

rotork®

Fluid Systems

Introducing the GT Range single- and double-acting pneumatic piston actuators.

Design

Single- and double-acting pneumatic piston actuators (rack and pinion).

Action

Standard 90°, 120°, 180° and 240° upon application.
Customised angles available as well as three position versions.

Stroke adjustment

90° Position from -5° to +5°

Single and double end stop options

Torques

3 to 15,300 Nm

Air Pressure

2 to 10 bar

Supply

Filtered air PNEURO/ISO class 4,
other fluids on request

Materials

Body

Anodized aluminium ASTM 6063, UNI 10681,
additional versions on request

End caps

Aluminium UNI EN1706,
EN AC-46100, epoxy coated

Pistons

Aluminium UNI EN1706

Pinion

Nickel plated steel AISI SAE 11L37 -
ASTM B 656, stainless steel optional

Bearing pad guide

Technopolymer - Delrin Poliarilammide -
IXEF

Seals

NBR, alternative Viton or Silicone

Temperature range

Standard -50 to +70°C (NBR O-Ring - Guide Delrin)

Special versions -15 to +160°C (Viton O-Ring - Guide IXEF)
or -30 to +200°C (Silicone O-Ring - Guide PTFE)

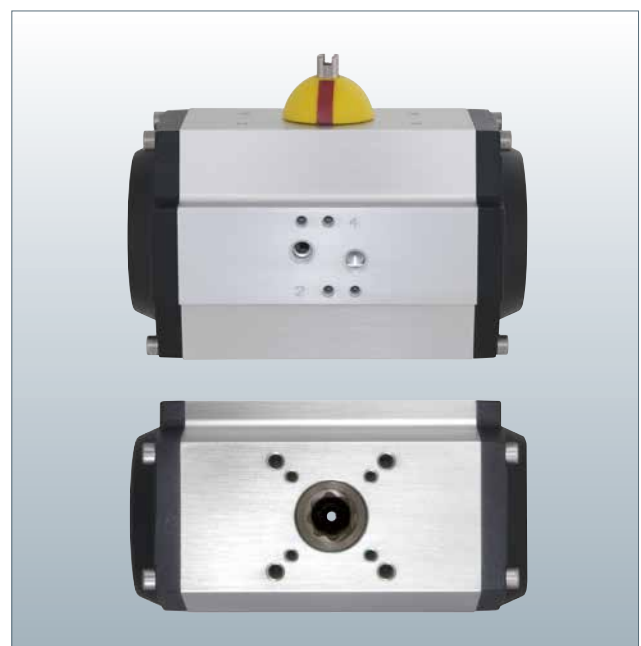
Mechanical interfaces

ISO 5211, NAMUR VDI/DE 3845, EN 15714-3-4



GT Range

Rack and Pinion Actuators



Redefining Flow Control

Sizing Guide for Double-Acting Actuators

Size	Pneumatic Torque (Nm)													
	2 bar	2.5 bar	3 bar	3.5 bar	4 bar	4.5 bar	5 bar	5.6 bar	6 bar	6.5 bar	7 bar	8 bar	9 bar	10 bar
32	3.1	3.8	4.6	5.4	6.1	6.9	7.6	8.4	9.2	9.95	10.7	12.2		
43, 44	4.7	5.8	7.0	8.2	9.4	10.5	11.7	13.1	14.0	15.2	16.4	18.7	21.0	23.4
52	7.8	9.7	11.7	13.6	15.6	17.5	19.5	21.8	23.4	25.3	27.3	31.2	35.1	39.0
63	11.6	14.5	17.4	20.3	23.2	26.1	29.0	32.5	34.8	37.7	40.6	46.4	52.2	58.0
75	20.0	25.0	30.0	35.0	40.0	45.0	50.0	56.0	60.0	65.0	70.0	80.0	90.0	100.0
83	29.0	36.2	43.5	50.7	58.0	65.2	72.5	81.2	87.0	94.2	101.5	116.0	130.5	145.0
92	40.0	50.0	60.0	70.0	80.0	90.0	100.0	112.0	120.0	130.0	140.0	160.0	180.0	200.0
110	58.0	72.5	87.0	101.5	116.0	130.5	145.0	162.4	174.0	188.5	203.0	232.0	261.0	290.0
118	86.0	107.5	129.0	150.5	172.0	193.5	215.0	240.8	258.0	279.5	301.0	344.0	387.0	430.0
127	116.0	145.0	174.0	203.0	232.0	261.0	290.0	324.8	348.0	377.0	406.0	464.0	522.0	580.0
143	186.0	232.5	279.0	325.5	372.0	418.5	465.0	520.8	558.0	604.5	651.0	744.0	837.0	930.0
160	230.0	287.5	345.0	402.5	460.0	517.5	575.0	644.0	690.0	747.5	805.0	920.0	1035	1150
190	400.0	500.0	600.0	700.0	800.0	900.0	1000	1120	1200	1300	1400	1600	1800	2000
210	480.0	600.0	720.0	840.0	959.9	1080	1200	1344	1440	1560	1680	1920	2160	2400
254	920.0	1150	1380	1610	1840	2070	2300	2576	2760	2990	3220	3680	4140	4600
255	1160	1450	1740	2030	2320	2610	2900	3248	3480	3770	4060	4640	5220	5800

Sizing Guide for Single-Acting Actuators

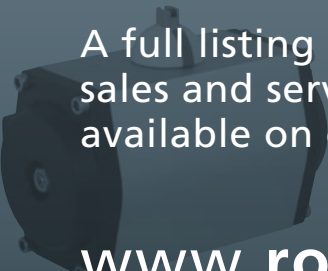
Size	Springs	Spring Torque (Nm)		Pneumatic Torque (Nm)																						
				2 bar		3 bar		4 bar		5 bar		5.6 bar		6 bar		7 bar		8 bar		9 bar		10 bar				
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°			
43, 44	2	1.68	2.53	2.97	2.09	5.31	4.43	7.64	6.77	9.98	9.11	11.39	10.51	12.32	11.45	14.66	13.79	17.00	16.12	19.34	18.46	21.68	20.80			
	4	3.36	5.07			3.59	1.85	5.93	4.18	8.27	6.52	9.68	7.93	10.61	8.86	12.95	11.20	15.29	13.54	17.63	15.88	19.97	18.22			
	6	5.03	7.60					4.22	1.60	6.56	3.94	7.96	5.34	8.90	6.28	11.24	8.61	13.58	10.95	15.92	13.29	18.26	15.63			
52	8	6.71	10.14							4.85	1.35	6.25	2.75	7.19	3.69	9.53	6.03	11.87	8.37	14.21	10.71	16.54	13.05			
	2	1.91	3.19	5.84	4.54	9.74	8.44	13.64	12.34	17.54	16.23	19.87	18.57	21.43	20.13	25.33	24.03	29.23	27.92	33.12	31.82	37.02	35.72			
	4	3.82	6.37	3.90	1.29	7.79	5.19	11.69	9.09	15.59	12.98	17.92	15.32	19.48	16.88	23.38	20.78	28.28	24.67	31.17	28.57	35.07	32.47			
	6	5.73	9.56			5.84	1.94	9.74	5.83	13.64	9.73	15.98	12.07	17.53	13.63	21.43	17.52	25.33	21.42	29.23	25.32	33.12	29.22			
	8	7.64	12.75					7.79	2.58					9.74	3.23	12.08	5.57	13.64	7.13	17.53	11.02	21.43	14.92	25.33	18.82	29.22
63	10	9.55	15.94							9.74	3.23	12.08	5.57	13.64	7.13	17.53	11.02	21.43	14.92	25.33	18.82	29.22	22.71			
	12	11.46	19.12									10.13	2.32	11.69	3.88	15.59	7.77	19.48	11.67	23.38	15.57	27.28	19.46			
	2	3.01	4.42	8.54	7.09	14.34	12.89	20.14	18.69	25.94	24.50	29.42	27.98	31.74	30.30	37.54	36.10	43.34	41.90	49.14	47.70	54.94	53.50			
	4	6.01	8.84	5.47	2.58	11.27	8.38	17.07	14.18	22.87	19.99	26.35	23.47	28.67	25.79	34.47	31.59	40.27	37.39	46.08	43.19	51.88	48.99			
	6	9.02	13.26			8.20	3.87	14.00	9.68	19.81	15.48	23.29	18.96	25.61	21.28	31.41	27.08	37.21	32.88	43.01	38.68	48.81	44.48			
75	8	12.03	17.68					10.94	5.17	16.74	10.97	20.22	14.45	22.54	16.77	28.34	22.57	34.14	28.37	39.94	34.17	45.74	39.97			
	10	15.03	22.11							13.67	6.46	17.15	9.94	19.47	12.26	25.27	18.06	31.08	23.86	36.88	29.66	42.68	35.46			
	12	18.04	26.53							14.09	5.43	16.41	7.75	22.21	13.55	28.01	19.35	33.81	25.15	39.61	30.95					
	2	5.24	7.96	14.65	11.87	24.65	21.87	34.65	31.87	44.65	41.87	50.65	47.87	54.64	51.87	64.64	61.86	74.64	71.86	84.64	81.86	94.64	91.86			
	4	10.48	15.93	9.31	3.75	19.31	13.75	29.31	23.75	39.30	33.75	45.30	39.74	49.30	43.74	59.30	53.74	69.30	63.74	79.30	73.74	89.29	83.74			
83	6	15.71	23.89			13.96	5.63	23.96	15.63	33.96	25.62	39.96	31.62	43.96	35.62	53.96	45.62	63.95	55.62	73.95	65.62	83.95	75.61			
	8	20.95	31.85					18.62	7.50	28.62	17.50	34.62	23.50	38.62	27.50	48.61	37.50	58.61	47.50	68.61	57.49	78.61	67.49			
	10	26.19	39.81							23.27	9.38	29.27	15.38	33.27	19.38	43.27	29.38	53.27	39.37	63.27	49.37	73.26	59.37			
	12	31.43	47.78							17.93	1.26	23.93	7.26	27.93	11.26	37.93	21.25	47.93	31.25	57.92	41.25	67.92	51.25			
	2	7.23	11.19	21.62	17.58	36.12	32.07	50.62	46.57	65.11	61.07	73.81	69.77	79.61	75.56	94.11	90.06	108.6	104.6	123.1	119.1	137.6	133.6			
92	4	14.46	22.39	14.25	6.16	28.75	20.65	43.24	35.15	57.74	49.65	66.44	58.35	72.24	64.15	86.73	78.64	101.2	93.14	115.7	107.6	130.2	122.1			
	6	21.68	33.58			21.37	9.24	35.87	23.73	50.37	38.23	59.07	46.93	64.86	52.73	79.36	67.23	93.86	81.72	108.4	104.7	122.9	110.7			
	8	28.91	44.78					28.50	12.31	42.99	26.81	51.69	35.51	57.49	41.31	71.99	55.81	86.49	70.30	101.0	84.80	115.5	99.30			
	10	36.14	55.97							35.62	15.39	44.32	24.09	50.12	29.89	64.62	44.39	79.11	58.89	93.61	73.36	108.1	87.88			
	12	43.37	67.17							28.25	3.98	36.95	12.67	42.75	18.47	57.24	32.97	71.74	47.47	86.24	61.96	100.7	76.46			
2	9.10	14.34	30.72	25.37	50.73	45.38	70.73	65.38	90.73	85.38	102.7	97.39	110.7	105.4	130.7	125.4	150.7	145.4	170.7	165.4	190.7	185.4				
92	4	18.20	28.69	21.44	10.74	41.44	30.75	61.45	50.75	81.45	70.75	93.45	82.75	101.5	90.76	121.5	110.8	141.5	130.8	161.5	150.8	181.5	170.8			
	6	27.31	43.03			32.16	16.12			72.16	56.12	84.17	68.12	92.17	76.12	112.2	96.13	132.2	116.1	152.2	136.1	172.2	156.1			
	8	36.41	57.38					42.88	21.49	62.88	41.49	74.88	53.49	82.88	61.49	102.9	81.50	122.9	101.5	142.9	121.5	162.9	141.5			
	10	45.51	71.72					33.59	6.86	53.60	26.86	65.60	38.86	73.60	46.86	93.60	66.86	113.6	86.87	133.6	106.9	153.6	126.9			
12	54.61	86.07							44.31	12.23	56.31	24.23	64.32	32.23	84.32	52.23	104.3	72.24	124.3	92.24	144.3	112.2				

GT Range

Rack and Pinion Actuators

Sizing Guide for Single-Acting Actuators *continued*

Size	Springs	Spring Torque (Nm)		Pneumatic Torque (Nm)																			
				2 bar		3 bar		4 bar		5 bar		5.6 bar		6 bar		7 bar		8 bar		9 bar		10 bar	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
110	2	15.81	23.71	41.9	33.8	70.9	62.8	99.9	91.8	128.9	120.8	146.3	138.2	157.9	149.8	186.9	178.8	215.9	207.8	244.9	236.8	273.9	265.8
	4	31.61	47.42	25.8	9.6	54.8	38.6	83.8	67.6	112.8	96.6	130.2	114.1	141.8	125.7	170.8	154.7	199.8	183.7	228.8	212.7	257.8	241.7
	6	47.42	71.13			38.6	14.5	67.6	43.5	96.6	72.5	114.1	89.9	125.7	101.5	154.7	130.5	183.7	159.5	212.7	188.5	241.7	217.5
	8	63.22	94.84					51.5	19.3	80.5	48.3	97.9	65.7	109.5	77.3	138.5	106.3	167.5	135.3	196.5	164.3	225.5	193.3
	10	79.03	118.5							64.4	24.1	81.8	41.5	93.4	53.1	122.4	82.1	151.4	111.1	180.4	140.1	209.4	169.1
	12	94.84	142.3										65.7	17.3	77.3	28.9	106.3	57.9	135.3	86.9	164.3	115.9	193.3
118	2	21.25	36.46	64.3	48.8	107.3	91.8	150.3	134.8	193.3	177.8	219.1	203.6	236.3	220.8	279.3	263.8	322.3	306.8	365.3	349.8	408.3	392.8
	4	42.50	72.92	42.7	11.6	85.7	54.6	128.7	97.6	171.7	140.6	197.5	166.4	214.7	183.6	257.7	226.6	300.7	269.6	343.7	312.6	386.7	355.6
	6	63.75	109.4			64.0	17.4	107.0	60.4	150.0	103.4	175.8	129.2	193.0	146.4	236.0	189.4	279.0	232.4	322.0	275.4	365.0	318.4
	8	84.99	145.8					85.3	23.3	128.3	66.3	154.1	92.1	171.3	109.3	214.3	152.3	257.3	195.3	300.3	238.3	343.3	281.3
	10	106.2	182.3							106.6	29.1	132.4	54.9	149.6	72.1	192.6	115.1	235.6	158.1	278.6	201.1	321.6	244.1
	12	127.5	218.7										110.8	17.7	128.0	34.9	171.0	77.9	214.0	120.9	257.0	163.9	300.0
127	2	29.94	48.78	85.5	66.2	143.5	124.2	201.5	182.2	259.5	240.2	294.2	275.0	317.4	298.2	375.4	356.2	433.4	414.2	491.4	472.2	549.4	530.2
	4	59.88	97.57	54.9	16.5	112.9	74.5	170.9	132.5	228.9	190.5	263.7	225.3	286.9	248.5	344.9	306.5	402.9	364.5	460.9	422.5	518.9	480.5
	6	89.82	146.3			82.4	24.7	140.4	82.7	198.4	140.7	233.2	175.5	256.4	198.7	314.4	256.7	372.4	314.7	430.4	372.7	488.4	430.7
	8	119.8	195.1					109.8	33.0	167.8	91.0	202.6	125.8	225.8	149.0	283.8	206.9	341.8	264.9	399.8	322.9	457.8	380.9
	10	149.7	243.9							137.3	41.2	172.1	76.0	195.3	99.2	253.3	157.2	311.3	215.2	369.3	273.2	427.3	331.2
	12	179.6	292.7										141.6	26.2	164.8	49.4	222.8	107.4	280.8	165.4	338.8	223.4	396.8
143	2	48.1	68.9	137.0	115.7	230.0	208.7	323.0	301.7	416.0	394.7	471.8	450.5	509.0	487.7	602.0	580.7	695.0	673.7	788.0	766.7	881.0	859.8
	4	96.1	137.8	87.9	45.5	181.0	138.5	274.0	231.5	367.0	324.5	422.8	380.3	460.0	417.5	553.0	510.5	646.0	603.5	739.0	696.5	832.0	789.5
	6	144.2	206.7			131.9	68.2	224.9	161.2	317.9	254.2	373.7	310.0	410.9	347.2	503.9	440.2	596.9	533.2	689.9	626.2	782.9	719.2
	8	192.3	275.6					175.9	90.9	268.9	183.9	324.7	239.7	361.9	276.9	454.9	369.9	547.9	462.9	640.9	555.9	733.9	648.9
	10	240.3	344.4					126.9	20.7	219.9	113.7	275.7	169.5	312.9	206.7	405.9	299.7	498.9	392.7	591.9	485.7	684.9	578.7
	12	288.4	413.3							170.8	43.4	226.6	99.2	263.8	136.4	356.8	229.4	449.8	322.4	542.9	415.4	635.9	508.4
160	2	55.9	83.0	172.4	144.5	287.4	259.5	402.5	374.5	517.5	489.5	586.5	558.5	632.5	604.5	747.5	719.5	862.5	834.5	977.5	949.5	1092	1065
	4	111.8	166.0	114.9	59.0	229.9	174.0	344.9	289.0	459.9	404.0	528.9	473.0	574.9	519.0	689.9	634.1	804.9	749.1	919.9	864.1	1035	979.1
	6	167.6	249.0			172.3	88.6	287.3	203.6	402.3	318.6	471.3	387.6	517.3	433.6	632.3	548.6	747.3	663.6	862.3	778.6	977.3	893.6
	8	223.5	332.0			229.8	118.1	344.8	233.1	413.8	302.1	413.8	302.1	459.8	348.1	574.8	463.1	689.8	578.1	804.8	693.1	919.8	808.1
	10	279.4	415.0					172.2	32.6	287.2	147.6	356.2	216.6	402.2	262.6	517.2	377.6	632.2	492.6	747.2	607.6	862.2	722.6
	12	335.3	498.0							229.7	62.1	298.7	131.1	344.7	177.1	459.7	292.1	574.7	407.1	689.7	522.1	804.7	637.1
190	2	106.2	133.9	290.6	262.1	490.6	462.1	690.6	662.1	890.6	862.1	1011	982.1	1091	1062	1291	1262	1491	1462	1691	1662	1891	1862
	4	212.5	267.8	181.2	124.2	381.2	324.2	581.2	524.2	781.2	724.2	901.2	844.2	981.2	924.2	1181	1124	1381	1324	1581	1524	1781	1724
	6	318.7	401.7			271.8	186.3	471.8	386.3	671.8	586.3	791.8	706.3	871.8	786.3	1072	986.3	1272	1186	1472	1386	1672	1586
	8	424.9	535.6			162.4	48.4	362.4	248.4	562.4	448.4	682.4	568.4	762.4	648.4	962.4	848.4	1162	1048	1362	1248	1562	1448
	10	531.2	669.5					253.0	110.5	453.0	310.5	573.0	430.5	653.0	510.5	853.0	710.5	1053	910.5	1253	1111	1453	1311
	12	637.4	803.4							343.5	172.6	463.6	292.6	543.6	372.6	743.6	572.6	943.6	772.6	1144	972.6	1344	1173
210	2	114.2	160.7	362.4	314.5	602.3	554.5	842.3	794.5	1082	1034	1226	1178	1322	1274	1562	1514	1802	1754	2042	1994	2282	2234
	4	228.4	321.3	244.7	149.0	484.7	389.0	724.7	629.0	964.7	868.9	1109	1016	1205	1109	1445	1349	1685	1589	1925	1829	2165	2069
	6	342.6	482.0			367.1	223.5	607.1	463.5	847.1	703.5	991.1	847.4	1097	943.4	1327	1183	1567	1423	1807	1663	2047	1903
	8	456.8	642.7			249.5	58.0	489.5	298.0	729.4	538.0	873.4	682.0	969.4	777.9	1209	1018	1449	1258	1689	1498	1929	1738
	10	571.0	803.4					371.8	132.5	611.8	372.5	755.8	516.5	851.8	612.5	1092	852.4	1332	1092	1572	1332	1812	1572
	12	685.2	964.0							494.2	207.0	638.2	351.0	734.2	447.0	974.2	686.9	1214	926.9	1454	1167	1694	1407
254	2	238.1	321.3	674.8	589.1	1135	1049	1595	1509	2055	1969	2331	2245	2515	2429	2975	2889	3435	3349	3895	3809	4355	4269
	4	476.3	642.7	429.5	258.1	889.6	718.2	1350	1178	1810	1638	2086	1914	2270	2098	2730	2558	3190	3018	3650	3478	4110	3938
	6	714.4	964.0			644.3	387.2	1104	847.2	1564	1307	1840	1583	2024	1767	2484	2227	2945	2687	3405	3147	3865	3607
	8	952.5	1285					859.1	516.2	1319	976	1595	1252	1779	1436	2239	1896	2699	2356	3159	2816	3619	3276
	10	1191	1607					613.8	185.2	1074	645	1350	921.0	1534	1105	1994	1565	2454	2025	2914	2485	3374	2945
	12	1429	1928							829.0	314	1105	590.0	1289	774.0	1749	1234	2209	1694	2669	2154	3129	2614
255	2	272.2	406.1	880	742	1460	1322	2040	1902	2620	2482	2968	2830	3200	3062	3780	3642	4360	4222	4940	4802	5520	5382
	4	544.4	812.2	599	323	1179	903	1759	1484	2339	2064	2687	2412	2919	2644	3499	3224	4079	3804	4659	4384	5239	4964
	6	816.6	1218			899	485	1479	1065	2059	1645	2407	1993	2639	2225	3219	2805	3799	3385	4379	3965	4959	4545
	8	1089	1624					1199	647	1779	1227	2127	1575	2359	1807	2939	2387	3519	2967	4099	3547	4679	4127
	10	1361	2031					918	229	1498	809	1846	1157	2078	1389	2658	1969	3238	2549	3818	3129	4398	3709
	12	1633	2437							1218	390	1566	738	1798	970	2378	1550	2958	2130	3538	2710	4118	3290



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Corporate Headquarters

Rotork plc

tel +44 (0)1225 733200

fax +44 (0)1225 333467

email mail@rotork.com

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