

# RCI 400 Series Actuators



The Remote Control RCI 400 Series offers a lower cost alternative to our highly successful scotch yoke design. The addition of this product broadens Remote Control's ability to satisfy all rotary, pneumatic actuation and fills a positive position within our family of actuators. The rack and pinion design provides constant torque in the double acting version, as required in some valve types, and a linear characteristic in the spring return version. The 400 series Actuators have adjustable travel stops in both directions  $\pm 5$  degrees. The use of high quality materials, high standards of manufacturing and attention to detail, make this actuator an excellent choice for most actuation applications.

## SPECIFICATIONS

Pressure Range (Working)	30 to 142 PSI
Temperature Range	-4° F to +175° F
Stroke	90° $\pm$ 5°
Media	Dry or lubricating air, non corrosive gas water or light hydraulic oil
Lubrication	None required, all moving parts are factory lubricated for the cycle life of the actuator
Construction	Suitable for indoor or outdoor installation
Mounting Dimensions	ISO standard

## FEATURES

- Eleven sizes
- Rack and pinion, double acting, spring return
- Large piston guides and rings minimize cylinder wear for optimum contact between rack and pinion
- Five different break and end torque combinations with adjustable preloaded spring cartridges
- NAMUR solenoid interface
- High interface position for easy installation of both air and electric connections
- Anodized cylinders, epoxy coated end caps fastened with stainless steel for corrosion resistance

## TECHNICAL DATA

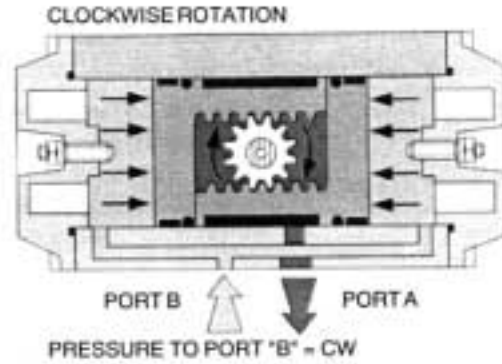
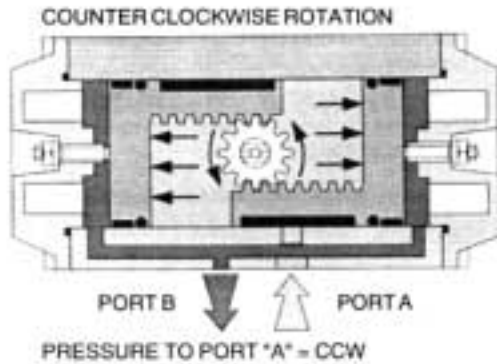
### MATERIALS OF CONSTRUCTION

DESCRIPTION	STANDARD MATERIAL	FINISH
Actuator Body	Extruded aluminum alloy	Anodized
End Cap	Die cast aluminum alloy	Black epoxy coated
Pinion	Carbon steel	ENP
Piston	Die cast aluminum alloy	Natural
Guide	Acetal resin	Natural
"O" Rings	Nitrile	----
Springs	Spring steel	Epoxy coated
Screws & Nuts	Stainless steel	Natural

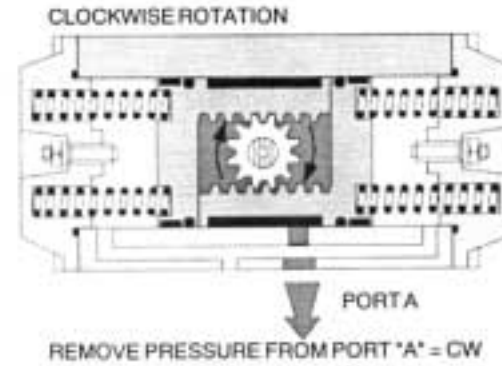
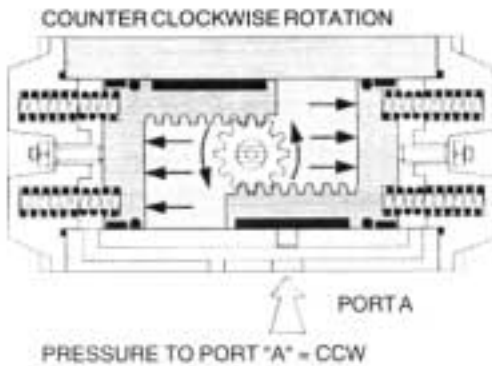


### OPERATION

#### DOUBLE ACTING



#### SINGLE ACTING



### SPECIFICATIONS

#### WEIGHTS

Model (DA)	RCI400	RCI410	RCI420	RCI430	RCI435	RCI440	RCI445	RCI450	RCI455	RCI460	RCI480
LBS.	1.05	1.87	3.57	6.44	9.22	12.92	19.0	24.65	30.1	46.75	94.82
Model (SR)	RCI400	RCI410	RCI420	RCI430	RCI435	RCI440	RCI445	RCI450	RCI455	RCI460	RCI480
LBS.	---	2.38	3.84	6.97	10.28	13.98	21.6	28.9	38.0	54.2	120.2

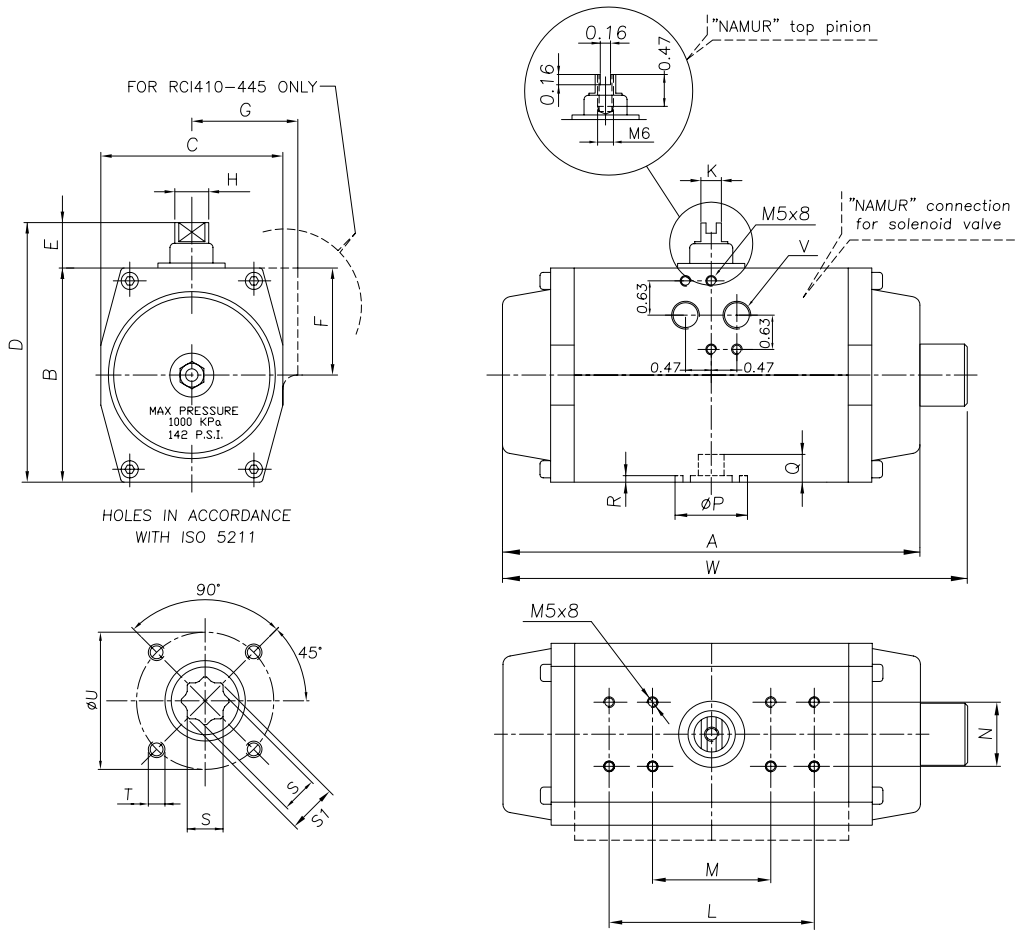
#### DISPLACEMENT/STROKE (IN<sup>3</sup>)

Model (DA/SR)	RCI400	RCI410	RCI420	RCI430	RCI435	RCI440	RCI445	RCI450	RCI455	RCI460	RCI480
Counter Clockwise	2.5	5.2	6.9	13.8	29.4	41.5	61.0	84.7	97.6	190.08	311.04
Clockwise (DA Only)	3.1	6.0	8.6	25.9	34.6	58.8	97.6	131.3	156.2	241.92	518.4

#### OPENING / CLOSING TIME (SECONDS) AT 80 PSI

Model	RCI400	RCI410	RCI420	RCI430	RCI435	RCI440	RCI445	RCI450	RCI455	RCI460	RCI480
Double Acting	0.5	1	1	1	1	1	1	1.25	1.5	1.5 - 2	3 - 4
Spring Return	---	1	1	1	1.5	1.5	1	1.5	2	2 - 3	4 - 6

## DIMENSIONS (Inches)



MODEL	A	W	B	C	D	E	F	G	H	K	L	M	N
RCI 410	5.59	6.37	2.64	2.36	3.43	0.79	1.65	1.61	0.47	0.31	---	3.15	1.18
RCI 420	6.10	6.73	3.27	2.87	4.06	0.79	1.65	1.75	0.47	0.31	---	3.15	1.18
RCI 430	8.38	9.45	3.94	3.35	4.72	0.79	1.97	1.95	0.55	0.39	---	3.15	1.18
RCI 435	9.29	10.55	4.33	3.86	5.12	0.79	1.97	2.09	0.75	0.55	---	3.15	1.18
RCI 440	10.87	11.97	4.92	4.33	5.71	0.79	1.97	2.28	0.75	0.55	---	3.15	1.18
RCI 445	12.20	13.78	5.59	5.04	6.77	1.18	2.28	2.72	1.10	0.79	5.12	3.15	1.18
RCI 450	14.41	15.49	6.10	5.51	7.28	1.18	---	---	1.10	0.79	5.12	3.15	1.18
RCI 455	15.27	17.40	6.93	6.30	8.11	1.18	---	---	1.42	1.10	5.12	3.15	1.18
RCI 460	18.42	19.69	7.87	6.89	9.06	1.18	---	---	1.42	1.10	5.12	3.15	1.18
RCI 480	21.85	24.09	9.84	8.46	11.81	1.97	---	---	1.89	1.26	5.12	---	1.18

MODEL	P	Q	R	S-S	ØS-1	T	U	V	ISO 5211
RCI 410	0.98	0.39	0.08	0.354-0.357	0.468-0.472	M5/M6	1.42/1.97	1/8" NPT	F03/F05
RCI 420	1.18/1.38	0.47	0.08	0.433-0.437	0.570-0.575	M5/M6	1.97	1/4" NPT	F05
RCI 430	1.38	0.63	0.12	0.551-0.555	0.728-0.732	M6/M8	1.97/2.76	1/4" NPT	F05/F07
RCI 435	2.17	0.79	0.14	0.669-0.674	0.884-0.888	M8	2.76	1/4" NPT	F07
RCI 440	2.17	0.79	0.14	0.669-0.674	0.884-0.888	M8/M10	2.76/4.02	1/4" NPT	F07/F10
RCI 445	2.76	0.94	0.14	0.866-0.871	1.142-1.146	M10	4.02	1/4" NPT	F10
RCI 450	2.76	0.94	0.14	0.866-0.871	1.142-1.146	M10	4.02	1/4" NPT	F10
RCI 455	3.35	1.14	0.14	1.063-1.068	1.404-1.407	M12	4.92	1/4" NPT	F12
RCI 460	3.35	1.14	0.14	1.063-1.068	1.404-1.407	M12	4.92	1/4" NPT	F12
RCI 480	3.94	1.50	0.20	1.417-1.422	1.930-1.940	M16	5.51	1/4" NPT	F14

## TORQUE OUTPUT DOUBLE ACTING ACTUATOR (SR) lbf. In

### OPERATING PRESSURE PSI

MODEL NO.	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI	120 PSI
RCI 400DA	18	24	30	36	43	48	53	60	72
RCI 410DA	52	70	89	108	126	142	158	179	210
RCI 420DA	84	113	142	172	201	226	251	285	339
RCI 430DA	178	241	303	365	428	481	535	606	713
RCI 435DA	303	409	515	621	728	819	910	1031	1213
RCI 440DA	428	578	728	877	1027	1156	1284	1455	1713
RCI 445DA	778	1050	1322	1594	1866	2099	2333	2644	3149
RCI 450DA	990.1	1336.2	1683.2	2029.3	2375.3	2672.4	2969.4	3365.5	4009.5
RCI 455DA	1405	1897	2389	2881	3373	3795	4217	4779	5692
RCI 460DA	2025	2733	3442	4150	4858	5466	6073	6883	8200
RCI 480DA	3800	5130	6460	7790	9120	10259	11399	12919	15389

## TORQUE OUTPUT SPRING RETURN ACTUATOR (SR) lbf. In

### OPERATING PRESSURE PSI

MODEL	#	30 PSI		40 PSI		60 PSI		70 PSI		80 PSI		100 PSI		SPRING STROKE	
		0	90	0	90	0	90	0	90	0	90	0	90	90	0
410 SR	2	31	21	49	39	87	77	104	95	120	111	158	148	31	21
	3	//	//	38	24	75	62	94	80	104	95	147	132	47	32
	4	//	//	28	8	65	46	83	63	99	79	137	117	62	43
	5	//	//	//	//	54	30	72	48	88	64	125	102	77	53
	6	//	//	//	//	//	//	61	32	77	48	115	85	94	64
420SR	2	50	34	79	63	138	122	167	151	193	176	251	235	50	34
	3	//	//	62	38	121	97	150	126	176	151	234	210	75	51
	4	//	//	45	13	104	72	133	101	159	127	217	185	100	68
	5	//	//	//	//	87	47	116	76	142	102	201	160	125	84
	6	//	//	//	//	//	//	99	51	124	77	184	135	150	101
430SR	2	107	71	169	134	294	258	357	321	410	374	535	489	107	71
	3	71	18	134	80	259	205	321	267	374	321	499	446	160	107
	4	//	//	98	26	223	151	285	214	339	267	464	392	214	143
	5	//	//	//	//	187	89	250	160	303	214	428	339	267	178
	6	//	//	//	//	//	//	214	107	267	160	322	285	321	214
435SR	2	213	116	324	222	537	434	643	540	734	631	946	844	187	85
	3	134	27	240	133	452	345	558	451	649	542	862	754	276	169
	4	//	//	//	//	399	134	504	300	596	390	808	603	428	273
	5	//	//	//	//	336	157	442	264	533	355	746	567	464	285
	6	//	//	//	//	283	60	389	166	480	257	692	469	562	339
440SR	2	265	173	415	323	714	622	864	772	993	901	1292	1200	255	163
	3	173	44	328	194	628	494	778	644	906	772	1206	1072	383	250
	4	//	//	248	69	548	369	697	519	826	647	1126	947	508	330
	5	//	//	//	//	467	235	617	385	745	514	1045	813	642	410
	6	//	//	//	//	387	110	537	260	665	389	965	688	767	490

## TORQUE OUTPUT SPRING RETURN ACTUATOR (SR) lbf. In

### OPERATING PRESSURE PSI

		30 PSI		40PSI		60 PSI		70 PSI		80 PSI		100 PSI		SPRING STROKE	
MODEL	#	0	90	0	90	0	90	0	90	0	90	0	90	90	0
445SR	2	31	15	746	575	1291	1118	1563	1390	1796	1624	2340	2168	475	303
	3	323	65	534	303	1024	792	1269	1037	1479	1247	1968	1736	713	455
	4	//	//	443	99	987	643	1259	915	1493	1149	2037	1693	951	606
	5	//	//	//	//	834	405	1108	677	1341	911	1886	1455	1189	758
	6	//	//	//	//	//	//	956	439	1190	672	1734	1217	1427	910
	450SR	2	604	387	950	733	1643	1426	1990	1773	2286	2069	2979	2762	603
	3	419	89	765	435	1458	1128	1805	1475	2101	1771	2794	2464	901	571
	4	//	//	569	132	1262	825	1609	1172	1905	1468	2598	2161	1204	767
	5	//	//	//	//	1066	522	1413	869	1709	1165	2402	1858	1507	963
	6	//	//	//	//	869	218	1217	565	1513	862	2206	1555	1811	1159
455SR	2	901	514	1392	1005	2376	1989	2868	2481	3290	2903	4274	3887	892	505
	3	627	46	1140	559	2124	1543	2616	2035	3038	2457	4022	3441	1338	757
	4	//	//	858	84	1870	1097	2363	1589	2785	2011	3768	2995	1784	1010
	5	//	//	//	//	1618	651	2110	1143	2532	1565	3516	2549	2230	1263
	6	//	//	//	//	1321	161	1858	698	2279	1119	3263	2103	2676	1516
	460SR	2	1284	776	1992	1484	3410	2901	4118	3610	4726	4217	5635	5635	1249
	3	910	151	1618	860	3035	2277	3743	2385	4351	3593	3441	5010	1873	1115
	4	//	//	1243	235	2661	1652	3369	2361	3976	2968	2995	4386	2497	1489
	5	//	//	//	//	2286	1028	2994	1736	3602	2344	2549	3761	3122	1864
	6	//	//	//	//	1911	404	2620	1112	3227	1720	2103	3137	3746	2239
480SR	2	2372	1552	3702	2882	6262	5542	7962	6872	8832	8012	11492	10672	2248	1427
	3	1659	428	2989	1758	5649	4418	6879	5748	8119	6888	10779	9548	3372	2141
	4	//	//	2275	634	4935	3294	6255	4624	7405	5764	10065	8424	4495	2854
	5	//	//	//	//	4222	2170	5552	3500	6692	4640	9351	7300	5620	3568
	6	//	//	//	//	3508	1046	4832	2376	5978	3516	8638	6176	6743	4281

### HOW TO ORDER

