

Bettis G-Series

Pneumatic Double-Acting and Spring-Return Actuator Torque Chart Metric

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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)																							
G01x08	Outboard	Start	959	1,129	1,299	1,639	1,809	1,979	2,320	2,490	2,830	3,000	3,341	3,511	3,682	4,022	4,193	4,363	Exceeds MOP	2.8	13.2	891	4,431
		Min	520	609	699	877	967	1,056	1,235	1,324	1,503	1,593	1,771	1,861	1,950	2,129	2,219	2,308				484	2,344
		End	958	1,128	1,298	1,637	1,807	1,977	2,317	2,487	2,827	2,997	3,338	3,508	3,678	4,018	4,188	4,359				890	4,427
	Inboard	Start	943	1,110	1,277	1,612	1,779	1,947	2,281	2,449	2,784	2,951	3,286	3,454	3,622	3,957	4,124	4,292				876	4,359
		Min	512	599	687	863	951	1,039	1,215	1,303	1,479	1,567	1,743	1,831	1,919	2,095	2,183	2,271				476	2,306
		End	942	1,109	1,276	1,610	1,777	1,945	2,279	2,446	2,781	2,948	3,283	3,451	3,618	3,953	4,120	4,288				875	4,355
G01x09	Outboard	Start	1,229	1,445	1,662	2,094	2,311	2,527	2,960	3,176	3,609	3,825	4,258	Exceeds MOP	2.8	10.4	1,143	4,432					
		Min	664	777	891	1,118	1,231	1,345	1,572	1,686	1,913	2,027	2,254				618	2,345					
		End	1,228	1,444	1,660	2,092	2,308	2,524	2,957	3,173	3,605	3,822	4,254				1,142	4,427					
	Inboard	Start	1,213	1,426	1,640	2,067	2,281	2,494	2,921	3,135	3,563	3,776	4,204				1,127	4,375					
		Min	655	767	879	1,104	1,216	1,328	1,552	1,664	1,889	2,001	2,225				610	2,315					
		End	1,212	1,425	1,638	2,065	2,278	2,492	2,919	3,132	3,559	3,773	4,200				1,126	4,371					
G01x10	Outboard	Start	1,641	1,927	2,213	2,785	3,072	3,358	3,931	4,217	Exceeds MOP	2.8	7.9	1,526	4,446								
		Min	881	1,031	1,182	1,482	1,632	1,783	2,083	2,233				821	2,354								
		End	1,639	1,925	2,211	2,783	3,069	3,355	3,927	4,213				1,525	4,442								
	Inboard	Start	1,624	1,908	2,191	2,758	3,042	3,325	3,893	4,176				1,511	4,403								
		Min	873	1,021	1,170	1,468	1,617	1,766	2,063	2,212				813	2,331								
		End	1,623	1,906	2,189	2,755	3,039	3,322	3,889	4,172				1,509	4,399								
G01x12	Outboard	Start	2,368	2,777	3,187	4,006	4,416	Exceeds MOP	2.8	5.5	2,204	4,416											
		Min	1,266	1,480	1,695	2,125	2,340				1,180	2,340											
		End	2,365	2,774	3,184	4,002	4,411				2,202	4,411											
	Inboard	Start	2,351	2,758	3,165	3,979	4,386				2,188	4,386											
		Min	1,257	1,470	1,684	2,111	2,324				1,172	2,324											
		End	2,349	2,755	3,162	3,975	4,381				2,186	4,381											
G01x14	Outboard	Start	2,886	3,383	3,881	Exceeds MOP	2.8	4.6	2,686	4,478													
		Min	1,540	1,801	2,062				1,435	2,375													
		End	2,883	3,380	3,877				2,684	4,474													
	Inboard	Start	2,869	3,364	3,859				2,671	4,453													
		Min	1,531	1,791	2,050				1,427	2,362													
		End	2,866	3,361	3,855				2,669	4,449													

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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
Pressure Torque Output: Start/Min./End (Nm)																						
G2x09	Outboard	Start	1,488	1,750	2,012	2,535	2,797	3,059	3,583	3,845	4,369	4,631	5,155	5,417	5,679	6,204	6,466	Exceeds MOP	2.8	1,383	12.9	6,676
		Min	803	941	1,078	1,353	1,491	1,628	1,903	2,041	2,316	2,453	2,728	2,866	3,003	3,279	3,416			748		3,526
		End	1,487	1,748	2,010	2,533	2,795	3,057	3,580	3,842	4,365	4,627	5,151	5,413	5,675	6,199	6,461			1,382		6,671
	Inboard	Start	1,468	1,727	1,985	2,502	2,761	3,019	3,537	3,795	4,313	4,571	5,089	5,348	5,607	6,124	6,383			1,365		6,591
		Min	793	929	1,064	1,336	1,472	1,607	1,879	2,015	2,286	2,422	2,694	2,830	2,965	3,237	3,373			739		3,482
		End	1,467	1,725	1,984	2,500	2,758	3,017	3,534	3,792	4,309	4,568	5,085	5,343	5,602	6,120	6,378			1,364		6,585
G2x10	Outboard	Start	1,986	2,332	2,679	3,372	3,718	4,065	4,758	5,105	5,799	6,145	Exceeds MOP	2.8	9.7	1,847	6,631					
		Min	1,067	1,248	1,430	1,794	1,976	2,158	2,521	2,703	3,067	3,249				994	3,504					
		End	1,984	2,330	2,677	3,369	3,715	4,062	4,755	5,101	5,794	6,140				1,846	6,626					
	Inboard	Start	1,966	2,309	2,652	3,339	3,682	4,025	4,712	5,055	5,742	6,086				1,829	6,567					
		Min	1,056	1,236	1,416	1,777	1,957	2,137	2,497	2,677	3,038	3,218				984	3,470					
		End	1,965	2,307	2,650	3,336	3,679	4,022	4,708	5,051	5,738	6,081				1,827	6,562					
G2x12	Outboard	Start	2,866	3,362	3,858	4,849	5,345	5,841	Exceeds MOP	2.8	6.9	2,668	6,734									
		Min	1,532	1,792	2,052	2,572	2,832	3,092				1,428	3,560									
		End	2,864	3,359	3,855	4,845	5,341	5,837				2,666	6,729									
	Inboard	Start	2,846	3,339	3,831	4,816	5,309	5,802				2,649	6,688									
		Min	1,521	1,780	2,038	2,555	2,813	3,071				1,418	3,536									
		End	2,844	3,336	3,828	4,812	5,305	5,797				2,647	6,683									
G2x14	Outboard	Start	3,493	4,095	4,698	5,903	6,506	Exceeds MOP	2.8	5.6	3,252	6,626										
		Min	1,864	2,179	2,495	3,127	3,443				1,737	3,506										
		End	3,490	4,092	4,694	5,898	6,500				3,249	6,621										
	Inboard	Start	3,473	4,072	4,671	5,870	6,469				3,234	6,589										
		Min	1,853	2,167	2,482	3,110	3,424				1,728	3,487										
		End	3,470	4,069	4,668	5,865	6,464				3,231	6,584										
G2x16	Outboard	Start	4,630	5,425	6,220	Exceeds MOP	2.8	4.2	4,313	6,538												
		Min	2,463	2,880	3,296				2,297	3,463												
		End	4,627	5,421	6,215				4,309	6,533												
	Inboard	Start	4,611	5,402	6,193				4,294	6,510												
		Min	2,453	2,868	3,283				2,287	3,449												
		End	4,607	5,398	6,188				4,291	6,505												

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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)																								
G3x10	Outboard	Start	2,403	2,823	3,243	4,082	4,502	4,922	5,762	6,182	7,022	7,442	8,282	8,702	9,123	9,963	10,384	10,804	11,224	2.8	13.8	2,235	11,477				
		Min	1,291	1,512	1,732	2,173	2,393	2,613	3,054	3,274	3,715	3,935	4,376	4,596	4,817	5,257	5,478	5,698	5,919			1,203		6,051			
		End	2,402	2,822	3,241	4,080	4,500	4,920	5,759	6,179	7,019	7,439	8,278	8,698	9,119	9,959	10,379	10,799	11,219			2,234		11,472			
	Inboard	Start	2,365	2,779	3,192	4,019	4,433	4,846	5,674	6,088	6,915	7,329	8,157	8,571	8,985	9,813	10,227	10,641	11,055			2.8		13.8	2,200	11,303	
		Min	1,272	1,489	1,706	2,140	2,357	2,574	3,008	3,225	3,659	3,876	4,310	4,527	4,744	5,179	5,396	5,613	5,830						1,185		5,960
		End	2,364	2,778	3,191	4,017	4,431	4,844	5,671	6,085	6,912	7,326	8,153	8,567	8,980	9,808	10,222	10,636	11,050						2,199		11,298
G3x12	Outboard	Start	3,473	4,075	4,676	5,879	6,481	7,082	8,285	8,887	10,091	10,692	Exceeds MOP	2.8	9.8	3,233	11,655										
		Min	1,857	2,172	2,488	3,119	3,434	3,749	4,380	4,696	5,327	5,642				1,731		6,147									
		End	3,472	4,073	4,674	5,876	6,478	7,079	8,282	8,883	10,086	10,687				3,231		11,650									
	Inboard	Start	3,436	4,031	4,626	5,816	6,411	7,007	8,197	8,793	9,984	10,579				Exceeds MOP		2.8	9.8	3,198	11,532						
		Min	1,837	2,149	2,461	3,086	3,398	3,710	4,334	4,646	5,271	5,583								1,712		6,083					
		End	3,434	4,029	4,624	5,814	6,409	7,004	8,194	8,789	9,979	10,574								3,196		11,527					
G3x14	Outboard	Start	4,236	4,967	5,698	7,160	7,892	8,623	10,086	10,817	Exceeds MOP	2.8	8.1	3,944	11,695												
		Min	2,261	2,644	3,027	3,794	4,177	4,561	5,327	5,711				2,107			6,171										
		End	4,234	4,965	5,696	7,157	7,888	8,619	10,081	10,812				3,942			11,689										
	Inboard	Start	4,198	4,923	5,648	7,098	7,823	8,548	9,998	10,723				Exceeds MOP		2.8	8.1	3,909	11,593								
		Min	2,241	2,621	3,001	3,761	4,141	4,521	5,281	5,662								2,089		6,118							
		End	4,197	4,921	5,645	7,094	7,819	8,544	9,993	10,718								3,907		11,588							
G3x16	Outboard	Start	5,619	6,584	7,549	9,479	10,444	11,410	Exceeds MOP	2.8	6.2	5,233	11,796														
		Min	2,990	3,496	4,001	5,013	5,519	6,025				2,788			6,227												
		End	5,617	6,581	7,546	9,475	10,440	11,404				5,231			11,790												
	Inboard	Start	5,582	6,540	7,499	9,416	10,375	11,334				Exceeds MOP		2.8	6.2	5,198	11,718										
		Min	2,970	3,473	3,975	4,980	5,483	5,985								2,769		6,186									
		End	5,579	6,537	7,496	9,412	10,371	11,329								5,196		11,712									
G3x20	Outboard	Start	8,965	10,494	Exceeds MOP	2.8	3.9	8,354	11,718																		
		Min	4,751	5,552				4,431		6,193																	
		End	8,961	10,489				8,350		11,712																	
	Inboard	Start	8,927	10,450				Exceeds MOP		2.8	3.9	8,318	11,669														
		Min	4,732	5,530								4,413		6,168													
		End	8,923	10,446								8,315		11,663													

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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)																				
G4x12	Outboard	Start	4,206	4,935	5,664	7,121	7,850	8,579	10,038	10,767	12,225	12,954	14,413	15,143	15,872	17,331	18,061	18,791	19,521	2.8	13.8	3,915	19,959
		Min	2,250	2,632	3,014	3,779	4,161	4,543	5,308	5,690	6,455	6,837	7,602	7,984	8,367	9,132	9,514	9,897	10,279			2,097	10,509
		End	4,203	4,931	5,660	7,116	7,845	8,573	10,030	10,759	12,216	12,945	14,403	15,132	15,861	17,319	18,048	18,777	19,507			3,912	19,944
	Inboard	Start	4,140	4,858	5,576	7,011	7,729	8,447	9,884	10,602	12,038	12,757	14,193	14,912	15,630	17,068	17,786	18,505	19,224			3,853	19,655
		Min	2,215	2,592	2,968	3,721	4,098	4,474	5,227	5,604	6,357	6,734	7,487	7,864	8,240	8,994	9,370	9,747	10,124			2,065	10,350
		End	4,137	4,855	5,572	7,006	7,724	8,441	9,877	10,594	12,030	12,747	14,183	14,901	15,619	17,055	17,774	18,492	19,210			3,850	19,641
G4x14	Outboard	Start	5,133	6,020	6,906	8,679	9,566	10,453	12,226	13,113	14,887	15,774	17,549	18,436	19,323	21,098	21,985	22,873	Exceeds MOP	2.8	13.4	4,779	23,583
		Min	2,741	3,205	3,670	4,600	5,065	5,530	6,459	6,924	7,854	8,319	9,249	9,714	10,179	11,110	11,575	12,040				2,555	12,412
		End	5,130	6,016	6,901	8,673	9,559	10,445	12,218	13,104	14,877	15,763	17,536	18,423	19,309	21,083	21,970	22,857				4,776	23,566
	Inboard	Start	5,067	5,943	6,818	8,569	9,445	10,321	12,072	12,948	14,700	15,576	17,328	18,205	19,081	20,834	21,710	22,587				4,717	23,288
		Min	2,706	3,165	3,624	4,542	5,001	5,461	6,379	6,838	7,757	8,216	9,134	9,594	10,053	10,971	11,431	11,890				2,522	12,258
		End	5,064	5,939	6,813	8,563	9,438	10,313	12,064	12,939	14,690	15,565	17,316	18,192	19,067	20,819	21,695	22,571				4,714	23,271
G4x16	Outboard	Start	6,815	7,986	9,157	11,499	12,670	13,841	16,183	17,354	19,697	20,869	23,212	Exceeds MOP	2.8	10.1	6,347	23,446					
		Min	3,627	4,241	4,855	6,082	6,696	7,310	8,537	9,151	10,379	10,992	12,220				3,382	12,343					
		End	6,811	7,980	9,150	11,491	12,661	13,831	16,172	17,342	19,683	20,854	23,195				6,343	23,430					
	Inboard	Start	6,749	7,909	9,069	11,389	12,549	13,709	16,029	17,190	19,510	20,671	22,992				6,286	23,224					
		Min	3,593	4,201	4,809	6,025	6,633	7,241	8,457	9,065	10,281	10,889	12,105				3,350	12,227					
		End	6,745	7,904	9,063	11,381	12,540	13,699	16,018	17,177	19,496	20,656	22,976				6,281	23,208					
G4x20	Outboard	Start	10,883	12,739	14,596	18,310	20,167	22,024	Exceeds MOP	2.8	6.3	10,140	23,138										
		Min	5,769	6,742	7,714	9,660	10,633	11,605				5,380	12,189										
		End	10,875	12,730	14,586	18,297	20,153	22,008				10,133	23,122										
	Inboard	Start	10,817	12,662	14,508	18,200	20,046	21,892				10,078	23,000										
		Min	5,734	6,701	7,668	9,602	10,569	11,536				5,348	12,117										
		End	10,809	12,653	14,498	18,187	20,032	21,877				10,071	22,983										
G4x24	Outboard	Start	15,906	18,606	21,306	Exceeds MOP	2.8	4.3	14,826	22,926													
		Min	8,406	9,819	11,233				7,840	12,081													
		End	15,895	18,593	21,291				14,816	22,910													
	Inboard	Start	15,840	18,529	21,218				14,765	22,831													
		Min	8,371	9,779	11,187				7,808	12,032													
		End	15,829	18,516	21,203				14,754	22,815													
G4x28	Outboard	Start	22,402	Exceeds MOP	2.8	3.1	20,879	23,163															
		Min	11,852				11,054	12,250															
		End	22,386				20,864	23,146															
	Inboard	Start	22,336				20,817	23,095															
		Min	11,817				11,022	12,215															
		End	22,320				20,802	23,078															
G4x220	Outboard	Start	21,699	Exceeds MOP	2.8	3.2	20,219	23,180															
		Min	11,503				10,727	12,279															
		End	21,684				20,204	23,164															
	Inboard	Start	21,699				20,219	23,180															
		Min	11,503				10,727	12,279															
		End	21,684				20,204	23,164															

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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)																								
G5x16	Outboard	Start	8,787	10,295	11,802	14,818	16,326	17,834	20,850	22,358	25,374	26,883	29,900	31,408	32,917	35,934	37,443	38,952	40,461	2.8	8,184	13.8	41,367				
		Min	4,673	5,463	6,254	7,834	8,624	9,414	10,995	11,785	13,366	14,156	15,737	16,527	17,317	18,898	19,689	20,479	21,270					4,357			
		End	8,784	10,292	11,799	14,813	16,320	17,828	20,843	22,351	25,366	26,874	29,890	31,398	32,906	35,923	37,431	38,940	40,448						8,182		
	Inboard	Start	8,636	10,118	11,600	14,565	16,048	17,530	20,496	21,979	24,945	26,428	29,394	30,877	32,361	35,328	36,811	38,295	39,779							8,043	
		Min	4,594	5,371	6,148	7,702	8,479	9,256	10,810	11,587	13,141	13,918	15,472	16,249	17,027	18,581	19,358	20,136	20,913								4,283
		End	8,633	10,115	11,596	14,560	16,042	17,525	20,489	21,971	24,936	26,419	29,384	30,867	32,350	35,316	36,799	38,283	39,766								
G5x20	Outboard	Start	14,046	16,440	18,834	23,623	26,018	28,413	33,203	35,598	40,389	42,784	47,575	49,971	52,367	Exceeds MOP	2.8	13,088	11.3	53,804							
		Min	7,443	8,697	9,951	12,460	13,715	14,969	17,478	18,733	21,242	22,497	25,006	26,261	27,516						6,941						
		End	14,041	16,434	18,828	23,616	26,010	28,404	33,192	35,586	40,375	42,770	47,560	49,955	52,350							13,084					
	Inboard	Start	13,894	16,263	18,632	23,371	25,740	28,110	32,849	35,219	39,959	42,329	47,070	49,440	51,811								12,946				
		Min	7,363	8,604	9,846	12,328	13,569	14,811	17,293	18,535	21,017	22,259	24,742	25,983	27,225									6,867			
		End	13,889	16,258	18,626	23,363	25,732	28,100	32,838	35,207	39,946	42,315	47,054	49,424	51,794										12,942		
G5x24	Outboard	Start	20,540	24,024	27,509	34,478	37,962	41,447	48,417	51,902	Exceeds MOP	2.8	19,146	7.7	53,296												
		Min	10,852	12,677	14,502	18,151	19,976	21,801	25,450	27,275						10,122											
		End	20,533	24,016	27,500	34,466	37,950	41,434	48,401	51,885							19,140										
	Inboard	Start	20,388	23,847	27,306	34,225	37,684	41,144	48,063	51,523								19,005									
		Min	10,773	12,584	14,396	18,019	19,830	21,642	25,265	27,077									10,048								
		End	20,382	23,840	27,297	34,214	37,672	41,130	48,048	51,506										18,999							
G5x28	Outboard	Start	28,937	33,853	38,769	48,603	53,520	Exceeds MOP	2.8	26,971	5.5	53,520															
		Min	15,308	17,884	20,460	25,612	28,188						14,278														
		End	28,927	33,842	38,757	48,587	53,502							26,962													
	Inboard	Start	28,785	33,676	38,567	48,350	53,242								26,829												
		Min	15,229	17,791	20,354	25,479	28,042									14,204											
		End	28,776	33,665	38,555	48,334	53,224										26,820										
G5x32	Outboard	Start	37,941	44,371	50,801	Exceeds MOP	2.8	35,369	4.2	53,374																	
		Min	20,042	23,410	26,778						18,695																
		End	37,929	44,357	50,785							35,358															
	Inboard	Start	37,790	44,194	50,599								35,228														
		Min	19,963	23,318	26,673									18,621													
		End	37,777	44,180	50,583										35,216												
G5x36	Outboard	Start	48,159	Exceeds MOP	2.8	44,901	3.3	53,047																			
		Min	25,410						23,704																		
		End	48,143							44,886																	
	Inboard	Start	48,007								44,759																
		Min	25,331									23,630															
		End	47,992										44,745														

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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)																							
G5x220	Start	Outboard	27,939	32,703	37,466	46,994	51,758	Exceeds MOP											2.8	26,034	5.7	53,664	
	Min		14,806	17,301	19,797	24,788	27,284															13,807	28,282
	End		27,930	32,692	37,454	46,979	51,741															26,026	53,646
	Start	Inboard	27,939	32,703	37,466	46,994	51,758															26,034	53,664
	Min		14,806	17,301	19,797	24,788	27,284															13,807	28,282
	End		27,930	32,692	37,454	46,979	51,741															26,026	53,646
G5x224	Start	Outboard	40,928	47,872	Exceeds MOP														2.8	38,151	3.9	53,426	
	Min		21,625	25,261																		20,171	28,170
	End		40,915	47,856																		38,139	53,409
	Start	Inboard	40,928	47,872																		38,151	53,426
	Min		21,625	25,261																		20,171	28,170
	End		40,915	47,856																		38,139	53,409

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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)																									
G7x20	Start	Outboard	17,134	20,063	22,991	28,849	31,778	34,707	40,565	43,495	49,354	52,284	58,144	61,075	64,005	69,867	72,798	75,729	78,660	2.8	15,963	13.8	80,419		
	Min	Outboard	9,099	10,635	12,170	15,242	16,777	18,313	21,385	22,920	25,992	27,528	30,600	32,136	33,672	36,745	38,281	39,817	41,353					8,485	42,275
	End	Outboard	17,130	20,058	22,985	28,841	31,770	34,698	40,555	43,484	49,342	52,271	58,130	61,059	63,989	69,849	72,779	75,710	78,640					15,959	80,399
	Start	Inboard	16,899	19,788	22,677	28,456	31,345	34,235	40,015	42,905	48,686	51,577	57,358	60,249	63,141	68,924	71,815	74,707	77,599					15,743	79,334
	Min	Inboard	8,976	10,491	12,006	15,036	16,551	18,066	21,097	22,612	25,643	27,158	30,189	31,704	33,220	36,251	37,767	39,282	40,798					8,370	41,708
	End	Inboard	16,894	19,783	22,671	28,448	31,337	34,226	40,005	42,894	48,674	51,564	57,344	60,234	63,125	68,906	71,797	74,688	77,579					15,739	79,314
G7x24	Start	Outboard	25,108	29,375	33,642	42,177	46,445	50,713	59,249	63,517	72,054	76,323	84,861	89,131	93,400	101,940	Exceeds MOP			2.8	23,401	12.3	104,502		
	Min	Outboard	13,289	15,525	17,762	22,235	24,471	26,708	31,181	33,418	37,891	40,128	44,602	46,839	49,076	53,550								12,394	54,892
	End	Outboard	25,102	29,368	33,634	42,167	46,433	50,700	59,234	63,501	72,036	76,304	84,840	89,108	93,377	101,914								23,395	104,475
	Start	Inboard	24,872	29,100	33,328	41,784	46,013	50,241	58,699	62,928	71,386	75,616	84,075	88,305	92,536	100,996								23,181	103,535
	Min	Inboard	13,166	15,381	17,597	22,029	24,245	26,461	30,893	33,109	37,542	39,758	44,191	46,407	48,623	53,056								12,279	54,386
	End	Inboard	24,866	29,093	33,320	41,774	46,001	50,229	58,684	62,912	71,368	75,597	84,054	88,283	92,512	100,971								23,175	103,509
G7x28	Start	Outboard	35,427	41,453	47,480	59,533	65,561	71,588	83,644	89,672	101,730	Exceeds MOP								2.8	33,017	8.7	104,142		
	Min	Outboard	18,766	21,926	25,086	31,405	34,565	37,725	44,045	47,205	53,526													17,503	54,790
	End	Outboard	35,418	41,443	47,468	59,518	65,544	71,570	83,623	89,650	101,704													33,008	104,116
	Start	Inboard	35,191	41,178	47,165	59,140	65,128	71,117	83,094	89,083	101,062													32,797	103,458
	Min	Inboard	18,643	21,782	24,921	31,200	34,339	37,478	43,757	46,897	53,176													17,387	54,432
	End	Inboard	35,182	41,168	47,153	59,125	65,112	71,099	83,073	89,061	101,037													32,788	103,432
G7x32	Start	Outboard	46,488	54,374	62,260	78,033	85,920	93,807	Exceeds MOP											2.8	43,334	6.6	103,272		
	Min	Outboard	24,585	28,718	32,852	41,119	45,253	49,386																22,931	54,347
	End	Outboard	46,476	54,360	62,244	78,013	85,898	93,783																43,323	103,246
	Start	Inboard	46,252	54,099	61,945	77,640	85,487	93,335																43,114	102,753
	Min	Inboard	24,461	28,574	32,687	40,913	45,026	49,140																22,816	54,076
	End	Inboard	46,241	54,085	61,930	77,620	85,466	93,312																43,103	102,728
G7x36	Start	Outboard	59,039	69,033	79,027	99,016	Exceeds MOP													2.8	55,042	5.2	103,014		
	Min	Outboard	31,183	36,420	41,657	52,132																		29,088	54,227
	End	Outboard	59,025	69,016	79,007	98,991																		55,028	102,988
	Start	Inboard	58,804	68,758	78,713	98,623																		54,822	102,605
	Min	Inboard	31,059	36,276	41,493	51,927																		28,972	54,014
	End	Inboard	58,789	68,741	78,693	98,598																		54,808	102,580

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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)																							
G7x220	Start	Outboard	34,033	39,850	45,668	57,304	63,123	68,942	Exceeds MOP										2.8	31,706	6.9	79,416	
	Min		18,075	21,126	24,176	30,278	33,328	36,379														16,855	41,871
	End		34,025	39,840	45,657	57,290	63,107	68,924														31,698	79,396
	Start	Inboard	34,033	39,850	45,668	57,304	63,123	68,942														31,706	79,416
	Min		18,075	21,126	24,176	30,278	33,328	36,379														16,855	41,871
	End		34,025	39,840	45,657	57,290	63,107	68,924														31,698	79,396
G7x224	Start	Outboard	49,981	58,475	66,970	83,962	92,458	100,954	Exceeds MOP										2.8	46,583	6.1	102,653	
	Min		26,454	30,907	35,359	44,264	48,716	53,169												24,674		54,059	
	End		49,968	58,461	66,954	83,940	92,434	100,929												46,571		102,628	
	Start	Inboard	49,981	58,475	66,970	83,962	92,458	100,954														46,583	102,653
	Min		26,454	30,907	35,359	44,264	48,716	53,169														24,674	54,059
	End		49,968	58,461	66,954	83,940	92,434	100,929														46,571	102,628
G7x228	Start	Outboard	70,618	82,631	94,645	Exceeds MOP												2.8	65,813	4.3	101,853		
	Min		37,410	43,708	50,007																34,890	53,786	
	End		70,601	82,610	94,621																	65,797	101,828
	Start	Inboard	70,618	82,631	94,645																	65,813	101,853
	Min		37,410	43,708	50,007																	34,890	53,786
	End		70,601	82,610	94,621																	65,797	101,828

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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)																														
G8x24	Start	Outboard	29,645	34,685	39,725	49,805	54,846	59,886	69,968	75,009	85,093	90,134	100,219	105,261	110,304	120,389	125,433	130,476	135,519	2.8	13.8	27,629	138,546									
	Min		15,691	18,332	20,973	26,255	28,896	31,538	36,820	39,462	44,745	47,386	52,669	55,311	57,953	63,237	65,878	68,520	71,162			14,634	72,748									
	End		29,641	34,680	39,719	49,798	54,838	59,878	69,958	74,998	85,080	90,121	100,204	105,246	110,287	120,372	125,414	130,457	135,500			27,625	138,525									
	Start	Inboard	29,228	34,198	39,168	49,110	54,081	59,052	68,995	73,966	83,910	88,883	98,828	103,801	108,774	118,720	123,694	128,668	133,642			27,240	136,626									
	Min		15,473	18,077	20,682	25,891	28,496	31,101	36,311	38,916	44,126	46,731	51,942	54,547	57,152	62,363	64,969	67,574	70,180			14,431	71,743									
	End		29,224	34,193	39,163	49,103	54,073	59,043	68,985	73,956	83,898	88,870	98,813	103,785	108,758	118,703	123,676	128,649	133,622			27,236	136,606									
G8x28	Start	Outboard	41,864	48,987	56,111	70,359	77,484	84,609	98,860	105,986	120,239	127,366	141,622	148,750	155,878	Exceeds MOP				2.8	11.9	39,015	168,710									
	Min		22,177	25,912	29,646	37,116	40,850	44,585	52,055	55,790	63,261	66,996	74,467	78,203	81,939							20,684	88,663									
	End		41,858	48,980	56,103	70,349	77,473	84,597	98,846	105,971	120,222	127,348	141,601	148,728	155,855							39,009	168,685									
	Start	Inboard	41,447	48,501	55,555	69,664	76,719	83,775	97,887	104,943	119,057	126,115	140,231	147,289	154,348							38,625	167,055									
	Min		21,959	25,657	29,355	36,752	40,450	44,149	51,546	55,245	62,642	66,341	73,740	77,439	81,138							20,480	87,798									
	End		41,441	48,493	55,547	69,654	76,708	83,762	97,872	104,928	119,040	126,096	140,210	147,268	154,325							38,620	167,030									
G8x32	Start	Outboard	54,967	64,293	73,620	92,274	101,601	110,929	129,587	138,916	157,576	166,906	Exceeds MOP						2.8	9.0	51,237	166,906										
	Min		29,069	33,957	38,845	48,621	53,509	58,398	68,175	73,064	82,841	87,730									27,113	87,730										
	End		54,959	64,284	73,609	92,260	101,587	110,913	129,568	138,896	157,552	166,882									51,229	166,882										
	Start	Inboard	54,550	63,806	73,063	91,578	100,836	110,095	128,613	137,873	156,393	165,654									50,847	165,654										
	Min		28,850	33,702	38,554	48,257	53,109	57,961	67,666	72,518	82,223	87,076									26,910	87,076										
	End		54,542	63,797	73,052	91,565	100,822	110,079	128,594	137,853	156,370	165,630									50,840	165,630										
G8x36	Start	Outboard	69,835	81,658	93,482	117,130	128,955	140,781	164,433	Exceeds MOP									2.8	7.1	65,106	166,798										
	Min		36,883	43,079	49,274	61,666	67,861	74,057	86,450												34,405	87,689										
	End		69,825	81,646	93,468	117,113	128,936	140,760	164,409												65,096	166,774										
	Start	Inboard	69,418	81,172	92,926	116,435	128,190	139,946	163,459												64,717	165,811										
	Min		36,665	42,824	48,983	61,302	67,461	73,621	85,940												34,202	87,172										
	End		69,408	81,160	92,912	116,418	128,172	139,926	163,435												64,707	165,786										
G8x40	Start	Outboard	86,469	101,083	115,698	144,930	159,546	Exceeds MOP											2.8	5.8	80,623	168,316										
	Min		45,622	53,279	60,936	76,250	83,907														42,559	88,501										
	End		86,456	101,068	115,681	144,908	159,523														80,611	168,291										
	Start	Inboard	86,052	100,596	115,142	144,234	158,781																								80,234	167,509
	Min		45,404	53,024	60,645	75,886	83,507																								42,356	88,079
	End		86,039	100,582	115,125	144,213	158,758																								80,222	167,485

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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)																										
G8x224	Outboard	Start	58,873	68,883	78,893	98,915	108,926	118,938	Exceeds MOP										2.8	54,869	6.9	136,960				
		Min	31,163	36,409	41,655	52,146	57,392	62,639												29,065		72,082				
		End	58,865	68,873	78,882	98,900	108,910	118,921														54,861	136,940			
	Inboard	Start	58,873	68,883	78,893	98,915	108,926	118,938															54,869	136,960		
		Min	31,163	36,409	41,655	52,146	57,392	62,639															29,065	72,082		
		End	58,865	68,873	78,882	98,900	108,910	118,921															54,861	136,940		
G8x228	Outboard	Start	83,311	97,488	111,666	140,023	154,203	Exceeds MOP											2.8	77,640	5.9	165,547				
		Min	44,137	51,569	59,002	73,867	81,301															41,164	87,247			
		End	83,299	97,474	111,649	140,003	154,181																77,629	165,523		
	Inboard	Start	83,311	97,488	111,666	140,023	154,203																77,640	165,547		
		Min	44,137	51,569	59,002	73,867	81,301																41,164	87,247		
		End	83,299	97,474	111,649	140,003	154,181																77,629	165,523		
G8x232	Outboard	Start	109,517	128,099	146,683	Exceeds MOP													2.8	102,084	4.5	165,267				
		Min	57,919	67,658	77,398																		54,023	87,138		
		End	109,500	128,080	146,661																			102,069	165,243	
	Inboard	Start	109,517	128,099	146,683																			102,084	165,267	
		Min	57,919	67,658	77,398																			54,023	87,138	
		End	109,500	128,080	146,661																			102,069	165,243	
G8x236	Outboard	Start	139,253	162,830	Exceeds MOP														2.8	129,823	3.6	167,545				
		Min	73,549	85,903																				68,607	88,374	
		End	139,233	162,806																					129,804	167,521
	Inboard	Start	139,253	162,830																				129,823	167,545	
		Min	73,549	85,903																					68,607	88,374
		End	139,233	162,806																					129,804	167,521

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)																									
G10x28	Outboard	Start	54,673	63,981	73,290	91,910	101,221	110,532	129,155	138,467	157,093	166,407	185,036	194,351	203,666	222,299	231,616	240,933	250,251	2.8	50,949	13.8	255,842					
		Min	28,978	33,859	38,740	48,503	53,385	58,266	68,030	72,912	82,676	87,559	97,324	102,207	107,090	116,856	121,739	126,622	131,506					27,025				
		End	54,661	63,967	73,274	91,890	101,199	110,508	129,127	138,437	157,059	166,371	184,995	194,308	203,622	222,250	231,565	240,880	250,196						50,938			
	Inboard	Start	53,907	63,088	72,270	90,634	99,817	109,001	127,369	136,553	154,924	164,110	182,484	191,672	200,860	219,237	228,426	237,616	246,806							50,235		
		Min	28,577	33,392	38,206	47,835	52,650	57,465	67,095	71,911	81,541	86,357	95,989	100,805	105,621	115,253	120,070	124,886	129,703								26,652	
		End	53,895	63,074	72,254	90,614	99,795	108,977	127,341	136,524	154,891	164,075	182,444	191,630	200,816	219,189	228,376	237,564	246,752									50,224
G10x32	Outboard	Start	71,885	84,088	96,291	120,698	132,903	145,108	169,520	181,726	206,141	218,349	242,767	254,977	267,187	291,609	303,821	316,033	328,246	2.8	67,005	13.8	335,574					
		Min	38,032	44,429	50,826	63,619	70,017	76,414	89,209	95,607	108,403	114,801	127,597	133,996	140,395	153,192	159,591	165,991	172,390					35,473				
		End	71,870	84,070	96,270	120,672	132,874	145,076	169,483	181,687	206,096	218,301	242,714	254,921	267,128	291,545	303,754	315,964	328,174						66,990			
	Inboard	Start	71,120	83,195	95,270	119,423	131,499	143,577	167,733	179,812	203,972	216,053	240,215	252,297	264,380	288,547	300,631	312,716	324,801							66,290		
		Min	37,632	43,961	50,291	62,952	69,282	75,613	88,274	94,605	107,268	113,599	126,262	132,594	138,926	151,590	157,922	164,255	170,587								35,100	
		End	71,104	83,177	95,249	119,396	131,471	143,546	167,697	179,773	203,927	216,005	240,163	252,242	264,322	288,484	300,565	312,647	324,730									66,276
G10x36	Outboard	Start	91,417	106,900	122,383	153,352	168,837	184,322	215,295	230,783	261,759	277,248	308,228	323,719	Exceeds MOP						2.8	85,224	10.9					
		Min	48,300	56,414	64,529	80,758	88,874	96,989	113,220	121,335	137,567	145,683	161,916	170,032										45,054				
		End	91,397	106,877	122,357	153,318	168,800	184,282	215,248	230,732	261,702	277,188	308,161	323,648											85,206			
	Inboard	Start	90,652	106,007	121,363	152,076	167,433	182,791	213,509	228,869	259,590	274,952	305,677	321,040												84,510		
		Min	47,899	55,947	63,995	80,091	88,139	96,188	112,285	120,334	136,432	144,482	160,581	168,630													44,680	
		End	90,632	105,984	121,336	152,043	167,397	182,751	213,463	228,819	259,534	274,892	305,610	320,970														84,491
G10x40	Outboard	Start	113,268	132,418	151,568	189,870	209,022	228,175	266,483	285,637	323,948	Exceeds MOP								2.8	105,609	8.8	335,442					
		Min	59,781	69,815	79,850	99,920	109,955	119,991	140,062	150,098	170,170													55,767				
		End	113,244	132,389	151,535	189,829	208,977	228,125	266,424	285,575	323,878														105,586			
	Inboard	Start	112,503	131,525	150,547	188,594	207,619	226,644	264,696	283,723	321,779															104,894		
		Min	59,380	69,348	79,316	99,252	109,221	119,189	139,127	149,096	169,035																55,393	
		End	112,478	131,496	150,514	188,553	207,574	226,595	264,639	283,662	321,709																	104,871

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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)																							
G10x228	Start	Outboard	108,580	127,070	145,560	182,544	201,038	219,532	Exceeds MOP										2.8	101,184	6.9	252,824	
	Min		57,555	67,251	76,946	96,338	106,035	115,731		53,677	133,186												
	End		108,556	127,042	145,528	182,505	200,994	219,484		101,162	252,769												
	Start	Inboard	108,580	127,070	145,560	182,544	201,038	219,532														101,184	252,824
	Min		57,555	67,251	76,946	96,338	106,035	115,731		53,677	133,186												
	End		108,556	127,042	145,528	182,505	200,994	219,484		101,162	252,769												
G10x232	Start	Outboard	143,005	167,283	191,561	240,121	264,402	288,685	Exceeds MOP										2.8	133,295	6.9	332,396	
	Min		75,664	88,390	101,117	126,571	139,299	152,027		70,573	174,938												
	End		142,974	167,246	191,519	240,068	264,345	288,622		133,266	332,323												
	Start	Inboard	143,005	167,283	191,561	240,121	264,402	288,685														133,295	332,396
	Min		75,664	88,390	101,117	126,571	139,299	152,027		70,573	174,938												
	End		142,974	167,246	191,519	240,068	264,345	288,622		133,266	332,323												
G10x236	Start	Outboard	182,069	212,907	243,746	305,428	336,270	Exceeds MOP											2.8	169,734	5.5	336,270	
	Min		96,199	112,361	128,524	160,849	177,013		89,734	177,013													
	End		182,029	212,860	243,693	305,361	336,197		169,697	336,197													
	Start	Inboard	182,069	212,907	243,746	305,428	336,270															169,734	336,270
	Min		96,199	112,361	128,524	160,849	177,013		89,734	177,013													
	End		182,029	212,860	243,693	305,361	336,197		169,697	336,197													
G10x240	Start	Outboard	225,771	263,943	302,115	Exceeds MOP													2.8	210,503	4.4	332,655	
	Min		119,161	139,164	159,166		111,161	175,169															
	End		225,722	263,885	302,049		210,457	332,582															
	Start	Inboard	225,771	263,943	302,115																	210,503	332,655
	Min		119,161	139,164	159,166		111,161	175,169															
	End		225,722	263,885	302,049		210,457	332,582															

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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)																																			
G13x40	Start	Outboard	145,241	169,804	194,367	243,498	268,064	292,631	341,768	366,337	415,479	440,051	489,198	513,772	538,348	587,501	612,079	636,658	661,237	2.8	135,416	13.8	675,985												
	Min	Outboard	76,647	89,515	102,383	128,119	140,988	153,857	179,595	192,464	218,204	231,074	256,815	269,686	282,557	308,299	321,171	334,043	346,915					135,328	134,023	354,638									
	End	Outboard	145,147	169,694	194,242	243,340	267,890	292,441	341,546	366,100	415,210	439,766	488,881	513,439	537,999	587,120	611,682	636,245	660,809								70,772	133,936	669,122						
	Start	Inboard	143,749	168,063	192,378	241,011	265,328	289,647	338,286	362,607	411,251	435,575	484,224	508,550	532,877	581,533	605,862	630,192	654,523											330,660	343,402	351,048			
	Min	Inboard	75,867	88,604	101,342	126,819	139,557	152,296	177,774	190,513	215,992	228,732	254,213	266,954	279,695	305,177	317,919	330,660	343,402														668,688	654,099	668,688
	End	Inboard	143,656	167,954	192,253	240,855	265,156	289,459	338,067	362,372	410,985	435,293	483,910	508,221	532,531	581,156	605,469	629,784	654,099																
Start	Outboard	176,328	206,106	235,885	295,446	325,228	355,011	414,579	444,365	503,938	533,727	593,306	623,097	652,889	Exceeds MOP	164,417	11.4	676,723																	
Min	Outboard	92,974	108,572	124,170	155,367	170,965	186,564	217,763	233,362	264,563	280,163	311,364	326,965	342,567					163,024	86,007	352,082														
End	Outboard	176,214	205,973	235,732	295,255	325,017	354,781	414,311	444,077	503,612	533,381	592,921	622,693	652,466								162,919	162,919	670,618											
Start	Inboard	174,836	204,365	233,896	292,959	322,492	352,026	411,097	440,634	499,710	529,250	588,332	617,874	647,417											196,217	103,430	359,968								
Min	Inboard	92,194	107,661	123,129	154,066	169,534	185,003	215,941	231,411	262,351	277,821	308,762	324,233	339,705														194,824	102,702	357,444					
End	Inboard	174,723	204,233	233,744	292,769	322,283	351,798	410,831	440,349	499,387	528,907	587,951	617,474	646,998																	194,698	194,698	680,813		
Start	Outboard	210,413	245,904	281,397	352,384	387,879	423,376	494,371	529,870	600,872	636,374	Exceeds MOP	230,802	8.3	689,576																				
Min	Outboard	110,866	129,454	148,042	185,220	203,809	222,398	259,578	278,168	315,349	333,940					229,409	120,854	359,663																	
End	Outboard	210,277	245,745	281,214	352,156	387,628	423,101	494,051	529,527	600,483	635,962								229,409	120,854	357,444														
Start	Inboard	208,921	244,163	279,407	349,897	385,144	420,391	490,890	526,140	596,644	631,898											229,261	229,261	685,004											
Min	Inboard	110,085	128,543	147,001	183,919	202,378	220,837	257,756	276,217	313,138	331,598														229,261	229,261	685,004								
End	Inboard	208,786	244,005	279,226	349,671	384,894	420,119	490,572	525,799	596,258	631,489																	229,261	229,261	685,004					
Start	Outboard	247,482	289,184	330,887	414,296	456,002	497,709	581,127	622,837	Exceeds MOP	230,802	8.3	689,576																						
Min	Outboard	130,318	152,157	173,996	217,674	239,514	261,354	305,035	326,876					230,652	121,583	361,822																			
End	Outboard	247,322	288,997	330,673	414,027	455,707	497,387	580,750	622,434								229,409	120,854	359,663																
Start	Inboard	245,990	287,443	328,897	411,809	453,266	494,725	577,645	619,107											229,261	229,261	685,004													
Min	Inboard	129,538	151,246	172,955	216,374	238,083	259,793	303,214	324,925														229,261	229,261	685,004										
End	Inboard	245,831	287,257	328,684	411,542	452,973	494,405	577,271	618,706																	229,261	229,261	685,004							

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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)																									
G13x240	Start	Outboard	288,989	337,867	386,745	484,508	533,392	582,278	Exceeds MOP										2.8	269,439	6.9	670,276			
	Min		152,514	178,119	203,725	254,938	280,545	306,152														142,272	352,247		
	End		288,802	337,648	386,495	484,194	533,047	581,900															269,264	669,842	
	Start	Inboard	288,989	337,867	386,745	484,508	533,392	582,278															269,439	670,276	
	Min		152,514	178,119	203,725	254,938	280,545	306,152															142,272	352,247	
	End		288,802	337,648	386,495	484,194	533,047	581,900															269,264	669,842	
G13x244	Start	Outboard	351,164	410,471	469,781	588,405	647,720	Exceeds MOP											2.8	327,441	5.7	671,447			
	Min		185,168	216,233	247,299	309,432	340,499															172,742	352,927		
	End		350,936	410,206	469,477	588,024	647,301																327,229	671,012	
	Start	Inboard	351,164	410,471	469,781	588,405	647,720																327,441	671,447	
	Min		185,168	216,233	247,299	309,432	340,499																172,742	352,927	
	End		350,936	410,206	469,477	588,024	647,301																327,229	671,012	
G13x248	Start	Outboard	419,334	490,068	560,804	Exceeds MOP													2.8	391,041	4.8	673,985			
	Min		220,951	257,997	295,043																		206,132	354,319	
	End		419,062	489,750	560,440																			390,787	673,549
	Start	Inboard	419,334	490,068	560,804																		391,041	673,985	
	Min		220,951	257,997	295,043																			206,132	354,319
	End		419,062	489,750	560,440																			390,787	673,549
G13x252	Start	Outboard	493,472	576,627	659,784	Exceeds MOP													2.8	460,211	4.1	676,416			
	Min		259,856	303,403	346,951																		242,437	355,660	
	End		493,153	576,254	659,357																			459,913	675,978
	Start	Inboard	493,472	576,627	659,784																		460,211	676,416	
	Min		259,856	303,403	346,951																			242,437	355,660
	End		493,153	576,254	659,357																			459,913	675,978

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)																																				
G01x08-SR0	Start	2,729																	Please consult factory	1,806	1,968	2,131	Exceeds MOP	11.7	1,708	13.2	2,196									
	Min.	1,234																754		841	928	702			962											
	End	1,968																		1,046	1,208	1,370			948		1,435									
G01x08-SR1	Start	2,054																	Please consult factory	1,170	1,494	1,657	Exceeds MOP	8.8	1,105	13.2	2,534									
	Min.	975																516		689	775	860			1,032		1,117	1,203	1,237							
	End	1,630																		746	1,071	1,233			1,395		1,720	1,882	2,044	2,109						
G01x08-SR2	Start	1,717																	Please consult factory	882	1,206	1,369	Exceeds MOP	7.4	849	13.2	2,733									
	Min.	837																404		576	661	832			918		1,003	1,174	1,259	1,345	1,379					
	End	1,431																		596	921	1,083			1,407		1,569	1,732	2,056	2,218	2,381	2,446				
G01x08-SR3	Start	1,497																	Please consult factory	902	1,064	1,388	Exceeds MOP	6.5	739	13.2	2,915									
	Min.	732																425		511	682	767			938		1,024	1,109	1,280	1,365	1,450	1,485				
	End	1,249																		655	817	1,141			1,303		1,628	1,790	1,952	2,277	2,439	2,601	2,666			
G01x08-SR4	Start	1,270																	Please consult factory	578	741	1,065	Exceeds MOP	5.5	578	13.2	3,079									
	Min.	630																272		358	529	614			785		870	1,041	1,126	1,212	1,382	1,468	1,553	1,587		
	End	1,086																		395	557	881			1,043		1,368	1,530	1,854	2,016	2,179	2,503	2,665	2,828	2,893	
G01x09-SR0	Start	2,722																	Please consult factory	2,045	2,253	2,460	Exceeds MOP	9.1	1,672	13.8	3,621									
	Min.	1,232																883		994	1,103	1,323			1,432		1,542	1,651	1,651	1,651	1,651	1,716				
	End	1,961																		1,285	1,492	1,699			2,113		2,320	2,527	2,734	2,734	2,734	2,734	2,859			
G01x09-SR1	Start	2,047																	Please consult factory	1,141	1,348	1,762	Exceeds MOP	6.9	1,099	13.8	3,959									
	Min.	973																502		612	831	940			1,159		1,268	1,377	1,595	1,703	1,812	1,921	1,921	1,987		
	End	1,623																		717	924	1,338			1,545		1,959	2,166	2,373	2,787	2,994	3,201	3,408	3,533		
G01x09-SR2	Start	1,711																	Please consult factory	926	1,340	1,547	Exceeds MOP	5.8	843	13.8	4,158									
	Min.	835																428		647	756	974			1,083		1,301	1,410	1,518	1,736	1,845	1,954	2,063	2,128		
	End	1,424																		640	1,054	1,261			1,675		1,881	2,295	2,502	2,709	3,123	3,331	3,538	3,745	3,869	
G01x09-SR3	Start	1,490																	Please consult factory	901	1,108	1,522	Exceeds MOP	5.1	735	13.8	4,340									
	Min.	730																426		535	753	862			1,080		1,189	1,406	1,515	1,624	1,842	1,951	2,059	2,168	2,233	
	End	1,242																		654	861	1,274			1,481		1,895	2,102	2,516	2,723	2,930	3,344	3,551	3,758	3,965	4,090
G01x09-SR4	Start	1,263																	Please consult factory	857	1,064	1,271	Exceeds MOP	4.1	485	13.8	4,503									
	Min.	629																421		530	639	856			965		1,183	1,291	1,509	1,618	1,727	1,944	2,053	2,162	2,270	2,336
	End	1,079																		674	880	1,087			1,501		1,708	2,121	2,328	2,742	2,949	3,156	3,570	3,778	3,985	4,192

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)																								
G01x10-SR0	Start	2,714						Please consult factory	1,744	2,019	2,568	2,843	3,393	3,668	3,943	Exceeds MOP				6.9	1,689	11.4	4,164	
	Min.	1,230					723		870	1,162	1,307	1,598	1,742	1,887	693		2,003							
	End	1,953					984		1,258	1,807	2,082	2,632	2,906	3,181	929		3,401							
G01x10-SR1	Start	2,039					Please consult factory	1,257	1,532	2,082	2,357	2,907	3,182	3,732	4,007	4,282	Exceeds MOP				5.2	1,093	11.4	4,502
	Min.	971						565	711	1,001	1,146	1,435	1,579	1,868	2,012	2,157		478	2,272					
	End	1,615						834	1,108	1,658	1,932	2,481	2,756	3,306	3,580	3,855		669	4,075					
G01x10-SR2	Start	1,702			Please consult factory	1,181	1,456	1,731	2,281	2,556	3,106	3,380	3,930	4,206	4,481	Exceeds MOP				4.4	852	11.4	4,701	
	Min.	833				565	710	854	1,143	1,288	1,576	1,721	2,009	2,154	2,298		391	2,414						
	End	1,416				896	1,170	1,445	1,994	2,269	2,818	3,093	3,642	3,917	4,192		566	4,411						
G01x10-SR3	Start	1,482		Please consult factory	814	1,364	1,638	1,913	2,463	2,738	3,288	3,563	4,113	4,388	4,663	Exceeds MOP				3.9	759	11.4	4,883	
	Min.	728			382	671	816	960	1,249	1,393	1,682	1,826	2,115	2,259	2,404		352	2,519						
	End	1,234			567	1,116	1,391	1,665	2,214	2,489	3,038	3,313	3,863	4,137	4,412		512	4,632						
G01x10-SR4	Start	1,255		Please consult factory	703	978	1,527	1,802	2,077	2,626	2,901	3,451	3,726	4,276	4,551	4,826	Exceeds MOP				3.3	593	11.4	5,046
	Min.	626			341	485	774	919	1,063	1,352	1,496	1,784	1,929	2,217	2,362	2,506		283	2,621					
	End	1,071			519	794	1,343	1,617	1,892	2,441	2,716	3,265	3,540	4,089	4,364	4,639		410	4,858					
G01x12-SR0	Start	2,701			Please consult factory	1,827	2,222	2,616	3,405	3,799	Exceeds MOP								4.8	1,669	8.0	4,194		
	Min.	1,226				770	980	1,189	1,605	1,813												685	2,021	
	End	1,940				1,067	1,461	1,855	2,643	3,037												909	3,431	
G01x12-SR1	Start	2,027			Please consult factory	1,377	2,165	2,560	2,954	3,743	4,138	Exceeds MOP							3.7	1,140	8.0	4,532		
	Min.	968				631	1,047	1,254	1,462	1,876	2,083											506	2,290	
	End	1,602				953	1,741	2,135	2,529	3,317	3,711											717	4,105	
G01x12-SR2	Start	1,690	787	1,181	1,576	2,364	2,759	3,153	3,942	4,336	Exceeds MOP							3.0	787	8.0	4,731			
	Min.	829	359	567	775	1,189	1,396	1,603	2,017	2,224											359	2,431		
	End	1,404	502	896	1,290	2,077	2,471	2,865	3,654	4,048											502	4,442		
G01x12-SR3	Start	1,469	969	1,364	1,758	2,546	2,941	3,335	4,124	4,519	Exceeds MOP							2.7	733	8.0	4,913			
	Min.	724	466	674	881	1,295	1,502	1,709	2,123	2,330											341	2,537		
	End	1,222	722	1,116	1,510	2,298	2,692	3,086	3,874	4,268											486	4,662		
G01x12-SR4	Start	1,242	1,133	1,527	1,921	2,710	3,104	3,499	4,288	4,682	Exceeds MOP							2.3	581	8.0	5,077			
	Min.	623	570	777	984	1,398	1,605	1,811	2,225	2,432											279	2,639		
	End	1,058	949	1,343	1,737	2,524	2,918	3,312	4,101	4,495											397	4,889		

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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
Pressure Torque Output: Start/Min./End (Nm)																						
G01x14-SR0	Start	2,691	Please consult factory	1,711	2,671	3,150	3,630	Exceeds MOP											3.9	1,615	6.3	3,918
	Min.	1,224		710	1,220	1,473	1,726													658		1,878
	End	1,930		951	1,910	2,389	2,868													855		3,156
G01x14-SR1	Start	2,016	1,090	1,570	2,049	3,009	3,489	3,968	Exceeds MOP										3.0	1,090	6.3	4,256
	Min.	965	481	735	988	1,493	1,745	1,996										481		2,147		
	End	1,592	667	1,146	1,625	2,583	3,063	3,542										667		3,830		
G01x14-SR2	Start	1,680	1,289	1,769	2,248	3,208	3,687	4,167	Exceeds MOP										2.5	809	6.3	4,455
	Min.	827	626	879	1,131	1,634	1,886	2,138										373		2,289		
	End	1,393	1,003	1,482	1,962	2,920	3,399	3,879										524		4,166		
G01x14-SR3	Start	1,459	1,471	1,951	2,430	3,390	3,869	4,349	Exceeds MOP										2.2	704	6.3	4,637
	Min.	722	733	985	1,236	1,740	1,992	2,243										328		2,394		
	End	1,211	1,224	1,703	2,182	3,140	3,620	4,099										457		4,387		
G01x14-SR4	Start	1,232	1,635	2,114	2,594	3,553	4,033	4,513	Exceeds MOP										1.9	580	6.3	4,801
	Min.	620	836	1,087	1,339	1,842	2,094	2,346										281		2,496		
	End	1,048	1,450	1,929	2,408	3,367	3,846	4,325										396		4,613		

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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)																																		
G2x09-SR1	Start	3,531																		Please consult factory	2,148	2,398	2,649	3,151	3,402	Exceeds MOP	9.7	1,997	12.9	3,603							
	Min.	1,642																	923		1,056	1,190	1,455	1,587	842			1,693									
	End	2,702																			1,320	1,571	1,822	2,323	2,574			1,170		2,774							
G2x09-SR2	Start	3,049																		Please consult factory	1,705	1,955	2,457	2,708	2,959	3,460	3,711	Exceeds MOP	8.5	1,705	12.9	3,912					
	Min.	1,437																	738		872	1,137	1,270	1,402	1,666	1,798	738			1,904							
	End	2,393																			1,050	1,300	1,801	2,052	2,303	2,804	3,055			1,050		3,255					
G2x09-SR3	Start	2,732																		Please consult factory	1,961	2,212	2,713	2,964	3,215	3,717	3,968	Exceeds MOP	7.6	1,510	12.9	4,168					
	Min.	1,288																	892		1,025	1,289	1,421	1,554	1,817	1,949	652			2,055							
	End	2,137																			1,367	1,617	2,118	2,369	2,620	3,121	3,372			916		3,572					
G2x09-SR4	Start	2,437																		Please consult factory	1,492	1,743	2,244	2,495	2,996	3,247	3,498	4,000	4,251	Exceeds MOP	6.8	1,392	12.9	4,451			
	Min.	1,137																	646		779	1,044	1,177	1,441	1,573	1,705	1,969	2,101	592			2,206					
	End	1,854																			910	1,160	1,661	1,912	2,413	2,663	2,914	3,415	3,666			809		3,867			
G2x10-SR1	Start	3,521																		Please consult factory	2,115	2,781	3,114										Exceeds MOP	7.4	2,049	9.7	3,580
	Min.	1,639																	907		1,260	1,436									871	1,682					
	End	2,693																			1,288	1,953	2,286									1,221			2,751		
G2x10-SR2	Start	3,039																		Please consult factory	2,092	2,424	3,090	3,423									Exceeds MOP	6.3	1,626	9.7	3,889
	Min.	1,435																	945		1,121	1,472	1,648								698	1,893					
	End	2,383																			1,436	1,769	2,434	2,767								971			3,232		
G2x10-SR3	Start	2,722																		Please consult factory	1,683	2,348	2,681	3,347	3,679								Exceeds MOP	5.7	1,483	9.7	4,145
	Min.	1,285																	746		1,098	1,273	1,624	1,799								639			2,044		
	End	2,127																			1,088	1,753	2,086	2,751	3,084										889		3,549
G2x10-SR4	Start	2,428																		Please consult factory	1,633	1,966	2,631	2,964	3,629	3,962							Exceeds MOP	5.1	1,367	9.7	4,428
	Min.	1,134																	722		899	1,250	1,425	1,775	1,950							580			2,195		
	End	1,844																			1,051	1,383	2,048	2,380	3,045	3,378									785		3,844
G2x12-SR1	Start	3,505																		Please consult factory	2,361	2,838										Exceeds MOP	5.1	1,979	6.9	3,698	
	Min.	1,635																	1,040		1,293													836		1,747	
	End	2,677																			1,533	2,010														1,152	2,869
G2x12-SR2	Start	3,024																		Please consult factory	2,193	2,670	3,147									Exceeds MOP	4.5	1,715	6.9	4,007	
	Min.	1,431																	1,001		1,253	1,505									748			1,957			
	End	2,368																			1,537	2,014	2,491											1,060		3,350	
G2x12-SR3	Start	2,707																		Please consult factory	1,494	2,449	2,927	3,404								Exceeds MOP	4.0	1,494	6.9	4,263	
	Min.	1,281																	648		1,154	1,405	1,656								648			2,108			
	End	2,112																			900	1,854	2,331	2,808										900		3,667	
G2x12-SR4	Start	2,412																		Please consult factory	1,777	2,732	3,209	3,687								Exceeds MOP	3.6	1,396	6.9	4,546	
	Min.	1,130																	802		1,306	1,557	1,808								599			2,259			
	End	1,829																			1,195	2,149	2,626	3,103										813		3,962	

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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)																								
G2x14-SR1	Start	3,493			Please consult factory	2,904	3,485	Exceeds MOP												4.1	1,859	5.6	3,601	
	Min.	1,632				1,331	1,637																775	1,699
	End	2,665				2,077	2,657																	1,032
G2x14-SR2	Start	3,012		Please consult factory	2,052	3,214	3,794	Exceeds MOP												3.7	1,704	5.6	3,911	
	Min.	1,428				930	1,543		1,848														745	1,909
	End	2,356				1,397	2,558		3,138															1,049
G2x14-SR3	Start	2,695	Please consult factory	1,728	2,309	3,470	4,051	Exceeds MOP												3.3	1,496	5.6	4,167	
	Min.	1,278				776	1,083		1,694	1,999													652	2,060
	End	2,100				1,134	1,714		2,875	3,455														902
G2x14-SR4	Start	2,400	1,431	2,011	2,592	3,753	4,334	Exceeds MOP												3.0	1,431	5.6	4,450	
	Min.	1,127	620	928	1,235	1,845	2,151														620		2,212	
	End	1,817	848	1,428	2,009	3,169	3,749																848	3,865
G2x16-SR1	Start	3,477	Please consult factory	2,451	3,218	Exceeds MOP														3.2	1,991	4.2	3,525	
	Min.	1,628					1,094	1,499															849	1,661
	End	2,649					1,623	2,390																1,164
G2x16-SR2	Start	2,996	1,993	2,760	3,527	Exceeds MOP														2.8	1,687	4.2	3,834	
	Min.	1,423	902	1,307	1,711																739		1,872	
	End	2,340	1,338	2,104	2,871																		1,032	3,177
G2x16-SR3	Start	2,679	2,250	3,017	3,784	Exceeds MOP														2.5	1,483	4.2	4,090	
	Min.	1,274	1,055	1,459	1,862																649		2,023	
	End	2,084	1,655	2,421	3,188																		889	3,494
G2x16-SR4	Start	2,384	2,533	3,300	4,067	Exceeds MOP														2.2	1,306	4.2	4,373	
	Min.	1,123	1,207	1,610	2,013																557		2,174	
	End	1,801	1,950	2,716	3,482																		724	3,789

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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)																																								
G3x10-SR1	Start	6,197																		Please consult factory	3,871	4,673	5,074	5,476	5,877	10.7	3,630	13.8	6,118														
	Min.	2,868																	1,656		2,083	2,295	2,507	2,719	1,528					2,846													
	End	4,723																			2,397	3,199	3,601	4,002	4,403					2,157	4,644												
G3x10-SR2	Start	5,401																		Please consult factory	3,678	4,080	4,481	5,283	5,684	6,086	6,487	9.3	3,117	13.8	6,728												
	Min.	2,502																	1,609		1,822	2,034	2,458	2,670	2,881	3,092	1,310					3,219											
	End	4,113																			2,391	2,792	3,193	3,995	4,396	4,798	5,199					1,830	5,439										
G3x10-SR3	Start	4,717																		Please consult factory	3,001	3,402	4,204	4,605	5,006	5,808	6,210	6,611	7,012	8.1	2,680	13.8	7,253										
	Min.	2,188																	1,295		1,509	1,933	2,145	2,356	2,779	2,990	3,201	3,412	1,124					3,538									
	End	3,588																			1,873	2,274	3,076	3,477	3,878	4,680	5,081	5,482	5,883					1,552	6,124								
G3x10-SR4	Start	4,128																		Please consult factory	2,650	3,452	3,853	4,655	5,056	5,457	6,260	6,661	7,062	7,464	7.2	2,410	13.8	7,705									
	Min.	1,917																	1,150		1,575	1,787	2,210	2,421	2,632	3,054	3,265	3,475	3,686	1,021					3,813								
	End	3,137																			1,660	2,462	2,863	3,664	4,065	4,466	5,268	5,669	6,071	6,472					1,420	6,712							
G3x12-SR1	Start	6,179																		Please consult factory	3,685	4,839	5,416	Exceeds MOP												7.4	3,569	9.8	6,339				
	Min.	2,863																	1,560		2,173	2,478	1,498		2,965																		
	End	4,705																			2,212	3,365	3,942		2,096	4,865																	
G3x12-SR2	Start	5,382																		Please consult factory	3,718	4,295	5,449	6,026	Exceeds MOP												6.5	3,141	9.8	6,950			
	Min.	2,497																	1,633		1,939	2,548	2,852	1,325		3,338																	
	End	4,095																			2,431	3,008	4,161	4,738		1,854	5,661																
G3x12-SR3	Start	4,698																		Please consult factory	3,089	4,243	4,820	5,974	6,551	Exceeds MOP												5.7	2,743	9.8	7,475		
	Min.	2,183																	1,346		1,957	2,261	2,869	3,172	1,161		3,657																
	End	3,570																			1,962	3,115	3,692	4,845	5,422		1,616	6,345															
G3x12-SR4	Start	4,109																		Please consult factory	2,387	2,964	3,541	4,695	5,272	6,426	7,003	Exceeds MOP												5.0	2,387	9.8	7,926
	Min.	1,912																	1,012		1,319	1,625	2,233	2,537	3,143	3,446	1,012		3,931														
	End	3,118																			1,397	1,974	2,551	3,704	4,281	5,434	6,011		1,397	6,934													
G3x14-SR1	Start	6,164																		Please consult factory	4,852	5,555	Exceeds MOP													6.1	3,588	8.1	6,398				
	Min.	2,859																	2,183		2,555	1,511		2,999																			
	End	4,690																			3,379	4,081		2,115	4,924																		
G3x14-SR2	Start	5,368																		Please consult factory	3,355	4,057	5,463	6,165	Exceeds MOP												5.3	3,074	8.1	7,009			
	Min.	2,493																	1,443		1,816	2,558	2,928	1,293		3,372																	
	End	4,080																			2,068	2,770	4,175	4,877		1,787	5,720																
G3x14-SR3	Start	4,683																		Please consult factory	3,178	3,880	4,583	5,988	6,691	Exceeds MOP												4.7	2,756	8.1	7,534		
	Min.	2,179																	1,396		1,768	2,139	2,879	3,248	1,171		3,691																
	End	3,555																			2,050	2,752	3,454	4,859	5,561		1,629	6,404															
G3x14-SR4	Start	4,094																		Please consult factory	3,629	4,331	5,034	6,439	7,142	Exceeds MOP												4.1	2,365	8.1	7,985		
	Min.	1,908																	1,675		2,045	2,415	3,154	3,523	1,004		3,965																
	End	3,103																			2,639	3,341	4,043	5,448	6,150		1,375	6,993															

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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)																							
G3x16-SR1	Start	6,145			Please consult factory	4,289	5,218	6,148	Exceeds MOP										4.6	3,546	6.2	6,519	
	Min.	2,854				1,888	2,380	2,870														1,492	3,066
	End	4,671				2,816	3,745	4,673															2,073
G3x16-SR2	Start	5,348			Please consult factory	3,041	4,899	5,828	Exceeds MOP										4.0	3,041	6.2	7,129	
	Min.	2,488				1,279	2,265	2,754		3,243												1,279	3,438
	End	4,061				1,754	3,612	4,540		5,469													1,754
G3x16-SR3	Start	4,664			Please consult factory	2,637	3,566	5,425	Exceeds MOP										3.5	2,637	6.2	7,655	
	Min.	2,174				1,112	1,606	2,586		3,075	3,562											1,112	3,758
	End	3,536				1,510	2,439	4,296		6,154													1,510
G3x16-SR4	Start	4,075			Please consult factory	3,089	4,018	5,876	Exceeds MOP										3.1	2,346	6.2	8,106	
	Min.	1,903				1,393	1,883	2,861		3,349	3,837											998	4,032
	End	3,084				2,099	3,027	4,885		6,742													1,356
G3x20-SR1	Start	6,106	3,815	5,291	Exceeds MOP														2.9	3,520	3.9	6,472	
	Min.	2,844	1,644	2,426																		1,486	3,048
	End	4,632	2,342	3,817																			2,047
G3x20-SR2	Start	5,310	4,425	5,901	Exceeds MOP														2.6	3,245	3.9	7,082	
	Min.	2,478	2,022	2,800																		1,396	3,421
	End	4,022	3,138	4,613																			1,958
G3x20-SR3	Start	4,626	4,951	6,426	Exceeds MOP														2.2	2,590	3.9	7,607	
	Min.	2,164	2,344	3,120																		1,095	3,740
	End	3,497	3,822	5,297																			1,462
G3x20-SR4	Start	4,037	5,402	6,878	Exceeds MOP														1.9	2,156	3.9	8,059	
	Min.	1,893	2,620	3,394																		904	4,014
	End	3,046	4,411	5,886																			1,166

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)																															
G4x12-SR2	Start	11,098																	Please consult factory	7,203	8,596	9,293	9,989	10,686	11.0	7,203	13.8	11,104					
	Min.	4,929																2,884		3,631	4,002	4,372	4,741	2,884		4,962							
	End	7,778																		3,887	5,278	5,974	6,670	7,366		3,887		7,784					
G4x12-SR3	Start	9,343																	Please consult factory	7,031	7,727	8,423	9,816	10,513	11,209	11,906	9.2	5,917	13.8	12,324			
	Min.	4,160																2,957		3,328	3,698	4,435	4,803	5,171	5,538	5,758							
	End	6,559																4,249		4,944	5,640	7,032	7,728	8,424	9,120	9,538							
G4x12-SR4	Start	7,710																	Please consult factory	5,998	6,694	8,086	8,782	9,479	10,871	11,568	12,264	12,961	7.7	4,884	13.8	13,379	
	Min.	3,467																2,581		2,950	3,687	4,055	4,422	5,155	5,888	6,254	6,473						
	End	5,504																3,793		4,488	5,880	6,576	7,271	8,663	9,359	10,055	10,751	11,169					
G4x14-SR1	Start	12,681																	Please consult factory	8,252	9,101	10,800	11,649	12,499	Exceeds MOP	7,912	10.3	13,178					
	Min.	5,724																3,405		3,858	4,761	5,210	5,659	3,222		6,018							
	End	9,205																4,779		5,628	7,325	8,174	9,023	4,440		9,702							
G4x14-SR2	Start	11,080																	Please consult factory	7,151	8,849	9,698	10,547	12,246	13,095	13,945	Exceeds MOP	7,151	9.0	14,624			
	Min.	4,924																2,860		3,769	4,221	4,671	5,569	6,017	6,465	2,860		6,823					
	End	7,760																3,834		5,531	6,380	7,228	8,926	9,774	10,623	3,834		11,302					
G4x14-SR3	Start	9,325																	Please consult factory	7,522	8,371	10,069	10,918	11,767	13,466	15,165	Exceeds MOP	5,994	7.6	15,844			
	Min.	4,155																3,223		3,674	4,573	5,021	5,469	6,363	6,809	7,256		2,405		7,613			
	End	6,541																4,739		5,588	7,285	8,133	8,982	10,679	11,528	12,377		3,212		13,056			
G4x14-SR4	Start	7,692																	Please consult factory	6,031	6,879	8,577	9,426	11,124	11,973	12,823	14,521	15,371	16,220	Exceeds MOP	4,842	6.3	16,900
	Min.	3,462																2,602		3,053	3,950	4,398	5,292	5,738	6,185	7,077	7,523	7,969	1,967		8,325		
	End	5,486																3,826		4,674	6,371	7,219	8,916	9,764	10,613	12,310	13,159	14,008	2,638		14,687		
G4x16-SR1	Start	12,658																	Please consult factory	9,517	10,642	12,891								Exceeds MOP	7,943	7.8	13,116
	Min.	5,718																4,083		4,680	5,870								3,242		5,988		
	End	9,182																6,043		7,167	9,415								4,470		9,640		
G4x16-SR2	Start	11,056																	Please consult factory	7,590	8,714	10,963	12,088	14,337						Exceeds MOP	7,140	6.8	14,562
	Min.	4,918																3,100		3,701	4,894	5,489	6,675						2,858		6,793		
	End	7,737																4,273		5,397	7,644	8,768	11,016						3,824		11,240		
G4x16-SR3	Start	9,302																	Please consult factory	6,561	8,810	9,934	12,183	13,308	15,557					Exceeds MOP	5,887	5.7	15,782
	Min.	4,149																2,714		3,910	4,505	5,691	6,282	7,465					2,351		7,584		
	End	6,518																3,779		6,026	7,150	9,397	10,521	12,769					3,105		12,994		
G4x16-SR4	Start	7,669																	Please consult factory	5,368	6,492	7,617	9,865	10,990	13,239	14,363	16,613			Exceeds MOP	4,919	4.8	16,838
	Min.	3,456																2,253		2,851	3,447	4,632	5,224	6,406	6,996	8,177		2,012	8,296				
	End	5,463																3,164		4,287	5,411	7,658	8,781	11,029	12,152	14,400		2,715	14,625				

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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)																								
G4x20-SR1	Start	12,611			Please consult factory	8,247	10,036	11,825	Exceeds MOP										4.9	7,890	6.3	12,899		
	Min.	5,705				3,413	4,366	5,314														3,221	5,881	
	End	9,135				4,775	6,562	8,350															4,417	9,423
G4x20-SR2	Start	11,010			Please consult factory	9,694	11,483	13,272	Exceeds MOP										4.1	6,474	6.3	14,345		
	Min.	4,906				4,230	5,176	6,120														2,505	6,686	
	End	7,690				6,375	8,163	9,950															3,157	11,023
G4x20-SR3	Start	9,255		Please consult factory	7,336	10,914	12,703	14,492	Exceeds MOP										3.6	5,905	6.3	15,565		
	Min.	4,136				3,136	5,029	5,971		6,912													2,370	7,476
	End	6,471				4,553	8,129	9,916		11,704														3,123
G4x20-SR4	Start	7,623	4,814	6,603	8,391	11,969	13,758	15,547	Exceeds MOP										3.0	4,814	6.3	16,620		
	Min.	3,444	1,965	2,919	3,864	5,747	6,686	7,625														1,965	8,188	
	End	5,417	2,610	4,397	6,185	9,760	11,547	13,335															2,610	14,408
G4x24-SR1	Start	12,578	Please consult factory	8,566	11,172	Exceeds MOP													3.4	8,045	4.3	12,736		
	Min.	5,697		3,588	4,972																		3,310	5,798
	End	9,102		5,093	7,697																			4,572
G4x24-SR2	Start	10,976	7,407	10,013	12,618	Exceeds MOP													3.0	7,407	4.3	14,182		
	Min.	4,897	3,015	4,403	5,780																		3,015	6,603
	End	7,657	4,090	6,694	9,298																			4,090
G4x24-SR3	Start	9,221	8,627	11,233	13,838	Exceeds MOP													2.5	6,021	4.3	15,402		
	Min.	4,128	3,827	5,202	6,572																		2,438	7,394
	End	6,438	5,843	8,447	11,051																			3,240
G4x24-SR4	Start	7,589	9,682	12,288	14,894	Exceeds MOP													2.1	4,992	4.3	16,457		
	Min.	3,435	4,549	5,919	7,286																		2,067	8,106
	End	5,383	7,475	10,078	12,682																			2,788
G4x28-SR1	Start	12,434	12,255	Exceeds MOP															2.3	7,105	3.1	12,991		
	Min.	5,659	5,588																				2,847	5,976
	End	8,958	8,779																					3,633
G4x28-SR2	Start	10,832	13,701	Exceeds MOP															2.1	7,080	3.1	14,437		
	Min.	4,859	6,394																				2,881	6,781
	End	7,513	10,380																					3,763
G4x28-SR3	Start	9,077	14,921	Exceeds MOP															1.7	5,357	3.1	15,657		
	Min.	4,090	7,185																				2,121	7,572
	End	6,294	12,133																					2,576

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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)																																						
G5x16-SR2	Start	25,840																			Please consult factory	20,136	21,573	23,011	12.3	19,561	13.8	23,874													
	Min.	10,595																					7,560	8,343		9,121			7,244	9,586											
	End	15,284																						9,582		11,019		12,456		9,007	13,319										
G5x16-SR3	Start	20,778																			Please consult factory	15,366	16,803	18,241	21,116	22,554	23,991	25,429	9.9	15,078	13.8	26,292									
	Min.	8,710																					5,836	6,616	7,391	8,927	9,693	10,455		11,217			5,679	11,673							
	End	12,867																					7,456	8,893	10,330	13,204	14,641	16,079		17,516			7,168	18,379							
G5x16-SR4	Start	17,326																			Please consult factory	13,043	14,480	17,355	18,792	20,230	23,105	24,542	25,980	27,418	8.3	12,468	13.8	28,281							
	Min.	7,320																					5,053	5,829	7,367	8,131	8,893	10,414	11,172	11,930		12,688			4,740	13,142					
	End	10,879																					6,596	8,033	10,907	12,344	13,781	16,655	18,092	19,530		20,967			6,022	21,830					
G5x20-SR1	Start	28,761																			Please consult factory	22,681	27,275	29,572	31,869						8.6	20,843	11.3	33,248							
	Min.	12,112																					8,897	11,363	12,587	13,806	Exceeds MOP								7,900	14,537					
	End	18,024																					11,947	16,539	18,835	21,132	Exceeds MOP								10,110	22,510					
G5x20-SR2	Start	25,780																			Please consult factory	23,186	25,483	30,077	32,374	34,671					7.7	19,511	11.3	36,049							
	Min.	10,579																					9,226	10,459	12,907	14,125	15,341	Exceeds MOP								7,228	16,070				
	End	15,224																					12,631	14,927	19,519	21,816	24,112	Exceeds MOP								8,957	25,490				
G5x20-SR3	Start	20,718																			Please consult factory	18,714	21,010	25,604	27,901	32,494	34,792	37,089			6.2	15,039	11.3	38,467							
	Min.	8,694																					7,656	8,882	11,319	12,533	14,956	16,166	17,374	Exceeds MOP								5,669	18,098		
	End	12,807																					10,803	13,099	17,691	19,987	24,579	26,875	29,172	Exceeds MOP								7,130	30,550		
G5x20-SR4	Start	17,266																			Please consult factory	13,814	16,110	20,703	22,999	27,593	29,889	34,483	36,780	39,078	5.2	12,436	11.3	40,456							
	Min.	7,304																					5,482	6,714	9,155	10,368	12,790	13,998	16,413	17,621		18,826		Exceeds MOP						4,734	19,549
	End	10,818																					7,367	9,663	14,254	16,550	21,142	23,438	28,030	30,326		32,623		Exceeds MOP						5,990	34,001
G5x24-SR1	Start	28,717																			Please consult factory	21,532	28,238	31,591							5.9	20,862	7.7	32,932							
	Min.	12,101																					8,279	11,880	13,661												7,914	14,372			
	End	17,981																					10,798	17,502	20,853												10,128	22,194			
G5x24-SR2	Start	25,736																			Please consult factory	20,982	24,334	31,040	34,392						5.3	19,641	7.7	35,734							
	Min.	10,568																					8,036	9,847	13,421	15,197	Exceeds MOP									7,304	15,905				
	End	15,180																					10,427	13,779	20,482	23,834	Exceeds MOP									9,087	25,174				
G5x24-SR3	Start	20,675																			Please consult factory	20,047	23,399	26,752	33,457	36,810					4.1	14,013	7.7	38,151							
	Min.	8,683																					8,373	10,156	11,930	15,466	17,230	Exceeds MOP									5,110	17,935			
	End	12,763																					12,136	15,487	18,839	25,542	28,894	Exceeds MOP									6,104	30,234			
G5x24-SR4	Start	17,222																			Please consult factory	15,331	22,036	25,388	28,741	35,446	38,799				3.6	12,650	7.7	40,140							
	Min.	7,292																					6,304	9,864	11,632	13,398	16,922	18,682	Exceeds MOP									4,858	19,386		
	End	10,775																					8,884	15,587	18,938	22,290	28,993	32,345	Exceeds MOP									6,204	33,685		

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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)																					
G5x28-SR1	Start	28,531			Please consult factory	28,516	33,256	Exceeds MOP											4.1	19,983	5.5	33,256	
	Min.	12,051				12,090	14,608															7,496	14,608
	End	17,795				17,779	22,518																9,250
G5x28-SR2	Start	25,550		Please consult factory	21,837	31,317	36,058	Exceeds MOP											3.7	18,993	5.5	36,058	
	Min.	10,518				8,563	13,631		16,140													7,009	16,140
	End	14,994				11,283	20,760		25,499														8,440
G5x28-SR3	Start	20,488	14,776	19,515	24,255	33,735	38,476	Exceeds MOP											3.0	14,776	5.5	38,476	
	Min.	8,633	5,590	8,148	10,669	15,674	18,169													5,590		18,169	
	End	12,577	6,866	11,604	16,342	25,820	30,558															6,866	30,558
G5x28-SR4	Start	17,036	16,765	21,504	26,244	35,724	40,465	Exceeds MOP											2.6	12,973	5.5	40,465	
	Min.	7,243	7,127	9,642	12,143	17,131	19,620													5,091		19,620	
	End	10,589	10,317	15,055	19,793	29,271	34,009															6,527	34,009
G5x32-SR1	Start	28,456	Please consult factory	24,489	30,695	Exceeds MOP													3.2	20,765	4.2	33,178	
	Min.	12,031		9,953	13,265																	7,939	14,581
	End	17,719		13,754	19,958																		10,031
G5x32-SR2	Start	25,475	21,084	27,290	33,497	Exceeds MOP													2.8	18,601	4.2	35,980	
	Min.	10,498	8,170	11,505	14,801															6,809		16,113	
	End	14,919	10,529	16,734	22,939																	8,048	25,421
G5x32-SR3	Start	20,413	23,502	29,708	35,915	Exceeds MOP													2.3	14,813	4.2	38,398	
	Min.	8,613	10,285	13,567	16,837															5,627		18,142	
	End	12,502	15,589	21,794	27,999																	6,903	30,480
G5x32-SR4	Start	16,961	25,490	31,697	37,904	Exceeds MOP													1.9	11,837	4.2	40,387	
	Min.	7,222	11,762	15,028	18,290															4,489		19,593	
	End	10,513	19,040	25,245	31,449																	5,391	33,931
G5x36-SR1	Start	28,380	28,184	Exceeds MOP															2.5	20,314	3.3	32,905	
	Min.	12,011	11,944																	7,710		14,452	
	End	17,644	17,447																			9,581	22,168
G5x36-SR2	Start	25,399	30,985	Exceeds MOP															2.3	19,968	3.3	35,707	
	Min.	10,478	13,485																	7,579		15,985	
	End	14,843	20,428																			9,414	25,148
G5x36-SR3	Start	20,338	33,403	Exceeds MOP															1.8	14,517	3.3	38,125	
	Min.	8,593	15,530																	5,483		18,014	
	End	12,426	25,488																			6,608	30,208

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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)																														
G7x20-SR3	Start	41,412																	Please consult factory	32,888	35,690	41,294	44,096	46,899	49,701	10.1	30,647	13.8	51,383			
	Min.	17,172																12,657		14,175	17,182	18,676	20,168	21,654	11,433		22,546					
	End	25,072																		16,550	19,352	24,954	27,756	30,557	33,359		14,310		35,040			
G7x20-SR4	Start	34,751																	Please consult factory	25,507	28,308	33,911	36,713	39,515	45,119	47,921	50,723	53,526	8.5	25,507	13.8	55,208
	Min.	14,493																9,569		11,095	14,106	15,601	17,091	20,060	21,542	23,023	24,500	25,387				
	End	21,249																		12,007	14,808	20,409	23,210	26,011	31,614	34,415	37,217	40,019		41,700		
G7x24-SR1	Start	56,874																	Please consult factory	47,063	51,162	55,262	63,461			Exceeds MOP	42,964	12.3	65,921			
	Min.	23,400																18,198		20,413	22,614	26,988			15,961		28,297					
	End	33,928																		24,120	28,218	32,317	40,514				20,022		42,973			
G7x24-SR2	Start	50,212																	Please consult factory	38,591	42,690	50,888	54,987	59,086	67,285	Exceeds MOP	37,771	12.3	69,745			
	Min.	20,721																14,519		16,748	21,150	23,335	25,514	29,857	14,071		31,157					
	End	30,104																		18,486	22,584	30,780	34,878	38,976	47,173		17,667		49,633			
G7x24-SR3	Start	41,356																	Please consult factory	31,386	35,484	43,681	47,780	55,978	60,077	64,176	72,375	Exceeds MOP	31,386	12.3	74,835	
	Min.	17,157																11,839		14,064	18,454	20,634	24,975	27,142	29,303	33,625	11,839		34,919			
	End	25,016																		15,048	19,145	27,340	31,438	39,634	43,732	47,830	56,027		15,048		58,487	
G7x24-SR4	Start	34,695																	Please consult factory	27,014	35,210	39,309	47,505	51,604	59,802	63,901	68,001	76,200	Exceeds MOP	26,195	12.3	78,660
	Min.	14,478																10,395		14,802	16,982	21,322	23,486	27,807	29,963	32,119	36,431	37,722				
	End	21,192																		13,514	21,708	25,805	34,000	38,098	46,293	50,392	54,490	62,687		65,146		
G7x28-SR1	Start	56,648																	Please consult factory	46,112	51,916	63,524				Exceeds MOP	42,630	8.7	65,846			
	Min.	23,340																17,762		20,900	27,106				15,858		28,342					
	End	33,702																		23,169	28,972	40,577					19,688		42,898			
G7x28-SR2	Start	49,986																	Please consult factory	38,330	49,936	55,740	67,349			Exceeds MOP	37,169	8.7	69,671			
	Min.	20,661																14,455		20,722	23,817	29,974			13,818		31,202					
	End	29,879																		18,225	29,829	35,631	47,237				17,064		49,558			
G7x28-SR3	Start	41,130																	Please consult factory	31,814	37,616	43,419	55,026	60,830	72,439	Exceeds MOP	30,653	8.7	74,761			
	Min.	17,097																12,149		15,288	18,392	24,552	27,620	33,742	11,514		34,963					
	End	24,790																		15,476	21,277	27,079	38,683	44,485	56,091		14,316		58,412			
G7x28-SR4	Start	34,469																	Please consult factory	35,638	41,441	47,244	58,851	64,655	76,263	Exceeds MOP	25,194	8.7	78,585			
	Min.	14,417																15,104		18,188	21,260	27,385	30,440	36,547	9,474		37,767					
	End	20,967																		22,136	27,937	33,738	45,342	51,145	62,751		11,694		65,072			

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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)																								
G7x32-SR1	Start	56,555				Please consult factory	48,431	56,037	Exceeds MOP										5.1	42,347	6.6	65,163		
	Min.	23,315					19,035	23,125															15,718	27,992
	End	33,610						25,488		33,091														19,406
G7x32-SR2	Start	49,894			Please consult factory	44,651	52,256	59,861	Exceeds MOP										4.6	38,567	6.6	68,988		
	Min.	20,636					17,901	21,976		26,020													14,602	30,854
	End	29,786						24,545		32,148	39,751													18,462
G7x32-SR3	Start	41,038		Please consult factory	34,532	49,741	57,346	64,951	Exceeds MOP										3.7	29,969	6.6	74,078		
	Min.	17,072					13,642	21,767		25,793	29,807												11,155	34,617
	End	24,698						18,194		33,399	41,002	48,605												13,632
G7x32-SR4	Start	34,376		Please consult factory	30,752	38,356	53,565	61,170	Exceeds MOP										3.2	26,190	6.6	77,902		
	Min.	14,393					12,507	16,568		24,612	28,621	32,621											10,038	37,421
	End	20,874						17,251		24,853	40,058	47,661	55,265											12,690
G7x36-SR1	Start	56,463		Please consult factory	61,161	Exceeds MOP												4.1	43,796	5.2	65,020			
	Min.	23,291						25,876															16,530	27,931
	End	33,517							38,214														20,853	42,072
G7x36-SR2	Start	49,801		Please consult factory	45,691	64,986	Exceeds MOP											3.6	37,973	5.2	68,845			
	Min.	20,611						18,477	28,753														14,294	30,793
	End	29,694							25,584	44,874														17,869
G7x36-SR3	Start	40,945	31,487	41,134	50,781	70,075	Exceeds MOP											3.0	31,487	5.2	73,934			
	Min.	17,047	12,007	17,206	22,336	32,524																12,007	34,556	
	End	24,605	15,150	24,794	34,438	53,728																15,150	57,586	
G7x36-SR4	Start	34,284	35,312	44,958	54,605	73,900	Exceeds MOP											2.5	25,666	5.2	77,759			
	Min.	14,368	14,965	20,085	25,177	35,332																9,771	37,360	
	End	20,782	21,809	31,453	41,098	60,388																12,166	64,246	
G7xT28-SR1	Start	55,946		Please consult factory	45,397	57,001	Exceeds MOP											3.4	43,076	4.3	63,964			
	Min.	23,153						17,568	23,820														16,300	27,533
	End	33,001							22,454	34,055													20,134	41,016
G7xT28-SR2	Start	49,285	37,618	49,222	60,826	Exceeds MOP												3.0	37,618	4.3	67,788			
	Min.	20,473	14,261	20,531	26,709																	14,261	30,397	
	End	29,178	17,514	29,114	40,715																	17,514	47,676	
G7xT28-SR3	Start	40,429	42,708	54,311	65,915	Exceeds MOP												2.5	31,105	4.3	72,878			
	Min.	16,910	18,203	24,363	30,492																	11,955	34,163	
	End	24,089	26,368	37,968	49,569																	14,768	56,530	
G7xT28-SR4	Start	33,768	46,533	58,136	69,740	Exceeds MOP												2.1	25,648	4.3	76,702			
	Min.	14,230	21,072	27,197	33,305																	9,917	36,968	
	End	20,265	33,027	44,628	56,229																	12,148	63,190	

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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)																																				
G8x24-SR1	Start	84,093																	Please consult factory	57,751	62,571	67,391	72,211	11.9	56,787	13.8	75,104											
	Min.	36,545																22,591		25,189	27,772	30,346	22,070		31,885													
	End	56,718																		30,380	35,199	40,019	44,838		29,417		47,730											
G8x24-SR2	Start	67,668																	Please consult factory	47,118	51,937	56,756	66,395	71,215	76,035	80,855	9.7	44,226	13.8	83,747								
	Min.	30,152																19,334		21,907	24,470	29,575	32,122	34,664	37,204	17,782		38,728										
	End	48,076																		27,528	32,347	37,165	46,803	51,622	56,441	61,261		24,637		64,153								
G8x24-SR3	Start	57,376																	Please consult factory	39,925	44,744	54,381	59,200	64,019	73,659	78,478	83,298	88,119	8.2	37,034	13.8	91,011						
	Min.	25,604																16,419		18,991	24,104	26,651	29,194	34,273	36,808	39,342	41,876	14,868		43,397								
	End	40,813																		23,365	28,183	37,819	42,638	47,456	57,094	61,913	66,732	71,552		20,475		74,443						
G8x28-SR1	Start	83,822																	Please consult factory	58,078	64,917	78,596	85,437	92,277	Exceeds MOP							8.4	56,710	11.9	104,591			
	Min.	36,473																22,870		26,553	33,849	37,477	41,098								22,131		47,603					
	End	56,447																		30,707	37,545	51,222	58,062	64,901									29,339		77,213			
G8x28-SR2	Start	67,397																	Please consult factory	46,205	53,044	66,721	73,560	87,240	94,080	100,921	Exceeds MOP							6.8	43,470	11.9	113,235	
	Min.	30,081																18,942		22,594	29,848	33,462	40,674	44,272	47,870								17,472		54,344			
	End	47,805																		26,616	33,454	47,129	53,967	67,645	74,484	81,324									23,882		93,636	
G8x28-SR3	Start	57,105																	Please consult factory	39,794	53,469	60,307	73,985	80,824	94,504	101,344	108,184	Exceeds MOP							5.8	37,059	11.9	120,498
	Min.	25,532																16,442		23,717	27,333	34,545	38,143	45,337	48,929	52,522								14,973		58,988		
	End	40,542																		23,234	36,907	43,745	57,420	64,258	77,936	84,775	91,615									20,499		103,927
G8x32-SR1	Start	83,712																	Please consult factory	67,338	76,312	94,259	103,234	Exceeds MOP							6.4	56,571	9.0	103,234				
	Min.	36,444																27,862		32,647	42,158	46,899								22,071		46,899						
	End	56,338																		39,966	48,938	66,883	75,856									29,200		75,856				
G8x32-SR2	Start	67,287																	Please consult factory	49,064	58,036	75,982	84,955	102,903	111,877	Exceeds MOP							5.2	43,681	9.0	111,877		
	Min.	30,052																20,488		25,263	34,753	39,483	48,925	53,643								17,602		53,643				
	End	47,695																		29,475	38,446	56,388	65,360	83,305	92,279									24,092		92,279		
G8x32-SR3	Start	56,995																	Please consult factory	47,356	56,328	65,300	83,245	92,219	110,166	119,141	Exceeds MOP							4.4	36,590	9.0	119,141	
	Min.	25,503																20,492		25,245	29,982	39,431	44,150	53,575	58,287								14,740		58,287			
	End	40,433																		30,795	39,766	48,736	66,679	75,651	93,596	102,569									20,031		102,569	
G8x36-SR1	Start	83,603																	Please consult factory	55,537	66,929	78,321	101,107	Exceeds MOP							5.0	55,537	7.1	103,385				
	Min.	36,415																21,527		27,660	33,732	45,792								21,527		46,993						
	End	56,228																		28,166	39,556	50,947	73,729									28,166		76,007				
G8x36-SR2	Start	67,178																	Please consult factory	64,180	75,572	86,964	109,750	Exceeds MOP							4.1	43,676	7.1	112,029				
	Min.	30,023																28,537		34,554	40,558	52,541								17,619		53,737						
	End	47,586																		44,589	55,979	67,369	90,152									24,087		92,430				
G8x36-SR3	Start	56,885																	Please consult factory	37,271	48,662	71,444	82,836	94,228	117,014	Exceeds MOP							3.4	34,993	7.1	119,292		
	Min.	25,474																15,127		21,204	33,239	39,232	45,222	57,184								13,899		58,381				
	End	40,323																		20,712	32,100	54,879	66,270	77,660	100,443									18,434		102,721		

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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)																												
G8x40-SR1	Start	83,493			Please consult factory	82,476	96,573	Exceeds MOP											4.1	57,103	5.8	105,031						
	Min.	36,386				35,954	43,413															22,396	47,877					
	End	56,118				55,101	69,196																29,732	77,653				
G8x40-SR2	Start	67,068	Please consult factory	48,832	62,927	91,120	105,216	Exceeds MOP											3.3	43,193	5.8	113,675						
	Min.	29,994		20,404	27,895	42,761	50,174															17,382	54,618					
	End	47,476		29,242	43,336	71,524	85,619																23,605	94,076				
G8x40-SR3	Start	56,776	42,000	56,095	70,191	98,383	112,480	Exceeds MOP											2.8	36,362	5.8	120,939						
	Min.	25,445	17,683	25,162	32,598	47,421	54,821															14,661	59,261					
	End	40,214	25,440	39,533	53,626	81,815	95,910																19,803	104,367				
G8xT32-SR1	Start	82,718	Please consult factory	66,319	84,260	Exceeds MOP													3.2	55,555	4.5	102,201						
	Min.	36,181		27,590	37,138																		21,795	46,627				
	End	55,344		38,947	56,885																			28,185	74,823			
G8xT32-SR2	Start	66,293	57,023	74,963	92,903	Exceeds MOP													2.6	42,672	4.5	110,845						
	Min.	29,790	24,995	34,485	43,936																		17,332	53,373				
	End	46,701	37,433	55,370	73,307																			23,083	91,246			
G8xT32-SR3	Start	56,001	64,287	82,226	100,167	Exceeds MOP													2.2	35,585	4.5	118,108						
	Min.	25,241	29,715	39,163	48,594																			14,470	58,016			
	End	39,439	47,723	65,660	83,598																				19,026	101,537		
G8xT36-SR1	Start	82,499	77,196	99,976	Exceeds MOP														2.6	58,974	3.6	104,532						
	Min.	36,123	33,434	45,493																					23,690	47,896		
	End	55,125	49,823	72,599																						31,602	77,154	
G8xT36-SR2	Start	66,074	85,840	108,619	Exceeds MOP														2.1	44,839	3.6	113,175						
	Min.	29,732	40,262	52,244																						18,544	54,637	
	End	46,482	66,245	89,021																							25,250	93,576
G8xT36-SR3	Start	55,782	93,104	115,883	Exceeds MOP														1.7	33,881	3.6	120,439						
	Min.	25,183	44,927	56,888																							13,599	59,280
	End	39,220	76,536	99,312																								17,322

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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)																								
G10x28-SR2	Start	156,369																	Please consult factory	124,945	133,850	142,756	12.1	117,821	13.8	148,100
	Min.	64,909																48,271		53,091	57,882	44,388		60,747		
	End	95,262																		63,844	72,748	81,652		56,722		86,994
G10x28-SR3	Start	142,592																	Please consult factory	113,644	131,453	140,358	11.0	113,644	13.8	163,514
	Min.	57,027																41,521		51,254	56,063	41,521		68,469		
	End	79,852																		50,911	68,716	77,619		50,911		100,769
G10x28-SR4	Start	114,264																	Please consult factory	90,821	108,626	117,530	8.8	87,260	13.8	176,303
	Min.	46,725																34,256		43,898	48,670	32,302		79,848		
	End	67,065																		43,628	61,429	70,331		40,068		129,091
G10x32-SR1	Start	193,931																	Please consult factory	164,934	176,644	188,355	11.4	150,882	13.8	207,094
	Min.	78,995																63,646		69,983	76,281	55,977		86,310		
	End	113,386																		84,395	96,103	107,812		70,347		126,546
G10x32-SR2	Start	156,225																	Please consult factory	136,369	148,078	159,787	9.2	117,637	13.8	225,366
	Min.	64,871																54,462		60,747	67,005	44,302		101,765		
	End	95,118																		75,266	86,972	98,678		56,538		164,243
G10x32-SR3	Start	142,448																	Please consult factory	116,661	128,367	151,783	8.3	111,978	13.8	240,779
	Min.	56,989																43,201		49,595	62,210	40,615		109,412		
	End	79,708																		53,926	65,631	89,041		49,245		178,018
G10x32-SR4	Start	114,120																	Please consult factory	94,332	106,037	129,450	6.7	87,309	13.8	253,569
	Min.	46,687																36,190		42,523	55,044	32,348		120,539		
	End	66,922																		47,138	58,841	82,248		40,116		206,340
G10x36-SR1	Start	193,787																	Please consult factory	151,759	181,534	196,422	8.9	148,782	10.9	208,333
	Min.	78,956																56,474		72,630	80,617	54,835		86,986		
	End	113,242																		71,224	100,992	115,877		68,247		127,785
G10x36-SR2	Start	156,081																	Please consult factory	125,374	155,145	170,032	7.2	116,443	10.9	226,605
	Min.	64,832																48,537		64,543	72,475	43,668		102,433		
	End	94,974																		64,273	94,038	108,921		55,344		165,482
G10x36-SR3	Start	142,304																	Please consult factory	125,903	140,788	170,559	6.6	113,995	10.9	242,019
	Min.	56,950																48,273		56,326	72,248	41,751		110,078		
	End	79,564																		63,166	78,048	107,813		51,262		179,257
G10x36-SR4	Start	113,976																	Please consult factory	94,041	108,924	138,692	5.3	88,088	10.9	254,808
	Min.	46,648																36,054		44,096	59,975	32,800		121,204		
	End	66,778																		46,847	61,727	91,488		40,895		207,579

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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)																																								
G10x40-SR1	Start	193,643																	Please consult factory	160,260	197,139	Exceeds MOP											7.2	149,197	8.8	208,203				
	Min.	78,918																		61,139	81,017		55,083	86,933																
	End	113,098																			79,722		116,593	68,662	127,655															
G10x40-SR2	Start	155,937																	Please consult factory	123,218	160,093	178,532	215,411	Exceeds MOP											5.8	115,843	8.8	226,475		
	Min.	64,794																		47,386	67,203	77,010	96,533		43,361	102,380														
	End	94,830																			62,118	98,985	117,420		154,291	54,745	165,352													
G10x40-SR3	Start	142,160																	Please consult factory	120,195	138,632	175,507	193,945	230,825	Exceeds MOP											5.3	112,820	8.8	241,889	
	Min.	56,911																		45,181	55,188	74,902	84,687	104,192		41,127	110,026													
	End	79,420																			57,460	75,892	112,760	131,194		168,065	50,087	179,127												
G10x40-SR4	Start	113,832																	Please consult factory	114,548	132,984	151,421	188,296	206,735	243,614	Exceeds MOP											4.1	81,364	8.8	254,678
	Min.	46,610																		47,135	56,967	66,747	86,218	95,936	115,334		29,105	121,152												
	End	66,634																			67,349	85,781	104,214	141,081	159,516		196,387	34,173	207,449											
G10xT32-SR1	Start	192,653																	Please consult factory	163,584	Exceeds MOP														5.7	149,539	6.9	205,721		
	Min.	78,653																		63,280		83,046	55,607	85,944																
	End	112,109																						69,004	125,173															
G10xT32-SR2	Start	154,948																	Please consult factory	135,042	158,448	181,856	Exceeds MOP											4.6	116,317	6.9	223,993			
	Min.	64,529																		54,106	66,649	79,099		43,942	101,402															
	End	93,840																			73,939	97,340		120,743	55,218	162,871														
G10xT32-SR3	Start	141,170																	Please consult factory	150,455	173,862	197,270	Exceeds MOP											4.1	108,325	6.9	239,406			
	Min.	56,646																		61,856	74,348	86,775		38,950	109,050															
	End	78,430																			87,713	111,115		134,518	45,593	176,645														
G10xT32-SR4	Start	112,842																	Please consult factory	93,030	116,433	163,244	186,651	210,059	Exceeds MOP											3.4	88,349	6.9	252,196	
	Min.	46,346																		35,837	48,451	73,311	85,669	98,011		33,278	120,179													
	End	65,644																			45,836	69,235	116,035	139,437		162,840	41,156	204,967												

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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)																																						
G10xT36-SR1	Start	192,365			Please consult factory	180,056	209,821	Exceeds MOP												4.5	150,292	5.5	209,821															
	Min.	78,577				72,233	88,176																	56,073	88,176													
	End	111,821				99,514	129,273																		69,757	129,273												
G10xT36-SR2	Start	154,660		Please consult factory	138,802	198,328	228,093	Exceeds MOP												3.6	114,992	5.5	228,093															
	Min.	64,453				56,179	87,878		103,610															43,271	103,610													
	End	93,553				77,698	137,212		166,970																53,894	166,970												
G10xT36-SR3	Start	140,882		Please consult factory	124,454	154,215	213,742	243,507	Exceeds MOP											3.3	112,549	5.5	243,507															
	Min.	56,569				47,880	63,919	95,537		111,256														41,353	111,256													
	End	78,142				61,718	91,473	150,986		180,745															49,816	180,745												
G10xT36-SR4	Start	112,554	107,482	137,243	167,004	226,531	256,296	Exceeds MOP											2.6	83,675	5.5	256,296																
	Min.	46,269	43,709	59,591	75,350	106,722	122,379																30,763	122,379														
	End	65,356	60,285	90,039	119,794	179,308	209,067																	36,483	209,067													
G10xT40-SR1	Start	192,077		Please consult factory	177,094	Exceeds MOP													3.6	147,599	4.4	206,590																
	Min.	78,500					70,692																	54,643	86,502													
	End	111,533					96,553																		67,064	126,042												
G10xT40-SR2	Start	154,372	121,630	158,497	195,366	Exceeds MOP													2.9	114,257	4.4	224,862																
	Min.	64,376	46,955	66,779	86,363																		42,928	101,954														
	End	93,265	60,530	97,389	134,250																			53,158	163,739													
G10xT40-SR3	Start	140,594	137,044	173,911	210,779	Exceeds MOP													2.6	107,551	4.4	240,275																
	Min.	56,491	54,759	74,478	94,022																		38,638	109,601														
	End	77,855	74,305	111,164	148,025																			44,818	177,514													
G10xT40-SR4	Start	112,266	149,833	186,700	223,569	Exceeds MOP													2.1	83,475	4.4	253,064																
	Min.	46,192	66,327	85,798	105,215																		30,717	120,728														
	End	65,068	102,626	139,486	176,346																			36,283	205,836													

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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)																									
G13x40-SR1	Start	431,434																	Please consult factory	354,862	378,439	402,018	12.5	354,862	13.8	416,165	
	Min.	168,461																127,086		140,112	152,993	127,086					160,679
	End	230,059																		153,537	177,099	200,662					153,537
G13x40-SR2	Start	372,365																	Please consult factory	313,668	360,819	431,552	10.8	304,238	13.8	445,699	
	Min.	146,111																114,559		140,298	153,021	127,086					185,849
	End	200,544																		141,885	189,005	212,567					141,885
G13x40-SR3	Start	310,335																	Please consult factory	254,688	301,833	325,406	9.0	254,688	13.8	481,012	
	Min.	121,257																91,193		117,025	129,746	91,193					212,554
	End	165,254																		109,643	156,757	180,316					109,643
G13x40-SR4	Start	251,267																	Please consult factory	213,511	260,651	284,222	7.3	204,084	13.8	510,546	
	Min.	98,908																78,663		104,263	116,900	78,663					236,632
	End	135,739																		98,008	145,118	168,673					98,008
G13x44-SR1	Start	431,238																	Please consult factory	366,503	395,132		Exceeds MOP	355,051	11.4	418,036	
	Min.	168,408																133,560		149,267		127,216					161,719
	End	229,863																		165,170	193,781						153,726
G13x44-SR2	Start	372,169																	Please consult factory	310,154	367,408	396,037	Exceeds MOP	304,428	11.4	447,570	
	Min.	146,058																112,649		143,881	159,297	109,472					186,867
	End	200,348																		138,372	195,590	224,200					132,651
G13x44-SR3	Start	310,139																	Please consult factory	259,591	316,840	345,466	Exceeds MOP	253,866	11.4	482,883	
	Min.	121,204																93,945		125,157	140,546	90,766					213,566
	End	165,058																		114,543	171,755	200,363					108,822
G13x44-SR4	Start	251,070																	Please consult factory	203,258	260,502	289,125	Exceeds MOP	203,258	11.4	512,417	
	Min.	98,855																73,026		104,212	119,548	73,026					237,640
	End	135,543																		87,762	144,968	173,573					87,762
G13x48-SR1	Start	431,051																	Please consult factory	380,093			Exceeds MOP	352,762	9.7	427,923	
	Min.	168,358																141,063				125,967					167,083
	End	229,677																		178,751							151,438
G13x48-SR2	Start	371,983																	Please consult factory	307,140	375,464	409,627	Exceeds MOP	300,308	9.7	457,457	
	Min.	146,008																111,003		148,253	166,616	107,209					192,146
	End	200,162																		135,361	203,640	237,781					128,533
G13x48-SR3	Start	309,953																	Please consult factory	308,292	342,453	410,776	Exceeds MOP	253,638	9.7	492,770	
	Min.	121,154																120,566		138,951	175,389	90,667					218,807
	End	164,872																		163,213	197,351	265,630					108,594
G13x48-SR4	Start	250,884																	Please consult factory	201,195	235,351	269,509	Exceeds MOP	201,195	9.7	522,304	
	Min.	98,805																71,912		90,656	109,078	71,912					242,857
	End	135,357																		85,700	119,834	153,969					85,700

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)																						
G13x52-SR1	Start	430,865								Please consult factory	367,697	Exceeds MOP							7.4	359,661	8.3	431,986
	Min.	168,307								134,265										129,824		169,300
	End	229,491									166,364											158,333
G13x52-SR2	Start	371,797								Please consult factory	357,052	Exceeds MOP							6.3	300,803	8.3	461,521
	Min.	145,958								138,334										107,512		194,331
	End	199,976									185,241											129,028
G13x52-SR3	Start	309,766								Please consult factory	271,833	Exceeds MOP							5.3	255,762	8.3	496,833
	Min.	121,104								100,755										91,878		220,976
	End	164,686									126,777											110,717
G13x52-SR4	Start	250,698								Please consult factory	261,192	Exceeds MOP							4.1	188,879	8.3	526,367
	Min.	98,754								104,642										65,028		245,015
	End	135,171									145,658											73,392
G13xT40-SR1	Start	429,380								Please consult factory		Exceeds MOP							6.3	357,395	6.9	413,958
	Min.	167,907																		129,100		160,080
	End	228,006																				156,069
G13xT40-SR2	Start	370,311								Please consult factory	311,517	Exceeds MOP							5.4	302,090	6.9	443,492
	Min.	145,557								113,967										108,744		185,260
	End	198,491									139,735											130,314
G13xT40-SR3	Start	308,281								Please consult factory	299,698	Exceeds MOP							4.5	252,569	6.9	478,805
	Min.	120,703								116,445										90,605		211,972
	End	163,202									154,624											107,526
G13xT40-SR4	Start	249,213								Please consult factory	234,975	Exceeds MOP							3.7	206,699	6.9	508,339
	Min.	98,354								90,964										75,488		236,051
	End	133,686									119,458											91,201
G13xT44-SR1	Start	428,988								Please consult factory	392,775	Exceeds MOP							5.2	358,431	5.7	415,671
	Min.	167,801								148,623										129,745		161,077
	End	227,614									191,425											157,103
G13xT44-SR2	Start	369,919								Please consult factory	365,069	Exceeds MOP							4.5	307,832	5.7	445,205
	Min.	145,452								143,250										112,008		186,238
	End	198,099									193,253											136,052
G13xT44-SR3	Start	307,889								Please consult factory	285,908	Exceeds MOP							3.7	251,568	5.7	480,518
	Min.	120,597								109,027										90,129		212,941
	End	162,810									140,843											106,525
G13xT44-SR4	Start	248,820	200,976	258,208	315,442	429,916	487,156				Exceeds MOP							3.0	200,976	5.7	510,052	
	Min.	98,248	72,393	103,597	134,190	194,794	224,954														72,393	237,018
	End	133,295	85,481	142,676	199,873	314,273	371,475														85,481	394,357

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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)																						
G13xT48-SR1	Start	428,615			Please consult factory	Exceeds MOP													4.1	322,931	4.8	418,565
	Min.	167,700					109,864	162,712														
	End	227,242					121,626	217,198														
G13xT48-SR2	Start	369,547		Please consult factory	338,803	Exceeds MOP												3.7	297,819	4.8	448,099	
	Min.	145,351					129,073	187,840														
	End	197,727					167,004	276,228														
G13xT48-SR3	Start	307,516	Please consult factory	305,809	374,116	Exceeds MOP												3.1	251,164	4.8	483,412	
	Min.	120,497					119,896	156,548	214,532													
	End	162,437					160,731	228,994	338,219													
G13xT48-SR4	Start	248,448	267,038	335,343	403,650	Exceeds MOP												2.6	212,395	4.8	512,946	
	Min.	98,147	108,415	144,837	180,986		78,790	238,603														
	End	132,922	151,500	219,761	288,024		96,893	397,249														
G13xT52-SR1	Start	428,243	Please consult factory	405,189	Exceeds MOP													3.7	356,982	4.1	421,258	
	Min.	167,600					155,514	164,235														
	End	226,870					203,831	219,889														
G13xT52-SR2	Start	369,174	Please consult factory	354,379	434,723	Exceeds MOP												3.2	306,173	4.1	450,792	
	Min.	145,251					137,609	189,340														
	End	197,355					182,569	278,920														
G13xT52-SR3	Start	307,144	309,349	389,691	470,035	Exceeds MOP												2.6	245,077	4.1	486,104	
	Min.	120,396	121,884	164,908	207,532		86,655	216,021														
	End	162,065	164,269	244,559	324,851		100,038	340,910														
G13xT52-SR4	Start	248,075	338,883	419,225	499,570	Exceeds MOP												2.1	194,273	4.1	515,639	
	Min.	98,047	146,788	189,286	231,623		68,814	240,084														
	End	132,550	223,299	303,589	383,881		78,782	399,940														

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