

# Bettis GC-Series

## Pneumatic Double-Acting & Spring-Return Actuator Torque Chart Metric

**BETTIS™**



# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)		
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
Pressure Torque Output: Start/Min./End (Nm)																							
GC01x08	Start	Outboard	814	959	1,103	1,392	1,536	1,681	1,970	2,114	2,404	2,548	2,837	2,982	3,127	3,416	3,561	3,705	Exceeds MOP	2.8	757	13.2	3,763
	Min		513	601	689	865	953	1,041	1,217	1,305	1,481	1,570	1,746	1,834	1,922	2,098	2,186	2,275			477		2,310
	End		1,174	1,382	1,590	2,007	2,215	2,423	2,840	3,048	3,465	3,674	4,091	4,299	4,508	4,925	5,133	5,342			1,091		5,426
	Start	Inboard	1,154	1,359	1,564	1,973	2,178	2,383	2,793	2,998	3,408	3,613	4,023	4,229	4,434	4,844	5,049	5,255			1,072		5,337
	Min		505	592	679	852	939	1,026	1,200	1,286	1,460	1,547	1,721	1,808	1,894	2,068	2,155	2,242			470		2,277
	End		799	941	1,083	1,366	1,508	1,650	1,934	2,076	2,360	2,502	2,786	2,928	3,070	3,354	3,496	3,638			742		3,695
GC01x09	Start	Outboard	1,044	1,228	1,411	1,779	1,962	2,146	2,514	2,697	3,065	3,249	3,616	Exceeds MOP	2.8	970	10.4	3,764					
	Min		654	766	878	1,102	1,214	1,326	1,550	1,662	1,885	1,997	2,221			609		2,311					
	End		1,505	1,770	2,035	2,564	2,829	3,094	3,624	3,889	4,419	4,684	5,214			1,399		5,426					
	Start	Inboard	1,485	1,746	2,008	2,531	2,792	3,054	3,577	3,838	4,362	4,623	5,147			1,380		5,356					
	Min		647	757	868	1,090	1,200	1,311	1,533	1,643	1,865	1,976	2,197			602		2,286					
	End		1,028	1,209	1,390	1,752	1,933	2,114	2,476	2,658	3,020	3,201	3,564			956		3,709					
GC01x10	Start	Outboard	1,393	1,636	1,879	2,366	2,609	2,852	3,338	3,581	Exceeds MOP	2.8	1,296	7.9	3,776								
	Min		868	1,017	1,165	1,461	1,609	1,757	2,053	2,201			809		2,320								
	End		2,009	2,359	2,710	3,410	3,761	4,112	4,813	5,163			1,868		5,444								
	Start	Inboard	1,988	2,335	2,682	3,377	3,724	4,071	4,766	5,113			1,850		5,391								
	Min		862	1,009	1,155	1,449	1,596	1,743	2,037	2,184			803		2,302								
	End		1,377	1,617	1,857	2,338	2,578	2,819	3,300	3,540			1,281		3,732								
GC01x12	Start	Outboard	2,011	2,359	2,706	3,402	3,750	Exceeds MOP	2.8	1,872	5.5	3,750											
	Min		1,247	1,459	1,671	2,094	2,306			1,163		2,306											
	End		2,899	3,400	3,902	4,905	5,407			2,698		5,407											
	Start	Inboard	2,879	3,377	3,875	4,871	5,369			2,679		5,369											
	Min		1,241	1,452	1,662	2,084	2,295			1,157		2,295											
	End		1,993	2,338	2,683	3,373	3,718			1,855		3,718											
GC01x14	Start	Outboard	2,451	2,873	3,296	Exceeds MOP	2.8	2,281	4.6	3,803													
	Min		1,517	1,775	2,032			1,415		2,341													
	End		3,533	4,142	4,752			3,289		5,483													
	Start	Inboard	3,513	4,118	4,724			3,270		5,452													
	Min		1,512	1,768	2,024			1,409		2,332													
	End		2,432	2,852	3,271			2,264		3,775													

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# Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)	
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
Pressure Torque Output: Start/Min./End (Nm)																						
GC2x09	Start	Outboard	1,264	1,486	1,708	2,153	2,376	2,598	3,043	3,265	3,711	3,933	4,378	4,601	4,824	5,269	5,492	Exceeds MOP	2.8	1,175	12.9	5,670
	Min		792	927	1,063	1,334	1,469	1,605	1,876	2,011	2,282	2,418	2,689	2,824	2,960	3,231	3,367			737		3,475
	End		1,822	2,142	2,463	3,104	3,425	3,745	4,387	4,707	5,349	5,670	6,312	6,633	6,954	7,596	7,917			1,694		8,174
	Start	Inboard	1,797	2,113	2,430	3,063	3,379	3,696	4,329	4,645	5,279	5,595	6,229	6,546	6,863	7,496	7,813			1,671		8,067
	Min		783	917	1,051	1,319	1,453	1,587	1,855	1,989	2,257	2,391	2,659	2,793	2,927	3,196	3,330			729		3,437
	End		1,245	1,464	1,683	2,122	2,341	2,560	2,999	3,218	3,657	3,876	4,315	4,534	4,754	5,193	5,413			1,157		5,588
GC2x10	Start	Outboard	1,687	1,981	2,275	2,864	3,158	3,453	4,041	4,336	4,925	5,219	Exceeds MOP	2.8	1,569	9.7	5,632					
	Min		1,051	1,230	1,410	1,768	1,947	2,127	2,485	2,664	3,023	3,202			980		3,453					
	End		2,431	2,856	3,280	4,128	4,553	4,977	5,826	6,250	7,099	7,524			2,262		8,119					
	Start	Inboard	2,406	2,827	3,247	4,087	4,507	4,927	5,768	6,188	7,029	7,449			2,238		8,038					
	Min		1,043	1,221	1,398	1,754	1,932	2,110	2,465	2,643	2,999	3,177			972		3,426					
	End		1,667	1,958	2,249	2,831	3,122	3,413	3,996	4,287	4,869	5,160			1,551		5,568					
GC2x12	Start	Outboard	2,434	2,855	3,276	4,119	4,540	4,961	Exceeds MOP	2.8	6.9	2,266	5.6	5,719								
	Min		1,510	1,766	2,022	2,535	2,791	3,047				1,407		3,509								
	End		3,509	4,116	4,723	5,937	6,545	7,152				3,266		8,245								
	Start	Inboard	3,484	4,086	4,689	5,895	6,498	7,101				3,243		8,187								
	Min		1,502	1,757	2,012	2,522	2,777	3,032				1,400		3,491								
	End		2,413	2,831	3,249	4,084	4,502	4,919				2,246		5,671								
GC2x14	Start	Outboard	2,967	3,478	3,990	5,014	5,525	Exceeds MOP	2.8	5.6	2,762	4.2	5,628									
	Min		1,837	2,148	2,459	3,082	3,393				1,712		3,456									
	End		4,277	5,014	5,752	7,227	7,965				3,982		8,113									
	Start	Inboard	4,251	4,985	5,718	7,185	7,918				3,958		8,065									
	Min		1,830	2,140	2,450	3,070	3,380				1,705		3,442									
	End		2,945	3,453	3,961	4,977	5,485				2,742		5,587									
GC2x16	Start	Outboard	3,933	4,608	5,283	Exceeds MOP	2.8	4.2	3,663	4.2	5,553											
	Min		2,428	2,838	3,249				2,264		3,413											
	End		5,669	6,642	7,615				5,280		8,005											
	Start	Inboard	5,643	6,612	7,581				5,256		7,968											
	Min		2,422	2,831	3,241				2,258		3,405											
	End		3,909	4,580	5,252				3,641		5,520											

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## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)											
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5										
		Pressure Torque Output: Start/Min./End (Nm)																														
GC3x10	Start	Outboard	2,032	2,387	2,742	3,452	3,807	4,163	4,873	5,228	5,939	6,294	7,004	7,360	7,715	8,426	8,782	9,137	9,493	2.8	1,890	13.8	9,706									
	Min		1,274	1,491	1,709	2,143	2,361	2,578	3,013	3,230	3,665	3,882	4,317	4,535	4,752	5,187	5,405	5,622	5,840					1,187	5,970							
	End		2,968	3,486	4,004	5,041	5,560	6,078	7,116	7,634	8,672	9,190	10,228	10,747	11,266	12,304	12,823	13,343	13,862							2,760	14,173					
	Start	Inboard	2,919	3,429	3,940	4,960	5,471	5,981	7,002	7,513	8,534	9,045	10,066	10,577	11,088	12,110	12,621	13,132	13,643									2,715	13,950			
	Min		1,257	1,471	1,685	2,114	2,329	2,543	2,972	3,187	3,615	3,830	4,259	4,474	4,688	5,117	5,332	5,546	5,761											1,171	5,890	
	End		1,998	2,347	2,696	3,395	3,744	4,093	4,792	5,142	5,841	6,190	6,889	7,239	7,588	8,288	8,638	8,987	9,337													1,858
GC3x12	Start	Outboard	2,938	3,446	3,955	4,972	5,481	5,990	7,007	7,516	8,534	9,043	Exceeds MOP								2.8	2,734	9.8									
	Min		1,832	2,143	2,454	3,077	3,388	3,699	4,322	4,633	5,255	5,567												1,708	6,065							
	End		4,290	5,032	5,775	7,260	8,003	8,746	10,232	10,975	12,461	13,205														3,993	14,394					
	Start	Inboard	4,240	4,975	5,709	7,178	7,913	8,647	10,117	10,851	12,321	13,056																3,946	14,232			
	Min		1,816	2,124	2,432	3,049	3,357	3,666	4,283	4,591	5,208	5,517																		1,692	6,010	
	End		2,902	3,404	3,907	4,912	5,415	5,918	6,924	7,426	8,432	8,935																				2,701
GC3x14	Start	Outboard	3,583	4,201	4,819	6,056	6,674	7,293	8,530	9,148	Exceeds MOP									2.8	3,335	8.1	9,891									
	Min		2,230	2,609	2,987	3,743	4,121	4,500	5,256	5,634														2,079	6,088							
	End		5,231	6,134	7,037	8,843	9,746	10,649	12,455	13,359																4,870	14,443					
	Start	Inboard	5,181	6,076	6,970	8,759	9,654	10,549	12,338	13,233																		4,824	14,307			
	Min		2,214	2,590	2,965	3,716	4,092	4,468	5,219	5,594																				2,064	6,045	
	End		3,546	4,158	4,770	5,995	6,607	7,219	8,444	9,057																						3,301
GC3x16	Start	Outboard	4,752	5,569	6,385	8,017	8,833	9,649	Exceeds MOP											2.8	4,426	6.2	9,976									
	Min		2,950	3,449	3,948	4,946	5,445	5,944																6,463	14,567							
	End		6,940	8,131	9,323	11,707	12,898	14,090																		6,415	14,461					
	Start	Inboard	6,889	8,072	9,255	11,621	12,804	13,988																				2,736	6,113			
	Min		2,935	3,432	3,928	4,921	5,418	5,914																						4,391	9,897	
	End		4,714	5,524	6,334	7,953	8,763	9,573																								7,065
GC3x20	Start	Outboard	7,582	8,875	Exceeds MOP														2.8	4,372	3.9	6,110										
	Min		4,688	5,478																			10,316	14,471								
	End		11,072	12,960																					10,266	14,401						
	Start	Inboard	11,018	12,897																							4,360	6,095				
	Min		4,676	5,464																									7,026	9,855		
	End		7,540	8,826																												

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# Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5
			Pressure Torque Output: Start/Min./End (Nm)																				
GC4x12	Start	Outboard	3,572	4,191	4,810	6,047	6,667	7,286	8,524	9,143	10,382	11,001	12,240	12,859	13,479	14,718	15,337	15,957	16,577	2.8	13.8	3,324	16,949
	Min		2,217	2,594	2,971	3,724	4,101	4,478	5,231	5,608	6,362	6,739	7,492	7,869	8,246	9,000	9,377	9,754	10,131			2,067	10,357
	End		5,152	6,045	6,937	8,723	9,616	10,508	12,294	13,188	14,974	15,867	17,654	18,548	19,441	21,228	22,122	23,016	23,910			4,795	24,446
	Start	Inboard	5,069	5,948	6,827	8,584	9,463	10,343	12,101	12,980	14,739	15,618	17,378	18,257	19,137	20,897	21,776	22,656	23,537			4,718	24,065
	Min		2,187	2,559	2,930	3,674	4,046	4,417	5,161	5,533	6,276	6,648	7,392	7,764	8,135	8,879	9,251	9,623	9,995			2,038	10,218
	End		3,510	4,119	4,727	5,945	6,553	7,162	8,380	8,989	10,207	10,816	12,034	12,643	13,252	14,471	15,080	15,689	16,299			3,267	16,665
GC4x14	Start	Outboard	4,359	5,112	5,865	7,371	8,123	8,876	10,383	11,136	12,643	13,395	14,902	15,656	16,409	17,916	18,670	19,424	2.8	13.4	4,058	20,027	
	Min		2,701	3,159	3,617	4,534	4,992	5,450	6,366	6,825	7,741	8,199	9,116	9,574	10,033	10,949	11,408	11,866			2,518	12,233	
	End		6,288	7,373	8,459	10,631	11,717	12,803	14,975	16,062	18,235	19,321	21,494	22,581	23,668	25,842	26,929	28,016			5,853	28,886	
	Start	Inboard	6,204	7,276	8,348	10,492	11,564	12,636	14,781	15,853	17,998	19,071	21,216	22,289	23,362	25,508	26,581	27,654			5,776	28,513	
	Min		2,672	3,125	3,578	4,484	4,938	5,391	6,298	6,751	7,658	8,111	9,018	9,471	9,925	10,832	11,285	11,739			2,490	12,102	
	End		4,296	5,039	5,781	7,266	8,008	8,750	10,235	10,978	12,463	13,206	14,692	15,435	16,178	17,664	18,407	19,150			4,000	19,745	
GC4x16	Start	Outboard	5,788	6,782	7,776	9,765	10,759	11,754	13,743	14,737	16,727	17,722	19,711	Exceeds MOP	2.8	10.1	5,390	19,910					
	Min		3,575	4,180	4,785	5,994	6,599	7,204	8,414	9,019	10,229	10,834	12,044				3,333	12,165					
	End		8,348	9,782	11,216	14,084	15,519	16,953	19,822	21,257	24,126	25,561	28,431				7,774	28,718					
	Start	Inboard	8,264	9,684	11,104	13,944	15,364	16,784	19,625	21,046	23,887	25,308	28,150				7,696	28,434					
	Min		3,547	4,147	4,747	5,948	6,548	7,148	8,349	8,949	10,150	10,750	11,951				3,307	12,071					
	End		5,723	6,706	7,689	9,656	10,639	11,623	13,590	14,574	16,542	17,526	19,494				5,329	19,691					
GC4x20	Start	Outboard	9,242	10,818	12,395	15,549	17,126	18,703	Exceeds MOP	2.8	6.3	8,611	19,649										
	Min		5,686	6,644	7,603	9,521	10,479	11,438				5,302	12,013										
	End		13,330	15,604	17,878	22,427	24,702	26,976				12,420	28,341										
	Start	Inboard	13,243	15,503	17,763	22,283	24,543	26,804				12,340	28,160										
	Min		5,661	6,616	7,571	9,480	10,435	11,389				5,279	11,962										
	End		9,171	10,736	12,301	15,431	16,996	18,561				8,545	19,500										
GC4x24	Start	Outboard	13,508	15,800	18,093	Exceeds MOP	2.8	4.3	12,591	19,469													
	Min		8,285	9,678	11,071				7,727	11,907													
	End		19,483	22,790	26,097				18,160	28,081													
	Start	Inboard	19,394	22,686	25,978				18,077	27,953													
	Min		8,265	9,655	11,045				7,709	11,879													
	End		13,430	15,710	17,990				12,518	19,358													
GC4x28	Start	Outboard	19,023	Exceeds MOP	2.8	3.1	17,730	19,670															
	Min		11,681				10,894	12,074															
	End		27,439				25,573	28,371															
	Start	Inboard	27,346				25,487	28,276															
	Min		11,667				10,881	12,059															
	End		18,937				17,650	19,581															
GC4x220	Start	Outboard	18,427	Exceeds MOP	2.8	3.2	17,169	19,685															
	Min		11,337				10,573	12,102															
	End		26,579				24,765	28,392															
	Start	Inboard	26,568				24,754	28,381															
	Min		11,357				10,591	12,123															
	End		18,398				17,142	19,653															

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## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)					
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5				
			Pressure Torque Output: Start/Min./End (Nm)																								
GC5x16	Outboard	Start	7,463	8,744	10,024	12,585	13,866	15,147	17,708	18,989	21,551	22,833	25,395	26,676	27,958	30,521	31,802	33,084	34,365	2.8	6,951	13.8	35,134				
		Min	4,606	5,385	6,164	7,721	8,500	9,279	10,837	11,616	13,173	13,952	15,510	16,289	17,068	18,627	19,406	20,185	20,964					4,295			
		End	10,764	12,611	14,458	18,151	19,998	21,846	25,540	27,388	31,083	32,930	36,626	38,474	40,322	44,018	45,867	47,715	49,564						10,026		
	Inboard	Start	10,570	12,384	14,198	17,827	19,642	21,456	25,086	26,901	30,531	32,346	35,977	37,793	39,608	43,240	45,056	46,872	48,688							9,844	
		Min	4,535	5,302	6,069	7,602	8,369	9,136	10,670	11,438	12,972	13,739	15,273	16,040	16,807	18,342	19,109	19,876	20,644								4,228
		End	7,326	8,583	9,841	12,356	13,614	14,871	17,387	18,645	21,161	22,419	24,935	26,194	27,452	29,969	31,228	32,486	33,745								
GC5x20	Outboard	Start	11,929	13,963	15,997	20,064	22,098	24,132	28,201	30,235	34,304	36,338	40,407	42,442	44,477	Exceeds MOP	2.8	11,116	11.3	45,698							
		Min	7,335	8,572	9,808	12,281	13,517	14,754	17,227	18,464	20,937	22,173	24,647	25,883	27,120						6,841						
		End	17,205	20,138	23,071	28,938	31,871	34,805	40,672	43,606	49,475	52,409	58,278	61,212	64,147							16,032					
	Inboard	Start	17,006	19,905	22,805	28,605	31,505	34,405	40,206	43,107	48,908	51,809	57,611	60,513	63,414								15,846				
		Min	7,268	8,494	9,719	12,169	13,395	14,620	17,071	18,296	20,747	21,972	24,423	25,649	26,874									6,778			
		End	11,786	13,796	15,806	19,826	21,836	23,846	27,866	29,877	33,898	35,908	39,930	41,941	43,952										10,983		
GC5x24	Outboard	Start	17,445	20,405	23,364	29,283	32,243	35,203	41,123	44,083	Exceeds MOP	2.8	16,262	7.7	45,267												
		Min	10,696	12,495	14,293	17,890	19,689	21,487	25,084	26,883						9,977											
		End	25,161	29,429	33,697	42,234	46,503	50,771	59,309	63,578							23,454										
	Inboard	Start	24,954	29,188	33,422	41,890	46,124	50,359	58,828	63,062								23,261									
		Min	10,634	12,422	14,210	17,787	19,575	21,363	24,940	26,728									9,919								
		End	17,296	20,230	23,164	29,034	31,968	34,903	40,773	43,708										16,122							
GC5x28	Outboard	Start	24,577	28,753	32,928	41,280	45,456	Exceeds MOP	2.8	22,907	5.5	45,456															
		Min	15,088	17,627	20,166	25,243	27,782						14,073														
		End	35,447	41,469	47,491	59,537	65,560							33,038													
	Inboard	Start	35,232	41,218	47,205	59,179	65,166								32,838												
		Min	15,033	17,562	20,092	25,151	27,681									14,021											
		End	24,419	28,568	32,717	41,016	45,166										22,759										
GC5x32	Outboard	Start	32,225	37,686	43,148	Exceeds MOP	2.8	30,041	4.2	45,332																	
		Min	19,754	23,074	26,393						18,426																
		End	46,477	54,353	62,230							43,326															
	Inboard	Start	46,253	54,092	61,932								43,118														
		Min	19,706	23,017	26,329									18,381													
		End	32,058	37,491	42,924										29,884												
GC5x36	Outboard	Start	40,903	Exceeds MOP	2.8	38,136	3.3	45,054																			
		Min	25,045						23,363																		
		End	58,993							55,002																	
	Inboard	Start	58,759								54,783																
		Min	25,005									23,326															
		End	40,725										37,970														

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)							
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5						
		Pressure Torque Output: Start/Min./End (Nm)																										
GC5x220	Start	Outboard	23,730	27,776	31,822	39,914	43,960	Exceeds MOP													2.8	5.7	22,112	45,579				
	Min	Outboard	14,593	17,052	19,512	24,432	26,892																		13,609	27,876		
	End	Outboard	34,225	40,060	45,895	57,566	63,402																			31,891	65,736	
	Start	Inboard	34,197	40,027	45,857	57,519	63,350																			31,865	65,683	
	Min	Inboard	14,615	17,079	19,542	24,469	26,933																				13,630	27,918
	End	Inboard	23,701	27,742	31,783	39,866	43,907																				22,085	45,524
GC5x224	Start	Outboard	34,762	40,659	Exceeds MOP																2.8	3.9	32,403	45,377				
	Min	Outboard	21,314	24,898																						19,881	27,765	
	End	Outboard	50,136	58,641																							46,734	65,445
	Start	Inboard	50,095	58,593																							46,695	65,392
	Min	Inboard	21,347	24,936																							19,911	27,808
	End	Inboard	34,720	40,610																							32,364	45,322

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (barg)															MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
Pressure Torque Output: Start/Min./End (Nm)																							
GC7x20	Start	Outboard	14,554	17,041	19,529	24,504	26,992	29,480	34,456	36,944	41,921	44,410	49,388	51,877	54,366	59,345	61,834	64,324	66,814	2.8	13,559	13.8	68,308
	Min		8,968	10,482	11,995	15,022	16,536	18,050	21,077	22,591	25,618	27,132	30,160	31,674	33,188	36,216	37,730	39,244	40,759		8,363		41,667
	End		20,991	24,578	28,166	35,342	38,930	42,518	49,695	53,284	60,462	64,052	71,231	74,821	78,411	85,592	89,183	92,773	96,364		19,556		98,519
	Start	Inboard	20,682	24,218	27,754	34,826	38,363	41,900	48,974	52,511	59,586	63,124	70,200	73,738	77,277	84,354	87,894	91,433	94,972		19,268		97,096
	Min		8,861	10,356	11,852	14,843	16,339	17,835	20,826	22,322	25,314	26,810	29,802	31,298	32,794	35,786	37,283	38,779	40,275		8,263		41,173
	End		14,337	16,788	19,239	24,141	26,593	29,045	33,948	36,400	41,305	43,757	48,662	51,115	53,568	58,474	60,927	63,381	65,834		13,356		67,306
GC7x24	Start	Outboard	21,327	24,951	28,576	35,825	39,450	43,075	50,326	53,952	61,203	64,829	72,081	75,708	79,334	86,587	Exceeds MOP			2.8	19,877	12.3	88,764
	Min		13,098	15,302	17,506	21,915	24,119	26,324	30,732	32,937	37,346	39,551	43,960	46,165	48,370	52,780					12,216		54,103
	End		30,759	35,987	41,214	51,670	56,899	62,127	72,584	77,813	88,272	93,502	103,962	109,192	114,422	124,884					28,668		128,022
	Start	Inboard	30,441	35,615	40,790	51,139	56,314	61,489	71,841	77,016	87,369	92,545	102,899	108,076	113,253	123,608					28,371		126,715
	Min		12,997	15,184	17,372	21,747	23,934	26,122	30,497	32,685	37,060	39,248	43,624	45,812	48,000	52,376					12,122		53,689
	End		21,101	24,688	28,275	35,449	39,037	42,624	49,799	53,387	60,564	64,152	71,329	74,917	78,506	85,684					19,667		87,838
GC7x28	Start	Outboard	30,092	35,210	40,329	50,568	55,687	60,807	71,047	76,168	86,409	Exceeds MOP							2.8	28,044	8.7	88,458	
	Min		18,497	21,611	24,725	30,953	34,068	37,182	43,412	46,526	52,756									17,251		54,002	
	End		43,401	50,783	58,166	72,933	80,317	87,701	102,470	109,855	124,627									40,448		127,582	
	Start	Inboard	43,070	50,397	57,725	72,381	79,709	87,038	101,697	109,027	123,688									40,139		126,621	
	Min		18,404	21,503	24,602	30,800	33,899	36,998	43,196	46,296	52,495									17,165		53,734	
	End		29,856	34,935	40,014	50,174	55,254	60,335	70,496	75,577	85,740									27,824		87,773	
GC7x32	Start	Outboard	39,487	46,185	52,883	66,281	72,980	79,680	Exceeds MOP									2.8	36,808	6.6	87,719		
	Min		24,231	28,305	32,379	40,527	44,602	48,676											22,601		53,566		
	End		56,951	66,612	76,273	95,596	105,258	114,921											53,087		126,516		
	Start	Inboard	56,607	66,211	75,814	95,022	104,627	114,232											52,766		125,758		
	Min		24,148	28,208	32,268	40,389	44,449	48,510											22,524		53,383		
	End		39,240	45,897	52,554	65,869	72,527	79,185											36,577		87,175		
GC7x36	Start	Outboard	50,148	58,637	67,126	84,104	Exceeds MOP											2.8	46,753	5.2	87,500		
	Min		30,734	35,896	41,058	51,383													28,669		53,447		
	End		72,328	84,571	96,814	121,302													67,431		126,200		
	Start	Inboard	71,969	84,152	96,335	120,703													67,096		125,577		
	Min		30,661	35,811	40,961	51,261													28,601		53,321		
	End		49,888	58,334	66,779	83,671													46,510		87,049		

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric



# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
<b>Pressure Torque Output: Start/Min./End (Nm)</b>																							
GC7x220	Start	Outboard	28,908	33,849	38,790	48,674	53,616	58,559	Exceeds MOP										2.8	26,931	6.9	67,456	
	Min		17,815	20,822	23,828	29,842	32,849	35,856														16,613	41,269
	End		41,693	48,820	55,947	70,202	77,330	84,459														38,843	97,291
	Start	Inboard	41,653	48,772	55,892	70,134	77,255	84,376														38,805	97,196
	Min		17,843	20,855	23,866	29,889	32,901	35,913														16,639	41,334
	End		28,873	33,809	38,744	48,616	53,553	58,489														26,899	67,376
GC7x224	Start	Outboard	42,453	49,669	56,885	71,317	78,533	85,750	Exceeds MOP										2.8	39,567	6.1	87,194	
	Min		26,074	30,462	34,850	43,627	48,015	52,404												24,319		53,282	
	End		61,230	71,637	82,044	102,859	113,268	123,676												57,067		125,758	
	Start	Inboard	61,170	71,567	81,964	102,759	113,157	123,556														57,012	125,636
	Min		26,115	30,510	34,906	43,696	48,092	52,487														24,357	53,366
	End		42,403	49,610	56,817	71,232	78,440	85,648														39,520	87,090
GC7x228	Start	Outboard	59,983	70,187	80,391	Exceeds MOP												2.8	55,902	4.3	86,514		
	Min		36,871	43,079	49,288																34,388	53,013	
	End		86,513	101,230	115,947																80,626	124,778	
	Start	Inboard	86,429	101,131	115,834																80,548	124,656	
	Min		36,930	43,148	49,366																34,443	53,097	
	End		59,912	70,104	80,296																	55,835	86,411

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# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5
Pressure Torque Output: Start/Min./End (Nm)																							
GC8x24	Start	Outboard	25,179	29,459	33,740	42,302	46,583	50,864	59,427	63,709	72,273	76,555	85,120	89,402	93,685	102,252	106,535	110,818	115,102	2.8	13.8	23,467	117,672
	Min		15,466	18,069	20,672	25,879	28,482	31,086	36,292	38,896	44,103	46,707	51,914	54,518	57,122	62,330	64,934	67,538	70,142			14,425	71,705
	End		36,324	42,499	48,674	61,025	67,201	73,378	85,731	91,908	104,262	110,440	122,796	128,974	135,153	147,511	153,690	159,870	166,049			33,854	169,757
	Start	Inboard	35,775	41,859	47,943	60,111	66,195	72,280	84,450	90,536	102,707	108,793	120,966	127,053	133,140	145,315	151,403	157,491	163,579			33,342	167,232
	Min		15,273	17,844	20,416	25,558	28,129	30,701	35,844	38,415	43,558	46,130	51,273	53,845	56,417	61,561	64,133	66,705	69,277			14,245	70,820
	End		24,798	29,015	33,232	41,667	45,885	50,102	58,538	62,757	71,194	75,412	83,850	88,069	92,289	100,728	104,948	109,168	113,388			23,112	115,920
GC8x28	Start	Outboard	35,557	41,607	47,657	59,759	65,810	71,862	83,966	90,018	102,124	108,177	120,285	126,339	132,393	Exceeds MOP	2.8	11.9	33,137	143,292			
	Min		21,860	25,540	29,221	36,584	40,265	43,946	51,309	54,991	62,354	66,036	73,400	77,082	80,764				20,387	87,393			
	End		51,295	60,023	68,752	86,210	94,940	103,670	121,131	129,863	147,327	156,059	173,526	182,260	190,994				47,804	206,717			
	Start	Inboard	50,731	59,365	68,000	85,269	93,905	102,541	119,814	128,451	145,727	154,366	171,644	180,284	188,924				47,278	204,477			
	Min		21,676	25,327	28,977	36,279	39,930	43,580	50,882	54,534	61,836	65,488	72,791	76,442	80,094				20,216	86,668			
	End		35,165	41,150	47,135	59,106	65,092	71,078	83,052	89,039	101,014	107,002	118,978	124,967	130,956				32,772	141,738			
GC8x32	Start	Outboard	46,686	54,607	62,528	78,372	86,294	94,217	110,063	117,987	133,835	141,760	Exceeds MOP	2.8	9.0	43,517	141,760						
	Min		28,652	33,470	38,288	47,924	52,742	57,561	67,198	72,016	81,654	86,473				26,725	86,473						
	End		67,350	78,777	90,205	113,061	124,490	135,920	158,780	170,211	193,074	204,507				62,779	204,507						
	Start	Inboard	66,769	78,100	89,430	112,093	123,425	134,758	157,424	168,758	191,427	202,763				62,237	202,763						
	Min		28,479	33,268	38,057	47,636	52,426	57,215	66,795	71,585	81,165	85,955				26,563	85,955						
	End		46,283	54,136	61,990	77,699	85,555	93,410	109,122	116,978	132,692	140,549				43,141	140,549						
GC8x36	Start	Outboard	59,314	69,356	79,398	99,484	109,527	119,571	139,659	Exceeds MOP	2.8	7.1	55,297	141,668									
	Min		36,355	42,461	48,568	60,782	66,889	72,996	85,210				33,912	86,432									
	End		85,568	100,054	114,542	143,518	158,006	172,496	201,476				79,773	204,374									
	Start	Inboard	84,968	99,355	113,742	142,518	156,907	171,296	200,076				79,214	202,954									
	Min		36,193	42,273	48,353	60,513	66,593	72,673	84,834				33,761	86,050									
	End		58,897	68,870	78,843	98,789	108,763	118,737	138,687				54,909	140,682									
GC8x40	Start	Outboard	73,441	85,854	98,267	123,094	135,509	Exceeds MOP	2.8	5.8	68,476	142,958											
	Min		44,968	52,515	60,062	75,157	82,704				41,949	87,233											
	End		105,948	123,855	141,763	177,579	195,488				98,786	206,234											
	Start	Inboard	105,328	123,131	140,935	176,544	194,350				98,207	205,033											
	Min		44,819	52,342	59,864	74,909	82,432				41,810	86,946											
	End		73,010	85,351	97,692	122,375	134,717				68,074	142,123											

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
Pressure Torque Output: Start/Min./End (Nm)																							
GC8x224	Start	Outboard	50,003	58,505	67,007	84,012	92,516	101,019	Exceeds MOP										2.8	46,603	6.9	116,326	
	Min		30,717	35,887	41,058	51,399	56,570	61,741														28,649	71,049
	End		72,136	84,401	96,666	121,198	133,465	145,733														67,230	167,815
	Start	Inboard	72,061	84,314	96,566	121,073	133,327	145,582														67,161	167,641
	Min		30,762	35,940	41,119	51,475	56,654	61,832														28,691	71,154
	End		49,951	58,444	66,937	83,924	92,418	100,913														46,554	116,204
GC8x228	Start	Outboard	70,759	82,800	94,842	118,927	130,971	Exceeds MOP											2.8	65,943	5.9	140,606	
	Min		43,504	50,830	58,156	72,809	80,135													40,574		85,997	
	End		102,079	119,450	136,822	171,568	188,942													95,131		202,842	
	Start	Inboard	101,973	119,326	136,680	171,390	188,746															95,033	202,632
	Min		43,568	50,905	58,242	72,917	80,254															40,634	86,124
	End		70,685	82,713	94,743	118,803	130,833															65,874	140,458
GC8x232	Start	Outboard	93,017	108,800	124,584	Exceeds MOP													2.8	86,704	4.5	140,368	
	Min		57,089	66,689	76,289															53,249		85,889	
	End		134,188	156,957	179,727																	125,081	202,498
	Start	Inboard	134,049	156,795	179,541																	124,952	202,289
	Min		57,173	66,788	76,402																	53,328	86,016
	End		92,919	108,686	124,453																	86,613	140,221
GC8x236	Start	Outboard	118,273	138,298	Exceeds MOP														2.8	110,264	3.6	142,303	
	Min		72,494	84,672																		67,624	87,107
	End		170,624	199,512																		159,069	205,290
	Start	Inboard	170,447	199,306																		158,904	205,077
	Min		72,602	84,797																		67,724	87,236
	End		118,149	138,153																		110,148	142,154

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)											
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5								
<b>Pressure Torque Output: Start/Min./End (Nm)</b>																															
GC10x28	Start	Outboard	46,435	54,341	62,248	78,062	85,970	93,878	109,696	117,605	133,424	141,335	157,157	165,069	172,981	188,806	196,719	204,632	212,546	2.8	43,273	13.8	217,295								
	Min		28,563	33,375	38,186	47,809	52,621	57,433	67,057	71,869	81,494	86,306	95,932	100,745	105,558	115,184	119,997	124,811	129,624					26,639	132,513						
	End		66,983	78,388	89,793	112,605	124,012	135,420	158,237	169,646	192,466	203,877	226,700	238,113	249,526	272,354	283,769	295,184	306,600							62,421	313,450				
	Start	Inboard	65,984	77,222	88,461	110,940	122,180	133,421	155,904	167,147	189,634	200,878	223,368	234,614	245,860	268,354	279,603	290,851	302,100									61,489	308,850		
	Min		28,210	32,962	37,715	47,220	51,973	56,726	66,233	70,986	80,493	85,247	94,755	99,509	104,263	113,772	118,526	123,281	128,035											26,309	130,888
	End		45,735	53,524	61,314	76,895	84,686	92,477	108,060	115,853	131,439	139,232	154,821	162,615	170,411	186,002	193,798	201,595	209,392												
Start	Outboard	61,055	71,419	81,783	102,513	112,879	123,245	143,979	154,346	175,082	185,451	206,190	216,560	226,930	247,673	258,045	268,417	278,790	2.8	56,909	13.8	285,014									
Min		37,488	43,793	50,098	62,709	69,015	75,321	87,933	94,239	106,852	113,158	125,772	132,079	138,386	151,001	157,308	163,616	169,924					34,966	173,709							
End		88,072	103,022	117,973	147,876	162,829	177,782	207,690	222,645	252,558	267,515	297,431	312,390	327,349	357,270	372,232	387,194	402,156							82,092	411,134					
Start	Inboard	87,054	101,834	116,614	146,178	160,961	175,744	205,312	220,097	249,670	264,457	294,033	308,822	323,611	353,193	367,984	382,776	397,569									81,142	406,445			
Min		37,148	43,396	49,645	62,142	68,391	74,641	87,139	93,389	105,888	112,138	124,639	130,889	137,140	149,641	155,892	162,143	168,394											34,648	172,145	
End		60,339	70,583	80,828	101,319	111,565	121,812	142,306	152,554	173,051	183,300	203,800	214,051	224,302	244,805	255,057	265,310	275,563													56,241
Start	Outboard	77,644	90,794	103,944	130,247	143,399	156,551	182,857	196,011	222,321	235,476	261,788	274,945	Exceeds MOP	2.8	72,384	10.9	285,471													
Min		47,609	55,607	63,606	79,603	87,602	95,601	111,600	119,600	135,599	143,599	159,600	167,600						44,409	174,001											
End		112,002	130,971	149,940	187,882	206,854	225,826	263,773	282,748	320,699	339,676	377,632	396,611								104,414	411,794									
Start	Inboard	110,961	129,757	148,553	186,147	204,945	223,744	261,344	280,145	317,749	336,552	374,160	392,965										103,443	408,010							
Min		47,283	55,228	63,172	79,061	87,006	94,951	110,841	118,787	134,678	142,624	158,516	166,462												44,106	172,819					
End		76,910	89,937	102,965	129,022	142,052	155,081	181,143	194,174	220,238	233,271	259,338	272,372														71,699	282,800			
Start	Outboard	96,202	112,467	128,732	161,263	177,530	193,797	226,332	242,601	275,140	Exceeds MOP	2.8	89,697	8.8	284,902																
Min		58,926	68,817	78,708	98,491	108,382	118,274	138,058	147,950	167,736						54,969	173,671														
End		138,773	162,234	185,697	232,623	256,088	279,553	326,486	349,954	396,892								129,388	410,974												
Start	Inboard	137,708	160,991	184,276	230,847	254,134	277,421	323,999	347,289	393,871										128,395	407,846										
Min		58,617	68,456	78,296	97,976	107,817	117,657	137,338	147,179	166,862												54,681	172,766								
End		95,448	111,586	127,725	160,005	176,145	192,286	224,570	240,713	273,000														88,993	282,686						

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# Torque - Pneumatic

## Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (barg)															MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
<b>Pressure Torque Output: Start/Min./End (Nm)</b>																								
GC10x228	Start	Outboard	92,220	107,924	123,629	155,041	170,748	186,456	Exceeds MOP										2.8	85,939	6.9	214,732		
	Min		56,732	66,289	75,846	94,960	104,518	114,076														52,909	131,280	
	End		133,029	155,682	178,336	223,648	246,305	268,964														123,968	309,753	
	Start	Inboard	132,906	155,538	178,171	223,442	246,078	268,716															123,853	309,467
	Min		56,815	66,386	75,957	95,100	104,671	114,243															52,987	131,473
	End		92,120	107,807	123,494	154,872	170,562	186,253															85,845	214,498
GC10x232	Start	Outboard	121,459	142,079	162,699	203,943	224,566	245,189	Exceeds MOP										2.8	113,211	6.9	282,315		
	Min		74,581	87,126	99,670	124,761	137,306	149,852														69,563	172,435	
	End		175,206	204,950	234,695	294,189	323,938	353,688															163,309	407,241
	Start	Inboard	175,044	204,761	234,478	293,917	323,639	353,362															163,158	406,866
	Min		74,691	87,254	99,817	124,944	137,508	150,072															69,666	172,688
	End		121,327	141,924	162,522	203,720	224,321	244,922															113,088	282,007
GC10x236	Start	Outboard	154,637	180,829	207,021	259,410	Exceeds MOP												2.8	144,161	5.4	280,366		
	Min		94,823	110,754	126,685	158,548																88,450	171,294	
	End		223,065	260,847	298,630	374,201																	207,953	404,430
	Start	Inboard	222,860	260,606	298,355	373,855																	207,761	404,057
	Min		94,962	110,916	126,871	158,781																	88,580	171,546
	End		154,468	180,632	206,796	259,127																	144,004	280,060
GC10x240	Start	Outboard	191,755	224,175	256,596	Exceeds MOP													2.8	178,787	4.4	282,534		
	Min		117,457	137,173	156,889																		109,570	172,663
	End		276,608	323,374	370,142																		257,902	407,558
	Start	Inboard	276,353	323,076	369,801																		257,664	407,182
	Min		117,629	137,374	157,120																		109,731	172,916
	End		191,546	223,931	256,317																		178,592	282,226

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# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)																
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5															
		Pressure Torque Output: Start/Min./End (Nm)																																			
GC01x08-SR0	Start	2,313																	Please consult factory	2,219	2,418	2,617	Exceeds MOP	11.7	2,100	13.2	2,696										
	Min.	1,234																727		813	899	676			933												
	End	2,403																		891	1,029	1,167			809		1,222										
GC01x08-SR1	Start	1,742																	Please consult factory	1,437	1,834	2,033	Exceeds MOP	8.8	1,357	13.2	3,107										
	Min.	971																500		670	755	840			1,009		1,093	1,178	466	1,212							
	End	1,993																		636	911	1,048			1,186		1,461	1,599	1,737	581	1,792						
GC01x08-SR2	Start	1,457																	Please consult factory	1,082	1,480	1,679	Exceeds MOP	7.4	1,043	13.2	3,349										
	Min.	831																392		562	646	815			900		984	1,153	1,237	1,321	375	1,355					
	End	1,751																		508	783	920			1,196		1,333	1,471	1,746	1,884	2,022	480	2,077				
GC01x08-SR3	Start	1,270																	Please consult factory	1,106	1,305	1,702	Exceeds MOP	6.5	908	13.2	3,571										
	Min.	727																414		499	668	752			921		1,005	1,089	1,258	1,342	1,426	329	1,460				
	End	1,528																		557	694	970			1,107		1,382	1,520	1,658	1,933	2,071	2,209	419	2,264			
GC01x08-SR4	Start	1,077																	Please consult factory	710	909	1,306	Exceeds MOP	5.5	710	13.2	3,771										
	Min.	626																264		349	518	602			771		855	1,024	1,108	1,192	1,361	1,445	1,529	264	1,563		
	End	1,329																		336	474	749			886		1,161	1,299	1,574	1,712	1,850	2,125	2,263	2,400	336	2,455	
GC01x09-SR0	Start	2,307																	Please consult factory	2,512	2,766	3,019	Exceeds MOP	9.1	2,056	13.8	4,441										
	Min.	1,232																855		964	1,072	1,289			1,397		1,505	1,613	1,613	1,613	657	1,677					
	End	2,395																		1,094	1,270	1,446			1,797		1,973	2,149	2,324	2,324	778	2,430					
GC01x09-SR1	Start	1,736																	Please consult factory	1,401	1,655	2,162	Exceeds MOP	6.9	1,351	13.8	4,851										
	Min.	969																486		595	811	919			1,134		1,242	1,350	1,565	1,672	1,780	1,887	464	1,952			
	End	1,985																		611	787	1,138			1,313		1,664	1,840	2,016	2,367	2,543	2,719	2,894	576	3,000		
GC01x09-SR2	Start	1,451																	Please consult factory	1,136	1,643	1,897	Exceeds MOP	5.8	1,035	13.8	5,093										
	Min.	830																416		632	740	955			1,063		1,278	1,385	1,493	1,708	1,815	1,922	2,030	373	2,094		
	End	1,743																		545	896	1,071			1,422		1,598	1,949	2,125	2,301	2,652	2,828	3,003	3,179	475	3,285	
GC01x09-SR3	Start	1,264																	Please consult factory	1,105	1,359	1,866	Exceeds MOP	5.1	903	13.8	5,316										
	Min.	725																415		523	738	846			1,061		1,168	1,383	1,490	1,598	1,813	1,920	2,028	2,135	328	2,199	
	End	1,520																		556	732	1,083			1,258		1,609	1,785	2,136	2,487	2,839	3,014	3,190	3,366	416	3,471	
GC01x09-SR4	Start	1,072																	Please consult factory	1,052	1,305	1,558	Exceeds MOP	4.1	595	13.8	5,515										
	Min.	624																411		519	626	841			949		1,163	1,271	1,486	1,593	1,700	1,915	2,023	2,130	2,238	217	2,302
	End	1,321																		573	748	923			1,274		1,450	1,801	1,977	2,328	2,504	2,679	3,031	3,206	3,382	3,558	257

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)					
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5				
		Pressure Torque Output: Start/Min./End (Nm)																								
GC01x10-SR0	Start	2,301						Please consult factory	2,143	2,479	3,153	3,489	4,163	4,499	4,836	Exceeds MOP					6.9	2,076	11.4	5,105		
	Min.	1,230							696	842	1,130	1,273	1,560	1,703	1,846		667	1,960								
	End	2,385							839	1,072	1,538	1,771	2,237	2,470	2,703		792	2,890								
GC01x10-SR1	Start	1,729					Please consult factory	1,544	1,880	2,553	2,890	3,563	3,900	4,573	4,910	5,246	Exceeds MOP					5.2	1,342	11.4	5,516	
	Min.	967						549	692	979	1,121	1,407	1,549	1,835	1,977	2,120		462	2,234							
	End	1,975							710	943	1,409	1,642	2,108	2,341	2,807	3,040		3,273	570	3,460						
GC01x10-SR2	Start	1,444			Please consult factory	1,449	1,786	2,122	2,795	3,132	3,805	4,142	4,815	5,152	5,488	Exceeds MOP					4.4	1,046	11.4	5,758		
	Min.	828				551	694	837	1,122	1,265	1,550	1,692	1,977	2,120	2,262		379	2,376								
	End	1,733				762	995	1,228	1,694	1,927	2,393	2,626	3,092	3,325	3,558		482	3,745								
GC01x10-SR3	Start	1,257			Please consult factory	999	1,672	2,008	2,345	3,018	3,354	4,028	4,364	5,038	5,374	5,711	Exceeds MOP					3.9	932	11.4	5,980	
	Min.	723				371	657	800	942	1,228	1,370	1,655	1,798	2,082	2,225	2,367		342	2,481							
	End	1,510				483	949	1,181	1,414	1,880	2,113	2,580	2,813	3,279	3,512	3,745		436	3,932							
GC01x10-SR4	Start	1,065			Please consult factory	862	1,199	1,872	2,208	2,544	3,217	3,554	4,227	4,564	5,237	5,574	5,911	Exceeds MOP					3.3	728	11.4	6,180
	Min.	622				332	475	760	903	1,045	1,330	1,473	1,758	1,900	2,185	2,328	2,470		275	2,584						
	End	1,311				442	675	1,140	1,373	1,606	2,072	2,305	2,771	3,004	3,471	3,704	3,937		349	4,124						
GC01x12-SR0	Start	2,290			Please consult factory	2,245	2,728	3,211	4,177	4,660	Exceeds MOP								4.8	2,052	8.0	5,142				
	Min.	1,227				743	950	1,157	1,568	1,773		659	1,978													
	End	2,370				910	1,244	1,578	2,247	2,581		776	2,916													
GC01x12-SR1	Start	1,719			Please consult factory	1,690	2,656	3,138	3,621	4,587	5,070	Exceeds MOP							3.7	1,400	8.0	5,553				
	Min.	964				613	1,024	1,229	1,433	1,842	2,047		489	2,251												
	End	1,959				811	1,480	1,814	2,148	2,817	3,151		610	3,486												
GC01x12-SR2	Start	1,433	967	1,449	Please consult factory	1,932	2,898	3,380	3,863	4,829	5,312	Exceeds MOP							3.0	967	8.0	5,795				
	Min.	824	348	554		759	1,168	1,372	1,576	1,985	2,189		348	2,394												
	End	1,717	427	762		1,096	1,764	2,099	2,433	3,102	3,436		427	3,770												
GC01x12-SR3	Start	1,246	1,189	1,672	Please consult factory	2,155	3,120	3,603	4,086	5,052	5,535	Exceeds MOP							2.7	900	8.0	6,018				
	Min.	720	455	660		864	1,273	1,477	1,682	2,090	2,294		331	2,499												
	End	1,495	614	948		1,283	1,951	2,285	2,620	3,289	3,623		414	3,957												
GC01x12-SR4	Start	1,054	1,389	1,871	Please consult factory	2,354	3,320	3,802	4,285	5,251	5,734	Exceeds MOP							2.3	713	8.0	6,217				
	Min.	618	558	763		967	1,376	1,580	1,784	2,193	2,397		271	2,601												
	End	1,295	806	1,140		1,475	2,143	2,477	2,812	3,480	3,815		338	4,149												

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## Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5		
		Pressure Torque Output: Start/Min./End (Nm)																						
GC01x14-SR0	Start	2,281		Please consult factory	2,103	3,278	3,865	4,452	Exceeds MOP											3.9	1,986	6.3	4,805	
	Min.	1,224			684	1,188	1,438	1,687															633	1,837
	End	2,357			811	1,624	2,031	2,438																730
GC01x14-SR1	Start	1,710	1,339	1,926	2,514	3,688	4,275	4,863	Exceeds MOP										3.0	1,339	6.3	5,215		
	Min.	961	466	717	966	1,464	1,713	1,961														466	2,111	
	End	1,947	568	975	1,381	2,194	2,601	3,008															568	3,252
GC01x14-SR2	Start	1,425	1,581	2,168	2,755	3,930	4,517	5,105	Exceeds MOP										2.5	994	6.3	5,457		
	Min.	822	612	861	1,110	1,607	1,855	2,104														362	2,253	
	End	1,705	853	1,259	1,666	2,479	2,886	3,293															446	3,537
GC01x14-SR3	Start	1,238	1,804	2,391	2,978	4,153	4,740	5,327	Exceeds MOP										2.2	864	6.3	5,680		
	Min.	717	718	967	1,215	1,712	1,961	2,209														318	2,358	
	End	1,482	1,040	1,446	1,853	2,666	3,073	3,479															389	3,723
GC01x14-SR4	Start	1,045	2,003	2,590	3,178	4,352	4,939	5,527	Exceeds MOP										1.9	712	6.3	5,879		
	Min.	616	821	1,069	1,318	1,815	2,063	2,312														273	2,461	
	End	1,283	1,232	1,638	2,045	2,858	3,265	3,671															337	3,915

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# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)																				
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5																	
			Pressure Torque Output: Start/Min./End (Nm)																																					
GC2x09-SR1	Start	2,994																		Please consult factory	2,637	2,944	3,251	3,866	4,173	Exceeds MOP	9.7	2,453	12.9	4,418										
	Min.	1,638																	892		1,024	1,155	1,417	1,548	813			1,653												
	End	3,303																			1,125	1,338	1,550	1,976	2,189			997		2,359										
GC2x09-SR2	Start	2,586																		Please consult factory	2,093	2,400	3,014	3,321	3,628	4,242	4,549	Exceeds MOP	8.5	2,093	12.9	4,795								
	Min.	1,432																	714		846	1,108	1,239	1,369	1,630	1,760	714			1,864										
	End	2,926																			894	1,107	1,532	1,745	1,958	2,383	2,596			894		2,766								
GC2x09-SR3	Start	2,317																		Please consult factory	2,407	2,713	3,327	3,634	3,941	4,556	4,863	Exceeds MOP	7.6	1,854	12.9	5,108								
	Min.	1,284																	867		998	1,259	1,390	1,520	1,781	1,911	630			2,015										
	End	2,612																			1,163	1,376	1,801	2,013	2,226	2,652	2,864			780		3,035								
GC2x09-SR4	Start	2,067																		Please consult factory	1,832	2,139	2,753	3,060	3,674	3,981	4,288	4,902	5,209	Exceeds MOP	6.8	1,709	12.9	5,455						
	Min.	1,134																	624		756	1,018	1,148	1,409	1,540	1,670	1,931	2,061	571			2,165								
	End	2,266																			775	988	1,413	1,625	2,051	2,263	2,476	2,901	3,114			690		3,284						
GC2x10-SR1	Start	2,986																		Please consult factory	2,598	3,412	3,820										Exceeds MOP	7.4	2,516	9.7	4,390			
	Min.	1,635																	876		1,225	1,399									841	1,642								
	End	3,291																			1,097	1,662	1,944									1,041			2,339					
GC2x10-SR2	Start	2,578																		Please consult factory	2,567	2,974	3,789	4,197									Exceeds MOP	6.3	1,997	9.7	4,767			
	Min.	1,430																	918		1,092	1,439	1,612									674			1,854					
	End	2,914																			1,223	1,505	2,069	2,351											828		2,747			
GC2x10-SR3	Start	2,309																		Please consult factory	2,066	2,880	3,288	4,102	4,510								Exceeds MOP	5.7	1,822	9.7	5,080			
	Min.	1,281																	723		1,070	1,244	1,590	1,762											618		2,004			
	End	2,600																			927	1,491	1,773	2,338	2,620												758	3,015		
GC2x10-SR4	Start	2,059																		Please consult factory	2,005	2,412	3,227	3,634	4,449	4,856							Exceeds MOP	5.1	1,679	9.7	5,426			
	Min.	1,132																	700		874	1,221	1,394	1,739	1,912												559	2,154		
	End	2,254																			895	1,177	1,741	2,023	2,588	2,870												669	3,265	
GC2x12-SR1	Start	2,973																		Please consult factory	2,898	3,483											Exceeds MOP	5.1	2,431	6.9	4,535			
	Min.	1,631																	1,008		1,258																807	1,705		
	End	3,272																			1,306	1,710																982	2,439	
GC2x12-SR2	Start	2,565																		Please consult factory	2,691	3,275	3,859										Exceeds MOP	4.5	2,106	6.9	4,911			
	Min.	1,426																	974		1,223	1,471																724	1,917	
	End	2,895																			1,308	1,713	2,118																903	2,847
GC2x12-SR3	Start	2,296																		Please consult factory	1,835	3,004	3,588	4,173									Exceeds MOP	4.0	1,835	6.9	5,225			
	Min.	1,277																	626		1,126	1,374	1,622															626	2,068	
	End	2,581																			767	1,577	1,982	2,386																767
GC2x12-SR4	Start	2,045																		Please consult factory	2,182	3,350	3,934	4,519									Exceeds MOP	3.6	1,714	6.9	5,571			
	Min.	1,128																	778		1,276	1,524	1,772																578	2,217
	End	2,235																			1,017	1,827	2,231	2,636																693

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

## Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)								
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5							
		Pressure Torque Output: Start/Min./End (Nm)																											
GC2x14-SR1	Start	2,962			Please consult factory	3,564	4,274	Exceeds MOP												4.1	2,284	5.6	4,417						
	Min.	1,628		1,295		1,598																	746	1,658					
	End	3,257		1,767		2,259																		880	2,358				
GC2x14-SR2	Start	2,554			Please consult factory	2,519	3,940	Exceeds MOP												3.7	2,093	5.6	4,793						
	Min.	1,423		903		1,508	1,809																	720	1,870				
	End	2,880		1,189		2,174	2,666																		894	2,765			
GC2x14-SR3	Start	2,285			Please consult factory	2,122	2,832	Exceeds MOP												3.3	1,837	5.6	5,107						
	Min.	1,274		752		1,055	1,960																		630	2,020			
	End	2,566		965		1,458	2,935																			769	3,033		
GC2x14-SR4	Start	2,035	1,757	2,468	3,178	4,600	5,311	Exceeds MOP												3.0	1,757	5.6	5,453						
	Min.	1,124	599	903	1,206	1,809	2,110																		599	2,170			
	End	2,220	723	1,215	1,708	2,692	3,185																			723	3,283		
GC2x16-SR1	Start	2,949			Please consult factory	3,009	3,947	Exceeds MOP												3.2	2,445	4.2	4,323						
	Min.	1,624		1,061		1,461																				819	1,621		
	End	3,237		1,382		2,032																					992	2,293	
GC2x16-SR2	Start	2,541	2,447	3,385	4,324			Exceeds MOP												2.8	2,071	4.2	4,700						
	Min.	1,419	875	1,275	1,674																					715	1,833		
	End	2,861	1,139	1,789	2,440																						879	2,700	
GC2x16-SR3	Start	2,272	2,760	3,699	4,637			Exceeds MOP												2.5	1,821	4.2	5,013						
	Min.	1,270	1,028	1,427	1,824																						627	1,984	
	End	2,547	1,408	2,058	2,708																							757	2,969
GC2x16-SR4	Start	2,022	3,106	4,045	4,984			Exceeds MOP												2.2	1,604	4.2	5,359						
	Min.	1,120	1,178	1,576	1,974																							537	2,133
	End	2,201	1,658	2,308	2,958																								617

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# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)									
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5						
		Pressure Torque Output: Start/Min./End (Nm)																										
GC3x10-SR1	Start	5,231													Please consult factory	4,797	5,787	6,282	6,777	7,273	10.7	4,500	13.8	7,570				
	Min.	2,864												1,604		2,026	2,235	2,445	2,654	1,477		2,780						
	End	5,816														2,036	2,714	3,053	3,392	3,731		1,833		3,934				
GC3x10-SR2	Start	4,559												Please consult factory	4,557	5,052	5,547	6,537	7,033	7,528	8,023	9.3	3,864	13.8	8,320			
	Min.	2,499													1,562	1,772	1,982	2,401	2,610	2,818	3,027		1,266		3,152			
	End	5,065														2,030	2,368	2,707	3,385	3,724	4,063		4,402		1,555	4,605		
GC3x10-SR3	Start	3,981												Please consult factory	3,718	4,213	5,203	5,698	6,193	7,184	7,679	8,174	8,669	8.1	3,322	13.8	8,967	
	Min.	2,185													1,255	1,466	1,886	2,095	2,304	2,721	2,930	3,138	3,347		1,086		3,472	
	End	4,418														1,591	1,929	2,607	2,946	3,284	3,962	4,301	4,640		4,979		1,320	5,182
GC3x10-SR4	Start	3,484												Please consult factory	3,284	4,274	4,768	5,758	6,253	6,749	7,739	8,234	8,729	9,225	7.2	2,987	13.8	9,522
	Min.	1,915													1,114	1,534	1,744	2,162	2,370	2,579	2,996	3,204	3,412	3,621		987		3,746
	End	3,863														1,410	2,087	2,426	3,103	3,442	3,781	4,459	4,798	5,137		5,476		1,207
GC3x12-SR1	Start	5,215												Please consult factory	4,567	5,992	6,704								7.4	4,425	9.8	7,843
	Min.	2,859													1,509	2,115	2,416	Exceeds MOP								1,448		2,898
	End	5,793														1,879	2,854	3,341								1,782		4,121
GC3x12-SR2	Start	4,543												Please consult factory	4,606	5,318	6,742	7,454							6.5	3,894	9.8	8,594
	Min.	2,494													1,585	1,887	2,489	2,790	Exceeds MOP							1,281		3,270
	End	5,042														2,063	2,550	3,525	4,013							1,576		4,793
GC3x12-SR3	Start	3,965												Please consult factory	3,828	5,252	5,964	7,388	8,100						5.7	3,401	9.8	9,240
	Min.	2,180													1,305	1,909	2,209	2,810	3,109	Exceeds MOP						1,122		3,589
	End	4,395														1,666	2,640	3,128	4,102	4,590						1,373		5,370
GC3x12-SR4	Start	3,468												Please consult factory	2,959	3,671	4,383	5,807	6,519	7,944	8,656			5.0	2,959	9.8	9,795	
	Min.	1,910													978	1,282	1,584	2,185	2,485	3,084	3,384	Exceeds MOP					978	3,863
	End	3,839														1,188	1,675	2,162	3,137	3,624	4,599	5,086					1,188	5,866

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)				
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
		Pressure Torque Output: Start/Min./End (Nm)																							
GC3x14-SR1	Start	5,203								6,008	6,875	Exceeds MOP								6.1	4,447	8.1	7,916		
	Min.	2,855								2,125	2,492												1,461	2,931	
	End	5,774									2,865		3,459											1,797	4,171
GC3x14-SR2	Start	4,531										Exceeds MOP								5.3	3,811	8.1	8,667		
	Min.	2,490																						1,249	3,304
	End	5,023																						1,519	4,842
GC3x14-SR3	Start	3,953										Exceeds MOP								4.7	3,417	8.1	9,313		
	Min.	2,176																						1,132	3,622
	End	4,377																						1,384	5,420
GC3x14-SR4	Start	3,455										Exceeds MOP								4.1	2,932	8.1	9,868		
	Min.	1,906																						970	3,896
	End	3,821																						1,169	5,916
GC3x16-SR1	Start	5,186										Exceeds MOP								4.6	4,402	6.2	8,073		
	Min.	2,850																						1,444	3,000
	End	5,751																						1,766	4,278
GC3x16-SR2	Start	4,514										Exceeds MOP								4.0	3,775	6.2	8,824		
	Min.	2,485																						1,237	3,372
	End	5,000																						1,495	4,950
GC3x16-SR3	Start	3,936										Exceeds MOP								3.5	3,274	6.2	9,470		
	Min.	2,171																						1,075	3,691
	End	4,353																						1,287	5,527
GC3x16-SR4	Start	3,439										Exceeds MOP								3.1	2,912	6.2	10,025		
	Min.	1,901																						965	3,965
	End	3,797																						1,155	6,023
GC3x20-SR1	Start	5,154	4,728	6,550								Exceeds MOP								2.9	4,364	3.9	8,007		
	Min.	2,840	1,592	2,365																				1,436	2,979
	End	5,703	1,989	3,236																				1,740	4,233
GC3x20-SR2	Start	4,482	5,479	7,300								Exceeds MOP								2.6	4,022	3.9	8,757		
	Min.	2,475	1,970	2,738																				1,351	3,352
	End	4,952	2,661	3,907																				1,663	4,904
GC3x20-SR3	Start	3,904	6,125	7,946								Exceeds MOP								2.2	3,211	3.9	9,403		
	Min.	2,161	2,292	3,058																				1,056	3,670
	End	4,306	3,238	4,484																				1,244	5,481
GC3x20-SR4	Start	3,407	6,680	8,502								Exceeds MOP								1.9	2,674	3.9	9,959		
	Min.	1,891	2,567	3,332																				872	3,944
	End	3,750	3,734	4,981																				992	5,978

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# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)															
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5												
		Pressure Torque Output: Start/Min./End (Nm)																																
GC4x12-SR2	Start	9,406																	Please consult factory	8,855	10,560	11,413	12,265	13,118	11.0	8,855	13.8	13,630						
	Min.	4,939																2,771		3,509	3,875	4,241	4,605	2,771		4,823								
	End	9,499																		3,316	4,497	5,087	5,678	6,268		3,316		6,623						
GC4x12-SR3	Start	7,919																	Please consult factory	8,638	9,490	10,343	12,048	12,901	13,753	14,606	9.2	7,274	13.8	15,118				
	Min.	4,168																2,856		3,223	3,588	4,316	4,679	5,042	5,404	2,265		5,621						
	End	8,010																3,620		4,210	4,801	5,981	6,572	7,163	7,753	2,676		8,107						
GC4x12-SR4	Start	6,536																	Please consult factory	7,367	8,219	9,924	10,776	11,629	13,334	14,186	15,039	15,892	7.7	6,003	13.8	16,404		
	Min.	3,471																2,498		2,863	3,590	3,953	4,315	5,039	5,401	5,762	6,123	6,340						
	End	6,724																3,230		3,820	5,001	5,591	6,182	7,362	7,953	8,543	9,134	9,488						
GC4x14-SR1	Start	10,750																	Please consult factory	10,140	11,180	13,259	14,299	15,339	Exceeds MOP	9,724	10.3	16,171						
	Min.	5,726																3,282		3,730	4,621	5,065	5,508	3,102		5,862								
	End	11,246																4,074		4,794	6,234	6,954	7,674	3,786		8,251								
GC4x14-SR2	Start	9,391																	Please consult factory	8,790	10,869	11,909	12,949	15,028	16,068	17,108	Exceeds MOP	8,790	9.0	17,940				
	Min.	4,935																2,747		3,646	4,092	4,536	5,423	5,865	6,307	2,747		6,661						
	End	9,477																3,271		4,711	5,431	6,151	7,591	8,311	9,031	3,271		9,608						
GC4x14-SR3	Start	7,903																	Please consult factory	9,239	10,278	12,357	13,397	14,437	16,516	18,596	Exceeds MOP	7,368	7.6	19,428				
	Min.	4,163																3,119		3,564	4,451	4,894	5,336	6,218	6,660	7,100		2,310		7,453				
	End	7,988																4,036		4,756	6,196	6,916	7,636	9,076	9,796	10,516		2,741		11,092				
GC4x14-SR4	Start	6,520																	Please consult factory	7,407	8,446	10,525	11,564	13,643	14,683	15,723	17,802	18,842	19,882	Exceeds MOP	5,952	6.3	20,714	
	Min.	3,466																2,519		2,964	3,850	4,292	5,174	5,615	6,055	6,936	7,377	7,817	8,169					
	End	6,701																3,258		3,978	5,417	6,137	7,577	8,297	9,017	10,457	11,177	11,897	12,473					
GC4x16-SR1	Start	10,730																	Please consult factory	11,689	13,066	15,820									Exceeds MOP	9,762	7.8	16,096
	Min.	5,720																3,952		4,542	5,716								3,121	5,833				
	End	11,218																5,147		6,100	8,007								3,812	8,198				
GC4x16-SR2	Start	9,371																	Please consult factory	9,328	10,705	13,458	14,835	17,589							Exceeds MOP	8,777	6.8	17,864
	Min.	4,929																2,984		3,578	4,757	5,343	6,514						2,745	6,631				
	End	9,448																3,644		4,597	6,504	7,457	9,364						3,262	9,555				
GC4x16-SR3	Start	7,884																	Please consult factory	8,063	10,816	12,193	14,946	16,323	19,077						Exceeds MOP	7,237	5.7	19,352
	Min.	4,157																2,616		3,797	4,384	5,555	6,139	7,307					2,257	7,423				
	End	7,960																3,222		5,128	6,082	7,989	8,942	10,849					2,650	11,040				
GC4x16-SR4	Start	6,501																	Please consult factory	6,596	7,972	9,349	12,102	13,478	16,232	17,609	20,363				Exceeds MOP	6,046	4.8	20,638
	Min.	3,460																2,174		2,765	3,353	4,523	5,107	6,274	6,857	8,023			1,935	8,139				
	End	6,673																2,697		3,650	4,603	6,509	7,463	9,369	10,323	12,230			2,315	12,421				

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## Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)								
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5							
		Pressure Torque Output: Start/Min./End (Nm)																											
GC4x20-SR1	Start	10,691			Please consult factory	10,134	12,325	14,515	Exceeds MOP											4.9	9,696	6.3	15,829						
	Min.	5,708				3,290	4,232	5,167																3,101	5,727				
	End	11,161				4,070	5,587	7,104																	3,767	8,014			
GC4x20-SR2	Start	9,331			Please consult factory	11,903	14,094	16,284	Exceeds MOP											4.1	7,961	6.3	17,598						
	Min.	4,917				4,100	5,035	5,967																2,396	6,525				
	End	9,391				5,427	6,944	8,461																	2,697	9,371			
GC4x20-SR3	Start	7,844			Please consult factory	9,011	13,391	15,582	Exceeds MOP											3.6	7,259	6.3	19,086						
	Min.	4,145				3,033	4,902	5,832		6,761															2,275	7,317			
	End	7,902				3,879	6,912	8,429		9,946																2,665	10,856		
GC4x20-SR4	Start	6,461	5,917	8,107	10,297	14,677	16,868	19,058	Exceeds MOP											3.0	5,917	6.3	20,372						
	Min.	3,448	1,889	2,831	3,765	5,623	6,551	7,478																1,889	8,034				
	End	6,616	2,227	3,743	5,260	8,293	9,810	11,326																	2,227	12,237			
GC4x24-SR1	Start	10,662			Please consult factory	10,525	13,715	Exceeds MOP												3.4	9,887	4.3	15,629						
	Min.	5,699				3,463	4,830																		3,188	5,645			
	End	11,119				4,340	6,550																			3,899	7,875		
GC4x24-SR2	Start	9,303	9,104	12,294	15,484	Exceeds MOP														3.0	9,104	4.3	17,398						
	Min.	4,908	2,900	4,272	5,630																				2,900	6,444			
	End	9,350	3,488	5,698	7,907																					3,488	9,232		
GC4x24-SR3	Start	7,815	10,592	13,782	16,972	Exceeds MOP														2.5	7,402	4.3	18,886						
	Min.	4,136	3,715	5,072	6,426																				2,343	7,236			
	End	7,861	4,973	7,182	9,392																					2,764	10,717		
GC4x24-SR4	Start	6,432	11,878	15,068	18,258	Exceeds MOP														2.1	6,136	4.3	20,172						
	Min.	3,439	4,441	5,793	7,143																					1,990	7,953		
	End	6,575	6,354	8,563	10,772																						2,378	12,098	
GC4x28-SR1	Start	10,540	15,041	Exceeds MOP																2.3	8,736	3.1	15,942						
	Min.	5,662	5,438																							2,730	5,821		
	End	10,943	7,468																								3,101	8,092	
GC4x28-SR2	Start	9,180	16,810	Exceeds MOP																2.1	8,703	3.1	17,711						
	Min.	4,870	6,237																								2,768	6,619	
	End	9,173	8,825																									3,211	9,449
GC4x28-SR3	Start	7,693	18,298	Exceeds MOP																1.7	6,588	3.1	19,199						
	Min.	4,099	7,030																									2,029	7,412
	End	7,685	10,310																										2,201

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)															
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5												
			Pressure Torque Output: Start/Min./End (Nm)																																
GC5x16-SR2	Start	21,889																	Please consult factory	24,756	26,516	28,276	12.3	24,053	13.8	29,332									
	Min.	10,711																7,215		7,991	8,761	6,902		9,220											
	End	18,617																8,188		9,408	10,628	7,701		11,360											
GC5x16-SR3	Start	17,605																	Please consult factory	18,890	20,650	22,409	25,928	27,688	29,448	31,208	9.9	18,538	13.8	32,264					
	Min.	8,784																5,576		6,349	7,114	8,632	9,388	10,141	10,893	5,420		11,343							
	End	15,683																6,370		7,590	8,809	11,248	12,468	13,687	14,907	6,126		15,639							
GC5x16-SR4	Start	14,681																	Please consult factory	16,032	17,791	21,309	23,069	24,828	28,347	30,107	31,867	33,627	8.3	15,328	13.8	34,683			
	Min.	7,376																4,838		5,607	7,125	7,880	8,632	10,133	10,882	11,630	12,378	4,528		12,826					
	End	13,262																5,633		6,852	9,291	10,510	11,730	14,169	15,388	16,608	17,828	5,145		18,560					
GC5x20-SR1	Start	24,369																	Please consult factory	27,874	33,496	36,308	39,120	Exceeds MOP							8.6	25,625	11.3	40,807	
	Min.	12,207																8,536		10,972	12,181	13,385	7,547		14,107										
	End	21,973																10,196		14,093	16,042	17,991	8,638		19,160										
GC5x20-SR2	Start	21,838																	Please consult factory	28,490	31,301	36,924	39,735	42,547	Exceeds MOP							7.7	23,992	11.3	44,234
	Min.	10,695																8,864		10,083	12,501	13,704	14,904	6,885		15,623									
	End	18,543																10,776		12,724	16,621	18,570	20,519	7,659		21,688									
GC5x20-SR3	Start	17,554																	Please consult factory	22,988	25,799	31,421	34,232	39,855	42,667	45,479	Exceeds MOP	18,491	11.3	47,166					
	Min.	8,768																7,376		8,587	10,993	12,192	14,584	15,777	16,970	5,410		17,686							
	End	15,609																9,210		11,159	15,055	17,004	20,901	22,849	24,798	6,093		25,968							
GC5x20-SR4	Start	14,629																	Please consult factory	16,975	19,786	25,407	28,218	33,840	36,651	42,274	45,086	47,898	Exceeds MOP	15,289	11.3	49,585			
	Min.	7,360																5,263		6,481	8,890	10,088	12,478	13,671	16,055	17,246	18,437	4,523		19,151					
	End	13,188																6,287		8,235	12,131	14,079	17,976	19,924	23,821	25,770	27,719	5,118		28,888					
GC5x24-SR1	Start	24,332																	Please consult factory	26,468	34,675	38,779	Exceeds MOP								5.9	25,647	7.7	40,420	
	Min.	12,196																7,923		11,482	13,241	7,561		13,943											
	End	21,920																9,222		14,910	17,755	8,653		18,892											
GC5x24-SR2	Start	21,801																	Please consult factory	25,792	29,895	38,102	42,206	Exceeds MOP							5.3	24,151	7.7	43,848	
	Min.	10,684																7,688		9,478	13,008	14,761	6,961		15,460										
	End	18,490																8,906		11,750	17,438	20,283	7,768		21,420										
GC5x24-SR3	Start	17,517																	Please consult factory	24,620	28,723	32,827	41,034	45,138	Exceeds MOP							4.1	17,235	7.7	46,779
	Min.	8,756																8,085		9,845	11,597	15,087	16,828	4,854		17,524									
	End	15,556																10,341		13,185	16,029	21,718	24,562	5,223		25,700									
GC5x24-SR4	Start	14,592																	Please consult factory	18,833	27,039	31,142	35,246	43,453	47,557	Exceeds MOP	15,551	7.7	49,198						
	Min.	7,349																6,075		9,591	11,336	13,078	16,557	18,294	4,645		18,989								
	End	13,135																7,574		13,262	16,106	18,950	24,638	27,483	5,299		28,620								

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# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)				
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
			Pressure Torque Output: Start/Min./End (Nm)																							
GC5x28-SR1	Start	24,174			Please consult factory	35,015	40,817	Exceeds MOP												4.1	24,572	5.5	40,817			
	Min.	12,147				11,690	14,177																7,146		14,177	
	End	21,692				15,146	19,167																	7,908		19,167
GC5x28-SR2	Start	21,643		Please consult factory	26,839	38,442	44,245	Exceeds MOP												3.7	23,358	5.5	44,245			
	Min.	10,635				8,208	13,215		15,693															6,666		15,693
	End	18,262				9,632	17,674		21,695															7,219		21,695
GC5x28-SR3	Start	17,358	18,168	23,969	29,771	41,374	47,176	Exceeds MOP												3.0	18,168	5.5	47,176			
	Min.	8,708	5,331	7,863	10,352	15,293	17,755																5,331		17,755	
	End	15,328	5,870	9,890	13,911	21,953	25,975																5,870		25,975	
GC5x28-SR4	Start	14,434	20,587	26,388	32,190	43,793	49,595	Exceeds MOP												2.6	15,946	5.5	49,595			
	Min.	7,300	6,888	9,371	11,841	16,763	19,220																4,876		19,220	
	End	12,907	8,790	12,811	16,832	24,874	28,895																5,574		28,895	
GC5x32-SR1	Start	24,110	Please consult factory	30,086	37,683	Exceeds MOP														3.2	25,528	4.2	40,722			
	Min.	12,128		9,579	12,849																			7,586		14,150
	End	21,600		11,730	16,995																			8,571		19,101
GC5x32-SR2	Start	21,579	25,917	33,513	41,110	Exceeds MOP														2.8	22,878	4.2	44,149			
	Min.	10,615	7,820	11,116	14,370																		6,466		15,666	
	End	18,170	8,993	14,258	19,523																		6,887		21,629	
GC5x32-SR3	Start	17,294	28,848	36,445	44,042	Exceeds MOP														2.3	18,214	4.2	47,081			
	Min.	8,688	9,973	13,212	16,439																		5,368		17,729	
	End	15,236	13,272	18,537	23,802																		5,901		25,909	
GC5x32-SR4	Start	14,370	31,267	38,864	46,461	Exceeds MOP														1.9	14,556	4.2	49,500			
	Min.	7,280	11,464	14,688	17,907																		4,278		19,194	
	End	12,815	16,192	21,458	26,723																		4,610		28,829	
GC5x36-SR1	Start	24,046	34,609	Exceeds MOP																2.5	24,977	3.3	40,388			
	Min.	12,108	11,546																				7,359		14,022	
	End	21,507	14,864																				8,189		18,870	
GC5x36-SR2	Start	21,515	38,036	Exceeds MOP																2.3	24,552	3.3	43,815			
	Min.	10,595	13,072																				7,233		15,539	
	End	18,077	17,392																				8,047		21,398	
GC5x36-SR3	Start	17,230	40,968	Exceeds MOP																1.8	17,852	3.3	46,747			
	Min.	8,668	15,150																				5,225		17,602	
	End	15,143	21,672																				5,651		25,677	
GC7x20-SR3	Start	35,086																		10.1	37,681	13.8	63,059			
	Min.	17,338																			12,116			21,886		
	End	30,551																			14,134			29,825		
GC7x20-SR4	Start	29,444																		8.5	31,360	13.8	67,710			
	Min.	14,624																			9,129			24,755		
	End	25,895																			10,263			35,460		

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric



## Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)															MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)														
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5												
			Pressure Torque Output: Start/Min./End (Nm)																																
GC7x24-SR1	Start	48,183																		Please consult factory	57,842	62,859	67,876	77,910	Exceeds MOP	9.5	52,825	12.3	80,921						
	Min.	23,647																	17,432		19,624	21,799	26,120	15,215						27,411					
	End	41,333																			20,594	24,071	27,549	34,505						17,116	36,592				
GC7x24-SR2	Start	42,540																		Please consult factory	47,443	52,459	62,493	67,510	72,527	82,561	Exceeds MOP	8.4	46,440	12.3	85,572				
	Min.	20,933																	13,862		16,070	20,420	22,578	24,729	29,017	13,416						30,301			
	End	36,677																			15,797	19,274	26,230	29,707	33,185	40,141						15,102	42,228		
GC7x24-SR3	Start	35,038																		Please consult factory	38,585	43,600	53,633	58,649	68,682	73,699	78,716	88,751	Exceeds MOP	7.0	38,585	12.3	91,762		
	Min.	17,323																	11,304		13,507	17,845	19,997	24,284	26,421	28,556	32,820	11,304						34,098	
	End	30,482																			12,859	16,336	23,290	26,767	33,723	37,200	40,678	47,634						12,859	49,721
GC7x24-SR4	Start	29,396																		Please consult factory	33,205	43,236	48,251	58,283	63,300	73,333	78,350	83,367	93,402	Exceeds MOP	5.9	32,202	12.3	96,413	
	Min.	14,609																	9,949		14,304	16,457	20,742	22,877	27,142	29,271	31,401	35,654	9,506						36,929
	End	25,826																			11,542	18,495	21,972	28,926	32,403	39,358	42,836	46,314	53,270						10,846
GC7x28-SR1	Start	47,991																		Please consult factory	56,677	63,781	77,988	Exceeds MOP	6.7	52,416	8.7	80,830							
	Min.	23,587																	17,002		20,106	26,237	15,113						27,455						
	End	41,056																			19,787	24,711	34,559						16,832	36,529					
GC7x28-SR2	Start	42,349																		Please consult factory	47,123	61,328	68,432	82,639	Exceeds MOP	5.9	45,702	8.7	85,481						
	Min.	20,874																	13,798		19,997	23,054	29,132	13,165						30,345					
	End	36,401																			15,575	25,422	30,346	40,195						14,591	42,165				
GC7x28-SR3	Start	34,847																		Please consult factory	39,108	46,210	53,312	67,518	74,621	88,829	Exceeds MOP	4.9	37,688	8.7	91,670				
	Min.	17,264																	11,611		14,717	17,784	23,865	26,893	32,935	10,981						34,142			
	End	30,205																			13,222	18,145	23,068	32,915	37,839	47,688						12,237	49,658		
GC7x28-SR4	Start	29,204																		Please consult factory	43,759	50,861	57,963	72,169	79,272	93,480	Exceeds MOP	4.1	30,977	8.7	96,321				
	Min.	14,550																	14,602		17,648	20,681	26,726	29,742	35,769	9,034						36,973			
	End	25,550																			18,858	23,781	28,704	38,551	43,475	53,324						9,997	55,294		

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)										
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5									
		Pressure Torque Output: Start/Min./End (Nm)																													
GC7x32-SR1	Start	47,913				Please consult factory	59,516	68,824	Exceeds MOP													5.1	52,070	6.6	79,994						
	Min.	23,563					18,262	22,304																	14,973		27,110				
	End	40,943						21,754		28,207																16,593		35,950			
GC7x32-SR2	Start	42,270			Please consult factory	54,860	64,167	73,475	Exceeds MOP														4.6	47,414	6.6	84,645					
	Min.	20,849					17,210	21,235		25,229																	13,943		30,001		
	End	36,287						20,938		27,390	33,843																	15,777		41,586	
GC7x32-SR3	Start	34,768		Please consult factory	42,435	61,049	70,357	79,665	Exceeds MOP														3.7	36,851	6.6	90,835					
	Min.	17,240					13,091	21,117		25,091	29,053																	10,624		33,800	
	End	30,092						15,528		28,431	34,883	41,336																	11,658		49,079
GC7x32-SR4	Start	29,125	Please consult factory	37,780	47,086	65,700	75,008	84,316	Exceeds MOP														3.2	32,196	6.6	95,486					
	Min.	14,526						12,037		16,048	23,990	27,945	31,897															9,594		36,631	
	End	25,436								14,713	21,164	34,067	40,519	46,972															10,842		54,715
GC7x36-SR1	Start	47,834		Please consult factory	75,096	Exceeds MOP																	4.1	53,843	5.2	79,819					
	Min.	23,539							25,021																				15,780		27,050
	End	40,829								32,554																				17,821	
GC7x36-SR2	Start	42,191	Please consult factory	56,132	79,747	Exceeds MOP																	3.6	46,687	5.2	84,470					
	Min.	20,825							17,779	27,926																			13,638		29,941
	End	36,174								21,821	38,190																			15,273	
GC7x36-SR3	Start	34,690	38,709	50,515	62,322	85,936	Exceeds MOP																3.0	38,709	5.2	90,659					
	Min.	17,216	11,471	16,613	21,678	31,735																						11,471		33,740	
	End	29,978	12,945	21,129	29,314	45,683																							12,945		48,957
GC7x36-SR4	Start	29,047	43,360	55,166	66,973	90,587	Exceeds MOP																2.5	31,554	5.2	95,310					
	Min.	14,502	14,465	19,520	24,548	34,570																						9,329		36,572	
	End	25,323	18,581	26,765	34,949	51,319																							10,398		54,593
GC7xT28-SR1	Start	47,396	Please consult factory	55,803	70,004	Exceeds MOP																	3.4	52,962	4.3	78,526					
	Min.	23,404							16,809	22,990																			15,550		26,658
	End	40,197								19,180	29,025																			17,211	
GC7xT28-SR2	Start	41,753	46,252	60,453	74,655	Exceeds MOP																	3.0	46,252	4.3	83,177					
	Min.	20,690	13,604	19,808	25,910																							13,604		29,551	
	End	35,542	14,972	24,816	34,661																								14,972		40,568
GC7xT28-SR3	Start	34,251	52,442	66,643	80,845	Exceeds MOP																	2.5	38,241	4.3	89,366					
	Min.	17,080	17,597	23,679	29,730																							11,419		33,351	
	End	29,346	22,465	32,309	42,154																								12,621		48,061
GC7xT28-SR4	Start	28,608	57,093	71,294	85,496	Exceeds MOP																	2.1	31,533	4.3	94,017					
	Min.	14,366	20,496	26,540	32,571																							9,473		36,184	
	End	24,691	28,101	37,945	47,790																								10,383		53,697

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)																		
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5															
			Pressure Torque Output: Start/Min./End (Nm)																																			
GC8x24-SR1	Start	71,274																	Please consult factory	70,978	76,877	82,777	88,677	11.9	69,798	13.8	92,217											
	Min.	36,699																21,669		24,237	26,789	29,331	21,152		30,852													
	End	69,216																25,930		30,019	34,109	38,198	25,112		40,652													
GC8x24-SR2	Start	57,366																	Please consult factory	57,879	63,778	69,677	81,475	87,375	93,274	99,174	9.7	54,340	13.8	102,714								
	Min.	30,200																18,637		21,178	23,709	28,749	31,263	33,772	36,281	17,104		37,784										
	End	58,708																23,467		27,556	31,645	39,823	43,912	48,002	52,091	21,014		54,545										
GC8x24-SR3	Start	48,641																	Please consult factory	49,044	54,942	66,738	72,637	78,536	90,334	96,233	102,133	108,033	8.2	45,505	13.8	111,573						
	Min.	25,642																15,829		18,369	23,416	25,932	28,441	33,453	35,957	38,460	40,960	14,296		42,460								
	End	49,840																19,918		24,006	32,183	36,272	40,361	48,539	52,628	56,718	60,807	17,465		63,261								
GC8x28-SR1	Start	71,043																	Please consult factory	71,377	79,748	96,492	104,865	113,238	Exceeds MOP							8.4	69,703	11.9	128,310			
	Min.	36,628																21,945		25,585	32,789	36,374	39,947								21,212		46,366					
	End	68,884																26,207		32,009	43,616	49,419	55,223								25,046		65,671					
GC8x28-SR2	Start	57,136																	Please consult factory	56,763	65,133	81,875	90,246	106,990	115,362	123,735	Exceeds MOP							6.8	53,415	11.9	138,807	
	Min.	30,129																18,250		21,857	29,019	32,585	39,702	43,256	46,810								16,797		53,196			
	End	58,376																22,693		28,495	40,100	45,902	57,509	63,312	69,116								20,372		79,564			
GC8x28-SR3	Start	48,411																	Please consult factory	48,883	65,622	73,992	90,733	99,105	115,848	124,221	132,594	Exceeds MOP							5.8	45,535	11.9	147,666
	Min.	25,572																15,851		23,034	26,604	33,721	37,275	44,374	47,922	51,469								14,401		57,850		
	End	49,508																19,806		31,409	37,211	48,816	54,618	66,225	72,028	77,832								17,486		88,280		
GC8x32-SR1	Start	70,950																	Please consult factory	82,712	93,696	115,664	126,649	Exceeds MOP							6.4	69,533	9.0	126,649				
	Min.	36,600																26,878		31,605	40,994	45,671								21,153		45,671						
	End	68,750																34,064		41,677	56,905	64,519								24,928		64,519						
GC8x32-SR2	Start	57,043																	Please consult factory	60,262	71,244	93,210	104,193	126,161	137,146	Exceeds MOP							5.2	53,673	9.0	137,146		
	Min.	30,101																19,777		24,493	33,860	38,528	47,850	52,504								16,926		52,504				
	End	58,241																25,119		32,731	47,957	55,570	70,798	78,412								20,551		78,412				
GC8x32-SR3	Start	48,317																	Please consult factory	58,139	69,121	80,103	102,068	113,052	135,020	146,005	Exceeds MOP							4.4	44,962	9.0	146,005	
	Min.	25,543																19,851		24,544	29,220	38,547	43,202	52,509	57,159								14,170		57,159			
	End	49,374																26,222		33,835	41,447	56,673	64,286	79,514	87,128								17,088		87,128			

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

## Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)				
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
		Pressure Torque Output: Start/Min./End (Nm)																							
GC8x36-SR1	Start	70,857			Please consult factory	68,267	82,211	96,155	124,045	Exceeds MOP											5.0	68,267	7.1	126,834	
	Min.	36,571				20,615	26,679	32,674	44,578		20,615	26,679	32,674	44,578										20,615	45,764
	End	68,616				24,051	33,716	43,382	62,714		24,051	33,716	43,382	62,714										24,051	64,648
GC8x36-SR2	Start	56,950			Please consult factory	78,764	92,708	106,652	134,542	Exceeds MOP											4.1	53,667	7.1	137,331	
	Min.	30,072				27,724	33,663	39,588	51,415		27,724	33,663	39,588	51,415										16,943	52,596
	End	58,107				37,944	47,609	57,275	76,607		37,944	47,609	57,275	76,607										20,547	78,541
GC8x36-SR3	Start	48,224	Please consult factory	45,795	59,737	87,623	101,567	115,511	143,401	Exceeds MOP											3.4	43,007	7.1	146,190	
	Min.	25,515		14,553	20,555	32,433	38,351	44,260	56,072		14,553	20,555	32,433	38,351	44,260	56,072								13,339	57,251
	End	49,239		17,666	27,330	46,660	56,325	65,991	85,323		17,666	27,330	46,660	56,325	65,991	85,323								15,733	87,257
GC8x40-SR1	Start	70,764			Please consult factory	101,241	118,496	Exceeds MOP													4.1	70,184	5.8	128,849	
	Min.	36,542				34,869	42,234																	21,476	46,638
	End	68,481				46,907	58,868																	25,379	66,044
GC8x40-SR2	Start	56,856	Please consult factory	59,977	77,230	111,738	128,993	Exceeds MOP													3.3	53,076	5.8	139,346	
	Min.	30,044		19,694	27,089	41,764	49,081																	16,708	53,466
	End	57,973		24,921	36,881	60,800	72,761																	20,138	79,938
GC8x40-SR3	Start	48,131	51,584	68,836	86,089	120,597	137,852	Exceeds MOP													2.8	44,683	5.8	148,205	
	Min.	25,486	17,078	24,462	31,802	46,432	53,741																	14,092	58,120
	End	49,105	21,678	33,637	45,597	69,516	81,477																	16,895	88,653

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic

## Spring Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)																MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5		
		Pressure Torque Output: Start/Min./End (Nm)																						
GC8xT32-SR1	Start	70,142	Please	81,525	103,486	Exceeds MOP														3.2	68,349	4.5	125,447	
	Min.	36,351	consult	26,623	36,053																20,894		45,416	
	End	67,584	factory	33,241	48,463																		24,108	63,686
GC8xT32-SR2	Start	56,235	70,063	92,023	113,983	Exceeds MOP														2.6	52,496	4.5	135,944	
	Min.	29,853	24,240	33,608	42,937																16,671		52,249	
	End	57,076	31,912	47,134	62,356																		19,735	77,579
GC8xT32-SR3	Start	47,509	78,922	100,881	122,842	Exceeds MOP														2.2	43,788	4.5	144,803	
	Min.	25,296	28,969	38,296	47,603																13,915		56,905	
	End	48,208	40,628	55,850	71,072																		16,275	86,295
GC8xT36-SR1	Start	69,956	94,838	122,721	Exceeds MOP															2.6	72,532	3.6	128,298	
	Min.	36,294	32,393	44,297																	22,768		46,669	
	End	67,316	42,469	61,797																			27,007	65,662
GC8xT36-SR2	Start	56,048	105,335	133,218	Exceeds MOP															2.1	55,148	3.6	138,795	
	Min.	29,796	39,309	51,135																	17,869		53,498	
	End	56,807	56,362	75,690																			21,574	79,555
GC8xT36-SR3	Start	47,323	114,194	142,077	Exceeds MOP															1.7	41,702	3.6	147,654	
	Min.	25,239	43,981	55,792																	13,055		58,151	
	End	47,939	65,078	84,406																			14,829	88,271
GC10x28-SR4	Start	96,790																		8.8	107,308	13.8	216,300	
	Min.	47,257																			32,710		30,768	77,743
	End	81,686																			37,280		34,259	109,803

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)	Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)																				
		3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5																	
Pressure Torque Output: Start/Min./End (Nm)																																							
GC10x32-SR2	Start	132,353																	9.2	144,637	13.8	276,502																	
	Min.	65,483																Please consult factory					167,567	181,898	196,230	224,897	239,231	253,565	267,900										
	End	115,915																					64,204	74,138	84,072	103,941	113,876	123,812	133,748										
GC10x32-SR3	Start	120,642																	8.3	137,728	13.8	295,386																	
	Min.	57,788																Please consult factory					143,459	157,789	186,451	200,782	215,114	243,781	258,115	272,449	286,784								
	End	97,014																					41,162	47,501	59,974	66,155	72,315	84,583	90,699	96,815	102,915								
GC10x32-SR4	Start	96,668																	6.7	107,368	13.8	310,876																	
	Min.	47,219																Please consult factory					115,964	130,292	158,950	173,279	201,941	216,272	230,605	259,271	273,605	287,939	302,275						
	End	81,509																					34,628	40,892	53,260	59,401	71,642	77,744	83,842	96,020	102,104	108,188	114,268						
GC10x36-SR2	Start	132,231																	7.2	143,176	10.9	278,019																	
	Min.	65,445																Please consult factory					154,108	190,549	208,770	245,216	263,439	Exceeds MOP											
	End	115,739																					46,495	62,318	70,152	85,739	93,514	54,876	80,134	92,763	118,024	130,655							
GC10x36-SR3	Start	120,520																	6.6	140,197	10.9	296,903																	
	Min.	57,750																Please consult factory					154,772	172,992	209,433	227,654	264,100	282,323	Exceeds MOP										
	End	96,838																					46,196	54,160	69,889	77,700	93,267	101,030	53,945	66,574	91,832	104,461	129,722	142,353					
GC10x36-SR4	Start	96,545																	5.3	108,321	10.9	312,393																	
	Min.	47,181																Please consult factory					115,608	133,826	170,263	188,482	224,923	243,145	279,590	297,813	Exceeds MOP								
	End	81,333																					34,493	42,446	58,128	65,916	81,440	89,190	104,658	112,391	40,012	52,639	77,894	90,522	115,780	128,410	153,671	166,302	
GC10x40-SR1	Start	164,027																	7.2	183,473	8.8	255,699																	
	Min.	79,837																Please consult factory					197,015	242,156	Exceeds MOP														
	End	137,744																					58,476	78,133	68,092	99,380													
GC10x40-SR2	Start	132,108																	5.8	142,442	8.8	277,860																	
	Min.	65,407																Please consult factory					151,469	196,606	219,175	264,317	Exceeds MOP												
	End	115,563																					45,359	64,943	74,626	93,904	53,047	84,332	99,975	131,264									
GC10x40-SR3	Start	120,398																	5.3	138,759	8.8	296,744																	
	Min.	57,712																Please consult factory					147,785	170,353	215,490	238,059	283,201	Exceeds MOP											
	End	96,661																					43,129	53,033	72,511	82,172	101,419	49,103	64,744	96,030	111,673	142,962							
GC10x40-SR4	Start	96,423																	4.1	100,091	8.8	312,234																	
	Min.	47,144																Please consult factory					140,709	163,276	185,843	230,980	253,550	298,691	Exceeds MOP										
	End	81,157																					45,449	55,159	64,811	84,035	93,624	112,779	57,410	73,051	88,693	119,978	135,622	166,910					

Note: All Published Torques are Guaranteed Minimum Values. Units are Metric

# Torque - Pneumatic Spring Return Actuator

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure, (barg)														MinOP (barg)	Torque @ MinOP (Nm)	MOP (barg)	Torque @ MOP (Nm)			
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5
Pressure Torque Output: Start/Min./End (Nm)																							
GC10xT32-SR1	Start	163,186					Please consult factory	201,084	Exceeds MOP										5.7	183,892	6.9	252,661	
	Min.	79,577						60,597												52,987		83,000	
	End	136,531						70,912														58,997	106,661
GC10xT32-SR2	Start	131,268			Please consult factory	165,941	194,592	223,244	Exceeds MOP										4.6	143,021	6.9	274,821	
	Min.	65,148				52,004	64,396	76,690														41,942	98,704
	End	114,350				63,078	82,936	102,796														47,191	138,545
GC10xT32-SR3	Start	119,557			Please consult factory	184,825	213,476	242,128	Exceeds MOP										4.1	133,257	6.9	293,705	
	Min.	57,451				59,624	71,963	84,231														36,913	106,217
	End	95,448				74,776	94,634	114,494														39,032	150,243
GC10xT32-SR4	Start	95,582	Please consult factory	114,370	143,017	200,316	228,966	257,619	Exceeds MOP										3.4	108,641	6.9	309,196	
	Min.	46,883		34,276	46,748	71,296	83,494	95,670												31,736		117,556	
	End	79,944		39,154	59,010	98,724	118,583	138,442														35,183	174,191
GC10xT36-SR1	Start	162,941			Please consult factory	221,246	257,680	Exceeds MOP											4.5	184,814	5.5	257,680	
	Min.	79,501				69,454	85,201															53,449	85,201
	End	136,178				84,887	110,140															59,635	110,140
GC10xT36-SR2	Start	131,023	Please consult factory	170,544	243,407	279,840	Exceeds MOP												3.6	141,400	5.5	279,840	
	Min.	65,073		54,054	85,354	100,882														41,275		100,882	
	End	113,997		66,268	116,771	142,023																46,068	142,023
GC10xT36-SR3	Start	119,313	Please consult factory	152,999	189,428	262,291	298,724	Exceeds MOP											3.3	138,427	5.5	298,724	
	Min.	57,376		45,804	61,662	92,881	108,395													39,316		108,395	
	End	95,096		52,716	77,966	128,469	153,721													42,616		153,721	
GC10xT36-SR4	Start	95,338	132,061	168,489	204,918	277,781	314,215	Exceeds MOP											2.6	102,919	5.5	314,215	
	Min.	46,807	42,064	57,749	73,309	104,274	119,726													29,227		119,726	
	End	79,591	51,416	76,665	101,915	152,417	177,670													31,217		177,670	
GC10xT40-SR1	Start	162,697	Please consult factory	217,620	Exceeds MOP														3.6	181,517	4.4	253,724	
	Min.	79,425		67,927																		52,027	83,550
	End	135,825		82,374																		57,350	107,398
GC10xT40-SR2	Start	130,779	149,525	194,652	239,781	Exceeds MOP													2.9	140,500	4.4	275,885	
	Min.	64,997	44,931	64,524	83,857															40,934		99,247	
	End	113,644	51,699	82,978	114,257															45,444		139,282	
GC10xT40-SR3	Start	119,068	168,409	213,536	258,665	Exceeds MOP													2.6	132,308	4.4	294,769	
	Min.	57,300	52,609	72,091	91,385															36,594		106,761	
	End	94,743	63,397	94,676	125,955															38,375		150,980	
GC10xT40-SR4	Start	95,093	183,899	229,026	274,155	Exceeds MOP													2.1	102,674	4.4	310,259	
	Min.	46,732	64,397	83,620	102,785															29,180		118,098	
	End	79,238	87,346	118,624	149,904															31,047		174,928	

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