

“Fluid Under Control”

TORK[®]
CONTROL VALVES

high quality

control valves &
automation systems



PNEUMATIC ACTUATOR

Double Acting & Spring Return

for ball valves
butterfly valves
plug valves
dampers



Loyd



TS EN264 UKSEPRO

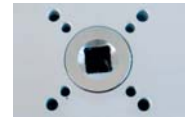
GENERAL FEATURES

- TORK Pneumatic Actuators manufactured since 1986
- New generation = RPA series
- For quarter turn valve automation (8Nm – 2900Nm)
- One compact design for both Double and Single Acting models
- Dual piston rack and pinion design
- According to international standards (NAMUR, ISO5211)
- Body : Extruded Aluminium
- Caps: Die cast Aluminium
- Two external travel stop adjustment
- Standard position indicator
- High cycle life
- High performance

T-RPA SERIES : SPARE PARTS LIST



Top mounting connection is in accordance with VDI/VDE namur standard and limit switch box, positioners could easily be mounted.



Bottom mounting connection is in accordance with ISO 5211 and DIN 3337 standard for direct mounting with valve



Side Connection for namur solenoid valve according VDI/VDE 3845 namur standard

PART NO	UNIT Q'TY	PART DESCRIPTION	STANDARD MATERIAL
1	1	SPRING CLIP (Pinion)	STEEL ALLOY
2	1	THRUST BEARING (Pinion)	POLYPHTHALAMIDE
3	1	BODY	EXTRUDED ALUMINIUM ALLOY
4	2	BEARING (Piston back)	POLYPHTHALAMIDE
5	2	PISTON	DIE CAST ALUMINIUM
6	2	"O" RING (Piston)	NITRILE (NBR70)
7	2	BEARING (Piston head)	POLYPHTHALAMIDE
8	2	CAP BOLT (End cap)	STAINLESS STEEL
9	2	RIGHT AND LEFT END CAP	DIE CAST ALUMINIUM
10	2	"O" RING (End cap)	NITRILE (NBR70)
11	1	"O" RING (Pinion top)	NITRILE (NBR70)
12	1	BEARING (Piston top)	POLYPHTHALAMIDE
13	1	OPEN.CLOSE CAM (Stop arrangement)	STEEL ALLOY
14	1	DRIVE SHAFT	STEEL ALLOY
15	1	BEARING (Pinion bottom)	POLYPHTHALAMIDE
16	1	"O" RING (Pinion bottom)	NITRILE (NBR70)
17	1	"O" RING (Stop screw)	NITRILE (NBR70)
18	2	STOP BOLT WASHER	STAINLESS STEEL
19	2	STOP NUT	STAINLESS STEEL
20	2	STOP BOLT	STAINLESS STEEL
21	min.5/max.12	SPRING (Catridge)	HIGH ALLOY SPRING STEEL
22	min.5/max.12	SPRING HOLDER	POLYPROPYLENE +GF

DOUBLE ACTING TORQUE RATING (Nm)

MODEL	Air Supply Pressure (bar)											
	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
T-RPA DA 32	2.0	3	4.0	5	6.0	7	8.0	9	10.0	11	12.0	13
T-RPA DA 40	7.5	9	10.5	12	13.5	15	16.5	18	19.5	21	22.5	24
T-RPA DA 60	14	18	22	26	30	34	38	42	46	50	54	58
T-RPA DA 80	26	38	50	62	74	86	98	110	122	134	146	158
T-RPA DA 100	73	88	103	118	133	148	163	178	193	208	223	238
T-RPA DA 120	137.5	165	192.5	220	247.5	275	302.5	330	357.5	385	412.5	440
T-RPA DA 143	240	288	336	385	433	480	529	578	626	674	722	770
T-RPA DA 160	321	385	450	510	576	642	705	765	833	897	963	1024
T-RPA DA 200	628	752	878	1000	1127	1252	1377	1500	1630	1752	1880	2005
T-RPA DA 400	1214	1454	1697	1933	2178	2420	2662	2900	3154	3378	3634	3876

SPRING RETURN TORQUE CHART (Nm)

MODEL	Spring Set	Air Supply Pressure																								Spring Torque		
		2.5 bar		3 bar		3.5 bar		4 bar		4.5 bar		5 bar		5.5 bar		6 bar		6.5 bar		7 bar		7.5 bar		8 bar				
		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	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End			
T-RPA SR 40	S05	3.3	1.7	4.8	2.0	6.3	4.7	7.8	6.2	9.3	7.7	10.8	9.2	12.3	10.7	13.8	12.2	15.3	13.7	16.8	15.2	18.3	16.7	19.8	18.2	4.2	5.8	
	S06			4.0	2.0	5.5	3.5	7.0	5.0	8.5	6.5	10.0	8.0	11.5	9.5	13.0	11.0	14.5	12.5	16.0	14.0	17.5	15.5	19.0	17.0	5.0	7.0	
	S07					4.7	2.3	6.2	3.8	7.7	5.3	9.2	6.8	10.7	8.3	12.2	9.8	13.7	11.3	15.2	12.8	16.7	14.3	18.2	15.8	5.8	8.2	
	S08							5.3	2.7	6.8	4.2	8.3	5.7	9.8	7.2	11.3	8.7	12.8	10.2	14.3	11.7	15.8	13.2	17.3	14.7	6.7	9.3	
	S09										6.0	3.0	7.5	4.5	9.0	6.0	10.5	7.5	12.0	9.0	13.5	10.5	15.0	12.0	16.5	13.5	7.5	10.5
	S10												6.7	3.3	8.2	4.8	9.7	6.3	11.2	7.8	12.7	9.3	14.2	10.8	15.7	12.3	8.3	11.7
	S11														7.3	3.7	8.8	5.2	10.3	6.7	11.8	8.2	13.3	9.7	14.8	11.2	9.2	12.8
	S12																8.0	4.0	9.5	5.5	11.0	7.0	12.5	8.5	14.0	10.0	10.0	14.0
	T-RPA SR 60	S05	8.6	1.9	12.6	5.9	16.6	9.9	20.6	13.9	24.6	17.9	28.6	21.9	32.6	25.9	36.6	29.9	40.6	33.9	44.6	37.9	48.6	41.9	52.6	45.9	5.4	12.1
		S06			11.5	3.5	15.5	7.5	19.5	11.5	23.5	15.5	27.5	19.5	31.5	23.5	35.5	27.5	39.5	31.5	43.5	35.5	47.5	39.5	51.5	43.5	6.5	14.5
		S07					14.4	5.1	18.4	9.1	22.4	13.1	26.4	17.1	30.4	21.1	34.4	25.1	38.4	29.1	42.4	33.1	46.4	37.1	50.4	41.1	7.6	16.9
		S08							17.3	6.7	21.3	10.7	25.3	14.7	29.3	18.7	33.3	22.7	37.3	26.7	41.3	30.7	45.3	34.7	49.3	38.7	8.7	19.3
S09										20.3	8.3	24.3	13.3	28.3	16.3	32.3	20.3	36.3	24.3	40.3	28.3	44.3	32.3	48.3	36.3	9.8	21.8	
S10												23.2	9.8	27.2	13.8	31.2	17.8	35.2	21.8	39.2	25.8	43.2	29.8	47.2	33.8	10.8	24.2	
S11														26.1	11.4	30.1	15.4	34.1	19.4	38.1	23.4	42.1	27.4	46.1	31.4	11.9	26.6	
S12																	29.0	13.0	33.0	17.0	37.0	21.0	41.0	25.0	45.0	29.0	13.0	29.0
T-RPA SR 80		S05	7.7	-8.2	19.7	3.8	31.7	15.8	43.7	27.8	55.7	39.8	67.7	51.8	79.7	63.8	91.7	75.8	103.7	87.8	115.7	99.8	127.7	111.8	139.7	123.8	18.3	34.2
		S06			16.0	-3.0	28.0	9.0	40.0	21.0	52.0	33.0	64.0	45.0	76.0	57.0	88.0	69.0	100.0	81.0	112.0	93.0	124.0	105.0	136.0	117.0	22.0	41.0
		S07					24.3	2.2	36.3	14.2	48.3	26.2	60.3	38.2	72.3	50.2	84.3	62.2	96.3	74.2	108.3	86.2	120.3	98.2	132.3	110.2	25.7	47.8
		S08							32.7	7.3	44.7	19.3	56.7	31.3	68.7	43.3	80.7	55.3	92.7	67.3	104.7	79.3	116.7	91.3	128.7	103.3	29.3	54.7
	S09										41.0	12.5	53.0	24.5	65.0	36.5	77.0	48.5	89.0	60.5	101.0	72.5	113.0	84.5	125.0	96.5	33.0	61.5
	S10												49.3	17.7	61.3	29.7	73.3	41.7	85.3	53.7	97.3	65.7	109.3	77.7	121.3	89.7	36.7	68.3
	S11														57.7	22.8	69.7	34.8	81.7	46.8	93.7	58.8	105.7	70.8	117.7	82.8	40.3	75.2
	S12																66.0	28.0	78.0	40.0	90.0	52.0	102.0	64.0	114.0	76.0	44.0	82.0
	T-RPA SR 100	S05	44.7	20.9	59.7	35.9	74.7	50.9	89.7	65.9	104.7	80.9	119.7	95.9	134.7	110.9	149.7	125.9	164.7	140.9	179.7	155.9	194.7	170.9	209.7	185.9	28.3	52.1
		S06			54.0	25.5	69.0	40.5	84.0	55.5	99.0	70.5	114.0	85.5	129.0	100.5	144.0	115.5	159.0	130.5	174.0	145.5	189.0	160.5	204.0	175.5	34.0	62.5
		S07					63.3	30.1	78.3	45.1	93.3	60.1	108.3	75.1	123.3	90.1	138.3	105.1	153.3	120.1	168.3	135.1	183.3	150.1	198.3	165.1	39.7	72.9
		S08							72.7	34.7	87.7	49.7	102.7	64.7	117.7	79.7	132.7	94.7	147.7	109.7	162.7	124.7	177.7	139.7	192.7	154.7	45.3	83.3
S09											82.0	39.3	97.0	54.3	112.0	69.3	127.0	84.3	142.0	99.3	157.0	114.3	172.0	129.3	187.0	144.3	51.0	93.8
S10													91.3	43.8	106.3	58.8	121.3	73.8	136.3	88.8	151.3	103.8	166.3	118.8	181.3	133.8	56.7	104.2
S11															100.7	48.4	115.7	63.4	130.7	78.4	145.7	93.4	160.7	108.4	175.7	123.4	62.3	114.6
S12																	110.0	53.0	125.0	68.0	140.0	83.0	155.0	98.0	170.0	113.0	68.0	125.0
T-RPA SR 120		S05	77.1	41.7	104.6	69.2	132.1	96.7	159.6	124.2	187.1	151.7	214.6	179.2	242.1	206.7	269.6	234.2	297.1	261.7	324.6	289.2	352.1	316.7	379.6	344.2	60.4	95.8
		S06			92.5	50.0	120.0	77.5	147.5	105.0	175.0	132.5	202.5	160.0	230.0	187.5	257.5	215.0	285.0	242.5	312.5	270.0	340.0	297.5	367.5	325.0	72.5	115.0
		S07					107.9	58.3	135.4	85.8	162.9	113.3	190.4	140.8	217.9	168.3	245.4	195.8	272.9	223.3	300.4	250.8	327.9	278.3	355.4	305.8	84.6	134.2
		S08							123.3	66.7	150.8	94.2	178.3	121.7	205.8	149.2	233.3	176.7	260.8	204.2	288.3	231.7	315.8	259.2	343.3	286.7	96.7	153.3
	S09								138.8	75.0	166.3	102.5	193.8	130.0	221.3	157.5	248.8	185.0	276.3	212.5	303.8	240.0	331.3	267.5	358.8	293.2	108.8	172.5
	S10										154.2	83.3	181.7	110.8	209.2	138.3	236.7	165.8	264.2	193.3	291.7	220.8	319.2	248.3	339.2	273.2	120.8	191.7
	S11												169.6	91.7	197.1	119.2	224.6	146.7	252.1	174.2	279.6	201.7	307.1	239.2	329.2	263.2	132.9	210.8
	S12																185.0	100.0	212.5	127.5	240.0	155.0	267.5	182.5	295.0	210.0	145.0	230.0
	T-RPA SR 143	S02					169.5	37.3	217.5	85.3	264.5	132.3	313.5	181.3	632.5	230.3	410.5	278.3	458.5	326.3	506.5	374.3	554.5	422.3	215.5	347.7		
	T-RPA SR 160	S02					226.7	50.7	292.7	116.7	358.7	182.7	421.7	245.7	481.7	305.7	549.7	373.7	613.7	437.7	679.7	503.7	740.7	564.7	283.3	459.3		
	T-RPA SR 200	S02					336.7	107.8	473.7	234.8	598.7	359.8	723.7	484.8	846.7	607.8	976.7	737.8	1098.7	859.8	1226.7	987.8	1361.7	1112.8	663.3	892.2		
	T-RPA SR 400	S02					634.7	203.2	892.9	442.5	1125.5	678.2	1364.1	913.8	1629.9	1150.0	1841.0	1390.7	2071.0	1620.7	2312.3	1862.0	2566.8	2097.6	1250.3	1681.7		

Note: The yellow pointed values above are the output torque of actuator. Please pay attention to these values while choosing valve for actuator.

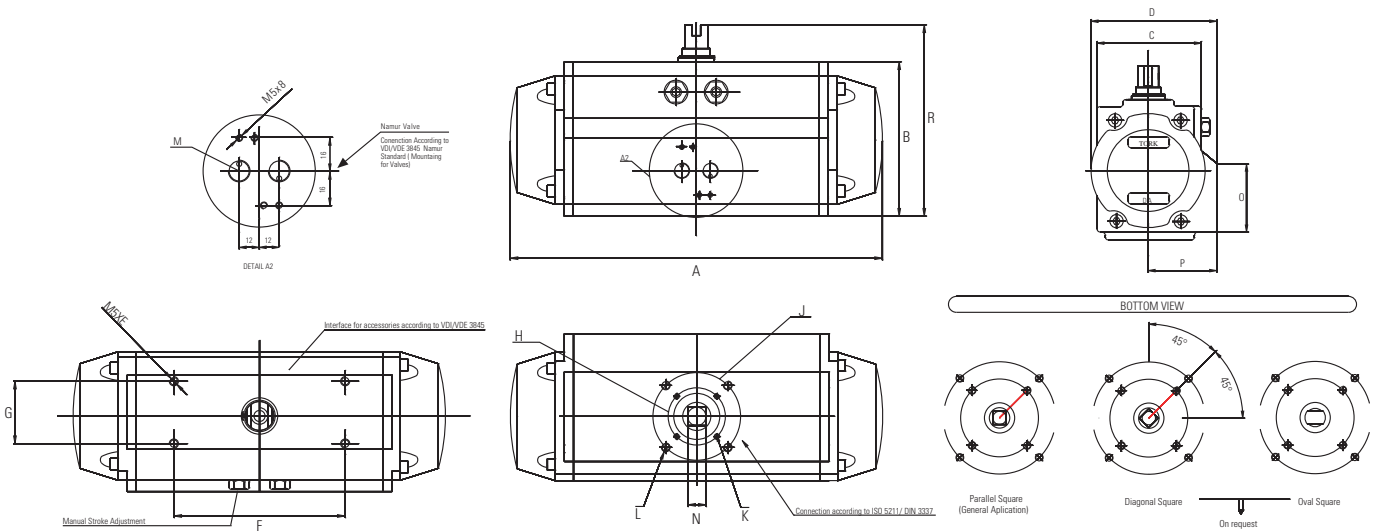
*For Actuator 0° : Start : Closed position actuator, 90° : End : Open position actuator

*For Spring 0° : Spring mounting position, 90° : Spring pressed by pistons

*1 bar:14.5 PSI 1Nm:8,85 LB-in 1Kg:9,81Nm

ACTUATOR MODELS		Air Volume Opening (L)	Air Volume Closing (L)	Opening Time (Sec.)	Closing Time (Sec.)	Approximate Weight (kg)
T-RPA DA/SR 40	DA	0.09	0.16	0.22	0.26	0.85
	SR			0.26	0.34	1.02
T-RPA DA/SR 60	DA	0.17	0.28	0.27	0.33	1.70
	SR			0.33	0.38	1.80
T-RPA DA/SR 80	DA	0.50	0.79	0.39	0.48	3.80
	SR</					

DIMENSION OF ACTUATORS



DIMENSION (mm)																		
ACTUATOR MODELS	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	ISO Flange for H	ISO Flange for J
T-RPA DA/SR 40	137.2	70.0	52.0	70.6	8.0	80.0	30.0	36/42	-	M5	-	1/8"	9	45.0	39.7	90.0	F03/F04	-
T-RPA DA/SR 60	172.6	85.2	62.0	82.7	8.0	80.0	30.0	42/50	70.0	M5/M6	M8	1/8"	9/11	47.0	47.0	105.2	F04/F05	F07
T-RPA DA/SR 80	242.0	116.9	91.8	109.2	8.0	80.0	30.0	50	70.0	M6	M8	1/8"	14	54.8	58.3	136.9	F05	F07
T-RPA DA/SR 100	282.0	130.0	95.0	121.0	8.0	80.0	30.0	70	102.0	M8	M10	1/4"	17	61.0	65.0	160.0	F07	F10
T-RPA DA/SR 120	360.0	160.0	116.2	150.0	8.0	80.0	30.0	70	102.0	M8	M10	1/4"	17/22	82.0	87.2	190.0	F07	F10
T-RPA DA 143	342	190	182	182	8.0	80.0	30.0	102	140	M10	M16	1/4"	22/27	91	91	210	F10	F14
T-RPA DA 160	374	216	202	202	8.0	80.0	30.0	102	140	M10	M16	1/4"	22/27	101	101	236	F10	F14
T-RPA DA 200	458	268	242	242	8.0	80.0	30.0	-	140/165	-	M20	1/4"	36	121	121	288	-	F14/F16
T-RPA DA 400	458	595	245	245	8.0	80.0	30.0	-	140/165	-	M20	1/4"	36	123	123	615	-	F14/F16
T-RPA SR 143	514	190	182	182	8.0	80.0	30.0	102	140	M10	M16	1/4"	22/27	91	91	210	F10	F14
T-RPA SR 160	558	216	202	202	8.0	80.0	30.0	102	140	M10	M16	1/4"	22/27	101	101	236	F10	F14
T-RPA SR 200	680	268	242	242	8.0	80.0	30.0	140	140/165	M16	M20	1/4"	36	121	121	288	F14	F14/F16
T-RPA SR 400	680	595	245	245	8.0	80.0	30.0	140	140/165	M16	M20	1/4"	36	123	123	615	F14	F14/F16

ACCESSORIES



T-LSG

Limit Switch Box
IP67 and Exproof Types



T-EPR

input: 4-20mA

Electro - Pneumatic Positioners
Pneumatic - Pneumatic Positioners



T-MOR

Manual Override
Torque Value: 100 - 7500 Nm



T-NM

Namur Solenoid Valves
IP65 and Exproof Types

APPLICATION

