	T52	T63	T75	T83	T92	T105	T125	T140	T160	T190	T210	T240	T270	T300	T350	T400
Air volume opening (L)	0.11	0.2	0.29	0.41	0.62	0.94	1.47	2.43	3.65	5.9	7.4	10.7	16.9	23.8	35.1	52.6
Air volume closing (L)	0.14	0.23	0.38	0.55	0.91	1.18	1.85	3.2	5.03	7.9	9.7	14.3	22.5	29.7	46.3	36
Weight DA (kg)	1.4	2.1	2.7	3.2	4.6	6.8	8.9	13.3	20.2	31.3	46.8	67.3	97	110	186	289
Weight SR (kg)	1.5	2.3	2.9	3.6	5.3	8	10.1	15.6	24	35.3	54.8	80.2	118	130	234	360

Wide range of accessories

Limit switches

- Mechanical, proximity types
- IS, FP, WP, SIL
- Aluminium, SS, Resin enclosures

Air filter regulator (SS, Aluminium)

Solenoid valves

- 3/2 way, 4/2 way, 5/2 way
- Aluminium, Brass, SS body
- IS, FP, WP, SIL
- Auto reset, manual reset

Cable glands

Junction box

Manual override

Volume tank with accessories

Fire safe enclosure

Fire resistant jacket

Positioner

Position transmitter

Volume booster

Pilot operated valve

Quick exhaust valve

Flow control valve

Air lock relay

Non return valve

Pressure relief valve

Fusible plug

Bug screens, silencers

Local control panel

Tubing and fittings



Valve automation for quarter turn valves

Microfinish has proven expertise in valve automation technology and capabilities to offer complete systems. Our wide range of valves, actuators, controls, and accessories enables us to be a single source for integrated automated valve systems that include:

- Pneumatic, electric, hydraulic, and electro hydraulic actuated valves and systems
- Gas, and gas over oil automation systems
- On-off remotely operated valves with automation systems
- Emergency shutdown(ESD) valves with automation systems
- Vertical actuators for special applications
- Fire proof enclosures for actuators and accessories
- Compliance to ISO 5211 and Namur specifications

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As improvement is a continuous process with us, the data given is subject to change.