

Bettis G-Series

Hydraulic Double-Acting & Spring-Return Actuator Torque Chart Imperial

BETTIS™



Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750	5000		
			Pressure Torque Output: Start/Min./End (lbf-in)																						
G01x01.5	Start	Outboard	2,072	4,650	6,466	10,046	11,813	13,567	15,309	17,042	18,766	20,485	22,200	23,912	25,623	27,336	30,771	32,497	34,231	400	5,000	2,072	34,231		
	Min		1,245	2,601	3,561	5,463	6,405	7,343	8,278	9,208	10,137	11,062	11,987	12,911	13,834	14,758	16,609	17,537	18,469			1,245	18,469		
	End		2,070	4,645	6,460	10,036	11,801	13,553	15,294	17,025	18,748	20,465	22,178	23,889	25,598	27,309	30,741	32,465	34,198			2,070	34,198		
	Start	Inboard	1,052	2,737	3,916	6,221	7,350	8,466	9,571	10,666	11,753	12,835	13,912	14,986	16,060	17,135	19,295	20,384	21,480			400	5,000	1,052	21,480
	Min		712	1,601	2,228	3,462	4,072	4,676	5,277	5,874	6,469	7,062	7,653	8,243	8,833	9,423	10,608	11,203	11,801					712	11,801
	End		1,051	2,734	3,912	6,215	7,343	8,458	9,561	10,655	11,742	12,822	13,898	14,972	16,044	17,118	19,276	20,363	21,459					1,051	21,459
Start	Outboard	3,017	6,545	9,043	13,989	16,440	18,879	21,308	23,727	26,140	28,547	30,950	33,350	35,750	Exceeds MOP	400	3,939	3,017	37,565						
Min		1,763	3,616	4,931	7,545	8,844	10,139	11,431	12,719	14,005	15,289	16,571	17,853	19,134				1,763	20,103						
End		3,014	6,539	9,034	13,975	16,424	18,860	21,287	23,704	26,114	28,519	30,919	33,317	35,715				3,014	37,528						
Start	Inboard	1,685	4,047	5,712	8,992	10,611	12,217	13,813	15,400	16,980	18,554	20,124	21,692	23,259				400	3,015	1,685	24,444				
Min		1,067	2,310	3,190	4,932	5,796	6,656	7,511	8,364	9,215	10,063	10,910	11,756	12,602						1,067	13,242				
End		1,683	4,043	5,706	8,983	10,600	12,205	13,799	15,385	16,963	18,535	20,104	21,670	23,236						1,683	24,420				
Start	Outboard	4,156	8,762	12,020	18,466	21,659	24,835	27,996	31,145	34,284	37,415	Exceeds MOP	400	3,015	4,156	37,602									
Min		2,378	4,797	6,514	9,924	11,618	13,306	14,989	16,668	18,343	20,015				2,378	20,116									
End		4,152	8,753	12,008	18,448	21,638	24,810	27,969	31,114	34,250	37,378				4,152	37,565									
Start	Inboard	2,822	6,260	8,684	13,463	15,822	18,164	20,492	22,807	25,112	27,409				400	3,015	2,822	27,546							
Min		1,681	3,489	4,770	7,307	8,566	9,818	11,065	12,307	13,547	14,783						1,681	14,857							
End		2,819	6,254	8,676	13,450	15,807	18,147	20,472	22,784	25,087	27,382						2,819	27,519							
Start	Outboard	5,478	11,317	15,452	23,648	27,712	31,759	35,789	Exceeds MOP	400	2,383	5,478	37,927												
Min		3,086	6,151	8,328	12,655	14,808	16,953	19,093				3,086	20,230												
End		5,473	11,306	15,437	23,624	27,685	31,727	35,753				5,473	37,889												
Start	Inboard	4,146	8,818	12,121	18,651	21,883	25,096	28,294				400	2,383	4,146	29,989										
Min		2,389	4,844	6,586	10,042	11,759	13,470	15,174						2,389	16,079										
End		4,142	8,810	12,109	18,633	21,862	25,072	28,266						4,142	29,959										
Start	Outboard	6,963	14,182	19,300	29,453	34,494	Exceeds MOP	400	1,930	6,963	38,111														
Min		3,880	7,667	10,359	15,714	18,379				3,880	20,294														
End		6,956	14,168	19,281	29,424	34,460				6,956	38,073														
Start	Inboard	5,629	11,680	15,965	24,450	28,657				400	1,930	5,629	31,674												
Min		3,182	6,359	8,615	13,098	15,327						3,182	16,928												
End		5,624	11,669	15,949	24,426	28,629						5,624	31,643												
Start	Outboard	10,433	20,847	28,242	Exceeds MOP	400	1,340	10,433	38,247																
Min		5,728	11,189	15,074				5,728	20,340																
End		10,422	20,827	28,214				10,422	38,209																
Start	Inboard	9,099	18,346	24,907				400	1,340	9,099	33,777														
Min		5,031	9,881	13,330						5,031	18,003														
End		9,090	18,328	24,882						9,090	33,744														
Start	Outboard	14,568	28,760	Exceeds MOP	400	985	14,568			38,244															
Min		7,925	15,364				7,925			20,342															
End		14,553	28,732				14,553			38,206															
Start	Inboard	13,235	26,262				400	985	13,235	34,963															
Min		7,228	14,057						7,228	18,626															
End		13,222	26,236						13,222	34,928															

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Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)			
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000
			Pressure Torque Output: Start/Min./End (lbf-in)																				
G2x01.7	Outboard	Start	3,652	7,924	10,947	16,934	19,901	22,854	25,794	28,723	31,644	34,557	37,466	40,372	43,277	46,184	52,008	54,930	Exceeds MOP	400	4,820	3,652	55,749
		Min	2,134	4,377	5,969	9,132	10,705	12,273	13,836	15,395	16,951	18,505	20,057	21,609	23,160	24,711	27,818	29,375				2,134	29,811
		End	3,649	7,917	10,938	16,920	19,885	22,836	25,773	28,700	31,618	34,529	37,436	40,340	43,243	46,147	51,966	54,886				3,649	55,705
	Inboard	Start	2,039	4,899	6,915	10,885	12,845	14,789	16,721	18,642	20,555	22,460	24,361	26,259	28,156	30,054	33,862	35,776				2,039	36,314
		Min	1,291	2,796	3,861	5,970	7,015	8,056	9,092	10,124	11,153	12,180	13,205	14,229	15,253	16,278	18,330	19,360				1,291	19,649
		End	2,038	4,895	6,909	10,877	12,834	14,777	16,708	18,627	20,538	22,442	24,341	26,238	28,133	30,030	33,835	35,747				2,038	36,284
G2x02.0	Outboard	Start	5,031	10,606	14,550	22,354	26,219	30,064	33,891	37,703	41,502	45,292	49,075	52,855	Exceeds MOP	400	3,691	5,031	55,741				
		Min	2,879	5,807	7,885	12,011	14,062	16,105	18,143	20,175	22,202	24,227	26,249	28,269				2,879	29,813				
		End	5,027	10,598	14,539	22,336	26,198	30,040	33,864	37,672	41,469	45,256	49,036	52,813				5,027	55,697				
	Inboard	Start	3,416	7,578	10,513	16,298	19,154	21,989	24,806	27,609	30,399	33,180	35,954	38,724				3,416	40,839				
		Min	2,034	4,224	5,774	8,845	10,368	11,883	13,393	14,897	16,397	17,893	19,388	20,881				2,034	22,021				
		End	3,413	7,572	10,504	16,285	19,138	21,971	24,787	27,587	30,375	33,153	35,925	38,693				3,413	40,806				
G2x02.2	Outboard	Start	6,631	13,699	18,706	28,627	33,547	38,445	43,324	48,186	53,034	Exceeds MOP	400	2,916	6,631	56,248							
		Min	3,735	7,445	10,080	15,318	17,923	20,520	23,111	25,695	28,275				3,735	29,987							
		End	6,626	13,688	18,691	28,604	33,520	38,414	43,289	48,147	52,992				6,626	56,203							
	Inboard	Start	5,018	10,675	14,673	22,578	26,491	30,380	34,251	38,105	41,945				5,018	44,490							
		Min	2,892	5,864	7,972	12,155	14,233	16,304	18,367	20,425	22,477				2,892	23,839							
		End	5,014	10,667	14,662	22,560	26,469	30,356	34,223	38,074	41,912				5,014	44,454							
G2x02.5	Outboard	Start	8,429	17,168	23,363	35,655	41,757	47,834	53,891	Exceeds MOP	400	2,362	8,429	56,598									
		Min	4,696	9,280	12,539	19,021	22,247	25,464	28,674				4,696	30,110									
		End	8,423	17,154	23,345	35,626	41,723	47,796	53,848				8,423	56,553									
	Inboard	Start	6,814	14,139	19,326	29,598	34,691	39,759	44,807				6,814	47,062									
		Min	3,852	7,697	10,428	15,854	18,552	21,242	23,924				3,852	25,123									
		End	6,809	14,128	19,310	29,575	34,663	39,728	44,771				6,809	47,024									
G2x03.0	Outboard	Start	12,629	25,237	34,188	51,976	Exceeds MOP	400	1,640	12,629	56,932												
		Min	6,934	13,543	18,246	27,611				6,934	30,224												
		End	12,619	25,216	34,161	51,934				12,619	56,886												
	Inboard	Start	11,014	22,209	30,151	45,920				11,014	50,310												
		Min	6,089	11,960	16,135	24,444				6,089	26,762												
		End	11,006	22,191	30,127	45,883				11,006	50,270												
G2x03.5	Outboard	Start	17,635	34,816	47,027	Exceeds MOP	400	1,205	17,635	57,006													
		Min	9,592	18,596	25,006				9,592	30,250													
		End	17,621	34,788	46,990				17,621	56,961													
	Inboard	Start	16,022	31,792	42,995				16,022	52,147													
		Min	8,749	17,015	22,898				8,749	27,710													
		End	16,009	31,766	42,961				16,009	52,106													
G2x04.0	Outboard	Start	23,448	45,909	Exceeds MOP	400	923	23,448	56,970														
		Min	12,673	24,440				12,673	30,242														
		End	23,429	45,872				23,429	56,924														
	Inboard	Start	21,835	42,885				21,835	53,248														
		Min	11,830	22,859				11,830	28,296														
		End	21,817	42,851				21,817	53,206														

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Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)																		
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750	5000																
			Pressure Torque Output: Start/Min./End (lbf-in)																																				
G3x02.0	Start	Outboard	5,976	12,751	17,541	27,011	31,698	36,359	40,997	45,616	50,218	54,808	59,390	63,966	68,541	73,118	82,293	86,898	91,520	400	5,976	5,000	91,520																
	Min		3,451	7,010	9,535	14,546	17,035	19,515	21,987	24,452	26,911	29,366	31,818	34,269	36,719	39,169	44,078	46,538	49,004					400	3,451	5,000	49,004												
	End		5,973	12,745	17,533	26,998	31,684	36,343	40,978	45,595	50,195	54,783	59,363	63,937	68,510	73,085	82,255	86,858	91,478									400	5,973	5,000	91,478								
	Start	2,907	6,997	9,869	15,503	18,273	21,016	23,736	26,436	29,121	31,793	34,456	37,115	39,772	42,431	47,770	50,457	53,161	400													2,907	5,000	53,161					
	Min	1,847	4,002	5,524	8,529	10,016	11,493	12,962	14,424	15,881	17,333	18,783	20,230	21,677	23,125	26,028	27,485	28,949																	400	1,847	5,000	28,949	
	End	2,906	6,994	9,864	15,496	18,264	21,006	23,725	26,424	29,107	31,778	34,441	37,098	39,754	42,411	47,748	50,434	53,136																					400
G3x02.2	Start	Outboard	7,923	16,513	22,595	34,640	40,611	46,553	52,470	58,366	64,244	70,109	75,965	81,815	87,663	93,514	Exceeds MOP				400	7,923	4,192																
	Min		4,493	9,002	12,204	18,567	21,731	24,884	28,029	31,166	34,297	37,423	40,547	43,668	46,789	49,910								400	4,493	4,192	52,309												
	End		7,919	16,506	22,584	34,624	40,592	46,532	52,446	58,339	64,215	70,077	75,930	81,777	87,623	93,471												400	7,919	4,192	97,966								
	Start	4,856	10,764	14,929	23,141	27,196	31,222	35,222	39,202	43,164	47,112	51,051	54,985	58,913	62,852	400			4,856													4,192	65,877						
	Min	2,890	5,997	8,197	12,556	14,717	16,868	19,011	21,146	23,276	25,400	27,521	29,641	31,760	33,879																			400	2,890	4,192	35,508		
	End	4,854	10,759	14,922	23,131	27,184	31,207	35,206	39,184	43,144	47,091	51,028	54,960	58,890	62,823																							400	4,854
G3x02.5	Start	Outboard	10,109	20,731	28,259	43,187	50,596	57,972	65,322	72,648	79,956	87,250	94,533	Exceeds MOP							400	10,109	3,395																
	Min		5,662	11,234	15,195	23,070	26,989	30,896	34,794	38,684	42,567	46,445	50,320											400	5,662	3,395	52,566												
	End		10,105	20,722	28,246	43,168	50,572	57,946	65,292	72,615	79,920	87,210	94,489															400	10,105	3,395	98,709								
	Start	7,043	14,982	20,594	31,689	37,181	42,641	48,074	53,484	58,876	64,253	69,620	400			7,043			3,395													72,729							
	Min	4,058	8,229	11,187	17,058	19,975	22,880	25,776	28,664	31,546	34,422	37,295																					400	4,058	3,395	38,960			
	End	7,040	14,975	20,584	31,674	37,164	42,622	48,052	53,460	58,849	64,223	69,588																									400	7,040	3,395
G3x03.0	Start	Outboard	15,217	30,545	41,425	63,038	73,779	84,485	95,159	Exceeds MOP												400	15,217																
	Min		8,383	16,419	22,135	33,517	39,185	44,840	50,485															400	8,383	2,358	52,920												
	End		15,211	30,531	41,406	63,009	73,746	84,446	95,115																			400	15,211	2,358	99,716								
	Start	12,149	24,791	33,753	51,530	60,354	69,141	77,897	400				12,149			2,358			81,671																				
	Min	6,778	13,411	18,124	27,500	32,165	36,818	41,460																								400	6,778	2,358	43,462				
	End	12,143	24,780	33,738	51,506	60,326	69,109	77,862																												400	12,143	2,358	81,634
G3x03.5	Start	Outboard	21,305	42,195	57,040	86,561	Exceeds MOP																400																
	Min		11,616	22,564	30,356	45,884																		400	11,616	1,732	53,065												
	End		21,295	42,176	57,014	86,522																						400	21,295	1,732	100,147								
	Start	18,239	36,446	49,375	75,063	400			18,239				1,732			86,916																							
	Min	10,013	19,558	26,349	39,872														400													10,013	1,732	46,124					
	End	18,231	36,430	49,352	75,028																														400	18,231	1,732	86,876	
G3x04.0	Start	Outboard	28,375	55,687	75,110		Exceeds MOP																																400
	Min		15,363	29,671	39,861																			400	15,363	1,326	53,116												
	End		28,362	55,662	75,076																							400	28,362	1,326	100,295								
	Start	25,309	49,938	67,445	400	25,309			1,326				90,177																										
	Min	13,760	26,665	35,854												400			13,760													1,326	47,801						
	End	25,297	49,915	67,414																														400	25,297	1,326	90,135		
G3x04.5	Start	Outboard	36,427	71,021			95,636	Exceeds MOP																															400
	Min		19,623	37,741			50,650																	400	19,623	1,048	53,125												
	End		36,410	70,988			95,592																					400	36,410	1,048	100,307								
	Start	33,361	65,272	87,970	400	33,361	1,048		92,320																														
	Min	18,020	34,735	46,642									400			18,020			1,048													48,925							
	End	33,345	65,242	87,930																													400	33,345	1,048	92,277			

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			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000
Pressure Torque Output: Start/Min./End (lbf-in)																							
G3x202.0	Start	Outboard	8,884	19,749	27,410	42,514	49,971	57,375	64,733	72,052	79,339	86,601	93,846	Exceeds MOP						400	8,884	3,296	95,178
	Min		5,298	11,012	15,058	23,075	27,051	31,008	34,949	38,876	42,792	46,699	50,601								5,298		51,318
	End		8,880	19,740	27,397	42,494	49,948	57,349	64,703	72,019	79,302	86,562	93,803								8,880		95,134
	Start	Inboard	8,884	19,749	27,410	42,514	49,971	57,375	64,733	72,052	79,339	86,601	93,846								8,884		95,178
	Min		5,298	11,012	15,058	23,075	27,051	31,008	34,949	38,876	42,792	46,699	50,601								5,298		51,318
	End		8,880	19,740	27,397	42,494	49,948	57,349	64,703	72,019	79,302	86,562	93,803								8,880		95,134
G3x202.5	Start	Outboard	17,153	35,713	48,853	74,876	87,776	Exceeds MOP												400	17,153	1,940	97,538
	Min		9,720	19,463	26,381	40,129	46,963														9,720		52,143
	End		17,145	35,697	48,831	74,842	87,736														17,145		97,493
	Start	Inboard	17,153	35,713	48,853	74,876	87,776														17,153		97,538
	Min		9,720	19,463	26,381	40,129	46,963														9,720		52,143
	End		17,145	35,697	48,831	74,842	87,736														17,145		97,493
G3x203.0	Start	Outboard	27,366	55,336	75,179	Exceeds MOP														400	27,366	1,291	98,147
	Min		15,161	29,829	40,260																15,161		52,356
	End		27,354	55,311	75,144																27,354		98,103
	Start	Inboard	27,366	55,336	75,179																27,366		98,147
	Min		15,161	29,829	40,260																15,161		52,356
	End		27,354	55,311	75,144																27,354		98,103
G3x203.5	Start	Outboard	39,544	78,642	Exceeds MOP															400	39,544	925	98,095
	Min		21,629	42,121																	21,629		52,334
	End		39,526	78,606																	39,526		98,051
	Start	Inboard	39,544	78,642																	39,544		98,095
	Min		21,629	42,121																	21,629		52,334
	End		39,526	78,606																	39,526		98,051
G3x204.0	Start	Outboard	53,684	Exceeds MOP															400	53,684	697	97,779	
	Min		29,122																	29,122		52,222	
	End		53,659																	53,659		97,734	
	Start	Inboard	53,684																	53,684		97,779	
	Min		29,122																	29,122		52,222	
	End		53,659																	53,659		97,734	
G3x204.5	Start	Outboard	69,787	Exceeds MOP															400	69,787	545	97,379	
	Min		37,643																	37,643		52,088	
	End		69,756																	69,756		97,335	
	Start	Inboard	69,787																	69,787		97,379	
	Min		37,643																	37,643		52,088	
	End		69,756																	69,756		97,335	

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750	5000		
			Pressure Torque Output: Start/Min./End (lbf-in)																						
G4x02.5	Start	Outboard	12,097	24,978	34,091	52,122	61,053	69,938	78,781	87,590	96,370	105,129	113,872	122,607	131,338	140,074	157,581	166,366	175,181	400	5,000	12,097	175,181		
	Min		6,816	13,580	18,381	27,915	32,652	37,374	42,081	46,776	51,461	56,138	60,810	65,479	70,147	74,817	84,168	88,855	93,552			6,816	93,552		
	End		12,089	24,961	34,066	52,084	61,010	69,888	78,725	87,527	96,301	105,054	113,791	122,519	131,244	139,973	157,469	166,247	175,055			12,089	175,055		
	Start	Inboard	6,729	14,913	20,670	31,990	37,567	43,096	48,584	54,038	59,463	64,866	70,255	75,634	81,010	86,390	97,188	102,617	108,077			400	5,000	6,729	108,077
	Min		4,009	8,317	11,364	17,389	20,373	23,340	26,292	29,233	32,164	35,087	38,005	40,920	43,834	46,749	52,592	55,524	58,467					4,009	58,467
	End		6,724	14,902	20,655	31,967	37,540	43,065	48,549	53,999	59,420	64,820	70,204	75,580	80,952	86,329	97,118	102,544	107,999					6,724	107,999
G4x03.0	Start	Outboard	18,308	36,909	50,097	76,254	89,239	102,170	115,055	127,901	140,715	153,505	166,278	179,040	191,800	Exceeds MOP	400	3,884	18,308	198,640					
	Min		10,124	19,883	26,819	40,615	47,480	54,327	61,158	67,975	74,780	81,578	88,369	95,157	101,944				10,124	105,582					
	End		18,294	36,883	50,061	76,200	89,175	102,097	114,973	127,810	140,615	153,395	166,159	178,912	191,662				18,294	198,498					
	Start	Inboard	12,936	26,838	36,668	56,112	65,739	75,313	84,841	94,330	103,787	113,220	122,635	132,041	141,443				Exceeds MOP	400	3,884	12,936	146,484		
	Min		7,316	14,617	19,798	30,084	35,194	40,285	45,360	50,422	55,473	60,515	65,551	70,584	75,615							7,316	78,312		
	End		12,927	26,819	36,642	56,072	65,692	75,259	84,780	94,262	103,713	113,139	122,548	131,946	141,342							12,927	146,379		
G4x03.5	Start	Outboard	25,709	51,074	69,081	104,853	122,635	140,357	158,028	175,656	193,248	Exceeds MOP	400	2,853	25,709	200,488									
	Min		14,055	27,354	36,814	55,651	65,033	74,394	83,737	93,065	102,381				14,055	106,216									
	End		25,690	51,037	69,031	104,778	122,547	140,256	157,915	175,530	193,110				25,690	200,345									
	Start	Inboard	20,340	41,008	55,660	84,722	99,148	113,515	127,831	142,104	156,341				Exceeds MOP	400	2,853	20,340	162,198						
	Min		11,248	22,091	29,797	45,125	52,753	60,360	67,949	75,523	83,085							11,248	86,197						
	End		20,326	40,979	55,620	84,661	99,077	113,434	127,740	142,002	156,229							20,326	162,082						
G4x04.0	Start	Outboard	34,304	67,476	91,049	137,929	161,254	184,514	Exceeds MOP	400	2,184	34,304	201,597												
	Min		18,610	35,995	48,370	73,027	85,316	97,582				18,610	106,597												
	End		34,279	67,428	90,984	137,831	161,139	184,382				34,279	201,452												
	Start	Inboard	28,935	57,411	77,628	117,798	137,768	157,672				Exceeds MOP	400	2,184	28,935	172,285									
	Min		15,804	30,732	41,353	62,502	73,036	83,548							15,804	91,272									
	End		28,915	57,370	77,573	117,714	137,669	157,559							28,915	172,162									
G4x04.5	Start	Outboard	44,049	86,016	115,830	175,103	Exceeds MOP	400	1,726	44,049	201,759														
	Min		23,774	45,771	61,426	92,612				23,774	106,661														
	End		44,017	85,955	115,747	174,978				44,017	201,614														
	Start	Inboard	38,680	75,951	102,409	154,972				Exceeds MOP	400	1,726	38,680	178,594											
	Min		20,968	40,508	54,409	82,087							20,968	94,550											
	End		38,653	75,896	102,336	154,861							38,653	178,467											
G4x05.0	Start	Outboard	55,026	106,884	143,748	Exceeds MOP	400	1,398	55,026				202,164												
	Min		29,576	56,749	76,096				29,576				106,802												
	End		54,987	106,807	143,645				54,987				202,020												
	Start	Inboard	49,658	96,818	130,327				Exceeds MOP	400	1,398	49,658	183,402												
	Min		26,770	51,486	69,079							26,770	96,992												
	End		49,622	96,749	130,233							49,622	183,271												
G4x06.0	Start	Outboard	80,557	155,324	Exceeds MOP	400	971	80,557				202,359													
	Min		43,050	82,210				43,050				106,876													
	End		80,499	155,213				80,499				202,214													
	Start	Inboard	75,189	145,258				Exceeds MOP	400	971	75,189	189,328													
	Min		40,243	76,947							40,243	100,062													
	End		75,135	145,154							75,135	189,192													

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000	
Pressure Torque Output: Start/Min./End (lbf-in)																								
G4x202.5	Start	Outboard	18,827	39,891	54,760	84,112	98,620	113,034	127,365	141,627	155,833	169,995	184,127	Exceeds MOP						400	18,827	3,410	193,161	
			Min	10,825	21,897	29,744	45,304	53,025	60,713	68,373	76,009	83,625	91,225								98,815		10,825	103,669
			End	18,813	39,863	54,721	84,052	98,549	112,953	127,274	141,526	155,722	169,874								183,995		18,813	193,023
	Min	Inboard	18,827	39,891	54,760	84,112	98,620	113,034	127,365	141,627	155,833	169,995	184,127								18,827		193,161	
			10,825	21,897	29,744	45,304	53,025	60,713	68,373	76,009	83,625	91,225	98,815								10,825		103,669	
			End	18,813	39,863	54,721	84,052	98,549	112,953	127,274	141,526	155,722	169,874								183,995		18,813	193,023
G4x203.0	Start	Outboard	31,244	63,748	86,765	132,366	154,978	177,483	Exceeds MOP										400	31,244	2,219	197,121		
			Min	17,440	34,501	46,617	70,699	82,674												94,612		17,440	105,043	
			End	31,221	63,702	86,703	132,271	154,867												177,356		31,221	196,980	
	Min	Inboard	31,244	63,748	86,765	132,366	154,978	177,483												31,244		197,121		
			17,440	34,501	46,617	70,699	82,674	94,612												17,440		105,043		
			End	31,221	63,702	86,703	132,271	154,867												177,356		31,221	196,980	
G4x203.5	Start	Outboard	46,049	92,081	124,740	189,575	Exceeds MOP												400	46,049	1,571	198,735		
			Min	25,304	49,445	66,611														100,776		25,304	105,611	
			End	46,016	92,015	124,651														189,439		46,016	198,593	
	Min	Inboard	46,049	92,081	124,740	189,575														46,049		198,735		
			25,304	49,445	66,611	100,776														25,304		105,611		
			End	46,016	92,015	124,651														189,439		46,016	198,593	
G4x204.0	Start	Outboard	63,239	124,887	168,678	Exceeds MOP													400	63,239	1,175	199,221		
			Min	34,414	66,727															89,723		34,414	105,782	
			End	63,194	124,798															168,557		63,194	199,079	
	Min	Inboard	63,239	124,887	168,678															63,239		199,221		
			34,414	66,727	89,723															34,414		105,782		
			End	63,194	124,798															168,557		63,194	199,079	
G4x204.5	Start	Outboard	82,729	161,967	Exceeds MOP														400	82,729	914	198,911		
			Min	44,742																86,279		44,742	105,678	
			End	82,670																161,851		82,670	198,768	
	Min	Inboard	82,729	161,967																82,729		198,911		
			44,742	86,279																44,742		105,678		
			End	82,670																161,851		82,670	198,768	
G4x205.0	Start	Outboard	104,684	Exceeds MOP														400	104,684	732	198,624			
			Min																56,346		56,346	105,571		
			End																104,609		104,609	198,482		
	Min	Inboard	104,684																104,684		198,624			
			56,346																56,346		105,571			
			End																104,609		104,609	198,482		
G4x206.0	Start	Outboard	155,746	Exceeds MOP														400	155,746	501	197,615			
			Min																83,293		83,293	105,210		
			End																155,634		155,634	197,474		
	Min	Inboard	155,746																155,746		197,615			
			83,293																83,293		105,210			
			End																155,634		155,634	197,474		

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
			Pressure Torque Output: Start/Min./End (lbf-in)																				
G5x03.5	Outboard	Start	32,703	65,367	88,488	134,272	156,965	179,546	202,030	224,431	246,766	269,049	291,296	313,521	335,740	357,967	402,510	424,855	447,270	400	5,000	32,703	447,270
		Min	17,989	35,142	47,320	71,517	83,547	95,537	107,493	119,420	131,325	143,211	155,084	166,950	178,814	190,681	214,445	226,353	238,285			17,989	238,285
		End	32,692	65,345	88,459	134,228	156,914	179,487	201,964	224,358	246,686	268,961	291,200	313,418	335,630	357,850	402,378	424,717	447,124			32,692	447,124
	Inboard	Start	20,366	42,236	57,646	88,010	102,992	117,863	132,636	147,327	161,952	176,524	191,060	205,575	220,083	234,601	263,722	278,357	293,062			20,366	293,062
		Min	11,538	23,045	31,191	47,323	55,320	63,277	71,201	79,096	86,968	94,822	102,663	110,497	118,328	126,163	141,862	149,738	157,637			11,538	157,637
		End	20,360	42,222	57,627	87,981	102,959	117,824	132,593	147,279	161,899	176,467	190,998	205,508	220,011	234,524	263,636	278,266	292,966			20,360	292,966
G5x04.0	Outboard	Start	43,808	86,556	116,861	176,972	206,811	236,526	266,136	295,657	325,104	354,495	383,846	413,174	442,495	Exceeds MOP				400	3,858	43,808	455,163
		Min	23,878	46,310	62,254	93,966	109,747	125,485	141,186	156,856	172,500	188,125	203,736	219,338	234,939							23,878	241,679
		End	43,793	86,528	116,823	176,914	206,743	236,449	266,049	295,560	324,998	354,379	383,721	413,039	442,350							43,793	455,015
	Inboard	Start	31,471	63,425	86,020	130,710	152,838	174,843	196,743	218,553	240,290	261,970	283,611	305,228	326,839							31,471	336,176
		Min	17,426	34,213	46,124	69,772	81,520	93,226	104,895	116,532	128,144	139,736	151,315	162,885	174,453							17,426	179,451
		End	31,461	63,404	85,991	130,667	152,788	174,786	196,678	218,481	240,211	261,884	283,518	305,128	326,732							31,461	336,067
G5x04.5	Outboard	Start	56,456	110,639	149,093	225,460	263,409	301,224	338,925	376,529	414,054	451,518	Exceeds MOP						400	3,049	56,456	458,855	
		Min	30,573	58,992	79,205	119,443	139,479	159,470	179,420	199,337	219,226	239,094									30,573	242,986	
		End	56,437	110,603	149,045	225,387	263,323	301,126	338,815	376,406	413,919	451,370									56,437	458,705	
	Inboard	Start	44,119	87,508	118,252	179,198	209,436	239,541	269,532	299,425	329,239	358,993									44,119	364,819	
		Min	24,121	46,895	63,076	95,248	111,253	127,211	143,129	159,013	174,869	190,705									24,121	193,806	
		End	44,105	87,479	118,213	179,139	209,367	239,463	269,443	299,327	329,132	358,875									44,105	364,699	
G5x05.0	Outboard	Start	70,647	137,617	185,185	279,737	326,760	373,640	420,397	Exceeds MOP									400	2,469	70,647	461,269	
		Min	38,075	73,188	98,175	147,946	172,744	197,491	222,195												38,075	243,806	
		End	70,624	137,572	185,124	279,646	326,653	373,518	420,259												70,624	461,118	
	Inboard	Start	58,307	114,478	154,333	233,460	272,770	311,937	350,981												58,307	385,097	
		Min	31,622	61,087	82,040	123,744	144,508	165,221	185,892												31,622	203,969	
		End	58,288	114,441	154,283	233,383	272,681	311,835	350,866												58,288	384,971	
G5x06.0	Outboard	Start	103,653	200,239	268,924	405,626	Exceeds MOP												400	1,715	103,653	464,169	
		Min	55,498	106,112	142,159	214,019															55,498	244,836	
		End	103,620	200,174	268,836	405,493															103,620	464,018	
	Inboard	Start	91,317	177,108	238,082	359,363															91,317	411,276	
		Min	49,046	94,015	126,029	189,825															49,046	217,174	
		End	91,287	177,050	238,004	359,246															91,287	411,142	
G5x07.0	Outboard	Start	142,834	274,439	368,098	Exceeds MOP													400	1,260	142,834	465,231	
		Min	76,150	145,091	194,215																76,150	245,208	
		End	142,787	274,349	367,978																142,787	465,079	
	Inboard	Start	130,493	251,300	337,247																130,493	426,358	
		Min	69,696	132,990	178,080																69,696	224,879	
		End	130,451	251,218	337,137																130,451	426,219	
G5x08.0	Outboard	Start	187,971	359,720	Exceeds MOP														400	965	187,971	464,798	
		Min	99,953	189,948																	99,953	245,083	
		End	187,909	359,602																	187,909	464,647	
	Inboard	Start	175,634	336,588																	175,634	435,036	
		Min	93,501	177,851																	93,501	229,518	
		End	175,576	336,478																	175,576	434,894	

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)					
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000		
			Pressure Torque Output: Start/Min./End (lbf-in)																						
G5x203.5	Start	Outboard	53,069	107,602	146,134	222,282	259,958	297,409	334,666	371,759	408,718	445,573	Exceeds MOP								400	53,069	3,011	447,193	
	Min		29,527	58,186	78,511	118,840	138,866	158,814	178,694	198,517	218,293	238,033		29,527	238,901										
	End		53,052	107,567	146,087	222,209	259,873	297,312	334,557	371,637	408,584	445,428		53,052	447,047										
	Start	Inboard	53,069	107,602	146,134	222,282	259,958	297,409	334,666	371,759	408,718	445,573												53,069	447,193
	Min		29,527	58,186	78,511	118,840	138,866	158,814	178,694	198,517	218,293	238,033		29,527	238,901										
	End		53,052	107,567	146,087	222,209	259,873	297,312	334,557	371,637	408,584	445,428		53,052	447,047										
G5x204.0	Start	Outboard	75,279	149,981	202,881	307,682	359,648	411,370	Exceeds MOP												400	75,279	2,205	453,621	
	Min		41,303	80,523	108,378	163,738	191,267	218,711		41,303	241,159														
	End		75,254	149,931	202,815	307,581	359,531	411,235		75,254	453,473														
	Start	Inboard	75,279	149,981	202,881	307,682	359,648	411,370																75,279	453,621
	Min		41,303	80,523	108,378	163,738	191,267	218,711		41,303	241,159														
	End		75,254	149,931	202,815	307,581	359,531	411,235		75,254	453,473														
G5x204.5	Start	Outboard	100,575	198,147	267,345	404,658	Exceeds MOP														400	100,575	1,691	456,778	
	Min		54,694	105,887	142,281	214,691		54,694	242,235																
	End		100,542	198,082	267,258	404,526		100,542	456,629																
	Start	Inboard	100,575	198,147	267,345	404,658																		100,575	456,778
	Min		54,694	105,887	142,281	214,691		54,694	242,235																
	End		100,542	198,082	267,258	404,526		100,542	456,629																
G5x205.0	Start	Outboard	128,954	252,095	339,518	Exceeds MOP															400	128,954	1,342	458,469	
	Min		69,697	134,275	180,216		69,697	242,838																	
	End		128,912	252,012	339,407		128,912	458,319																	
	Start	Inboard	128,954	252,095	339,518																			128,954	458,469
	Min		69,697	134,275	180,216		69,697	242,838																	
	End		128,912	252,012	339,407		128,912	458,319																	
G5x206.0	Start	Outboard	194,970	377,347	Exceeds MOP																400	194,970	908	459,347	
	Min		104,545	200,128		104,545	243,161																		
	End		194,906	377,224		194,906	459,197																		
	Start	Inboard	194,970	377,347																				194,970	459,347
	Min		104,545	200,128		104,545	243,161																		
	End		194,906	377,224		194,906	459,197																		
G5x207.0	Start	Outboard	273,327	Exceeds MOP																	400	273,327	657	458,783	
	Min		145,846		145,846	242,984																			
	End		273,238		273,238	458,633																			
	Start	Inboard	273,327																					273,327	458,783
	Min		145,846		145,846	242,984																			
	End		273,238		273,238	458,633																			
G5x208.0	Start	Outboard	363,604	Exceeds MOP																	400	363,604	498	456,943	
	Min		193,454		193,454	242,334																			
	End		363,486		363,486	456,794																			
	Start	Inboard	363,604																					363,604	456,943
	Min		193,454		193,454	242,334																			
	End		363,486		363,486	456,794																			

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
			Pressure Torque Output: Start/Min./End (lbf-in)																				
G7x04.0	Outboard	Start	53,529	106,019	143,218	216,978	253,580	290,025	326,334	362,529	398,631	434,660	470,639	506,587	542,527	578,479	650,505	686,622	722,835	400	5,000	53,529	722,835
		Min	29,247	56,810	76,396	115,344	134,721	154,043	173,319	192,554	211,756	230,934	250,093	269,242	288,389	307,539	345,883	365,090	384,332			29,247	384,332
		End	53,516	105,992	143,182	216,923	253,516	289,952	326,252	362,438	398,531	434,551	470,520	506,460	542,390	578,333	650,342	686,449	722,653			53,516	722,653
	Inboard	Start	34,346	70,051	95,261	145,041	169,654	194,110	218,430	242,636	266,748	290,788	314,777	338,736	362,686	386,649	434,697	458,824	483,048			34,346	483,048
		Min	19,210	37,990	51,302	77,703	90,807	103,856	116,857	129,819	142,748	155,652	168,538	181,414	194,286	207,163	232,960	245,894	258,862			19,210	258,862
		End	34,338	70,033	95,237	145,005	169,611	194,061	218,375	242,574	266,681	290,715	314,698	338,651	362,595	386,552	434,587	458,708	482,926			34,338	482,926
G7x04.5	Outboard	Start	69,066	135,603	182,813	276,541	323,105	369,500	415,748	461,873	507,897	553,843	599,734	645,592	691,441	737,304	829,160	875,200	Exceeds MOP	400	4,813	69,066	886,818
		Min	37,476	72,397	97,230	146,655	171,263	195,812	220,310	244,765	269,184	293,576	317,949	342,311	366,669	391,033	439,805	464,230				37,476	470,390
		End	69,049	135,569	182,767	276,471	323,024	369,407	415,644	461,757	507,769	553,703	599,583	645,430	691,267	737,118	828,952	874,980				69,049	886,595
	Inboard	Start	49,883	99,635	134,855	204,604	239,179	273,585	307,844	341,979	376,014	409,970	443,872	477,741	511,601	545,474	613,352	647,402				49,883	655,998
		Min	27,439	53,577	72,136	109,014	127,349	145,624	163,848	182,030	200,176	218,294	236,394	254,482	272,567	290,657	326,882	345,034				27,439	349,613
		End	49,871	99,610	134,821	204,553	239,119	273,516	307,767	341,893	375,919	409,867	443,760	477,621	511,472	545,336	613,197	647,239				49,871	655,833
G7x05.0	Outboard	Start	86,499	168,742	227,147	343,214	400,926	458,456	515,828	573,068	630,199	687,246	744,234	801,188	858,132	Exceeds MOP	400	3,898	86,499	891,847			
		Min	46,697	89,844	120,545	181,687	212,146	242,542	272,882	303,176	333,433	363,660	393,866	424,061	454,252				46,697	472,126			
		End	86,478	168,700	227,090	343,128	400,825	458,340	515,698	572,923	630,040	687,073	744,047	800,986	857,916				86,478	891,623			
	Inboard	Start	67,316	132,774	179,189	271,278	317,000	362,541	407,924	453,174	498,316	543,374	588,373	633,337	678,291				67,316	704,909			
		Min	36,660	71,024	95,451	144,046	168,232	192,354	216,421	240,441	264,424	288,378	312,311	336,232	360,149				36,660	374,310			
		End	67,299	132,741	179,144	271,210	316,921	362,449	407,821	453,060	498,190	543,237	588,225	633,177	678,120				67,299	704,732			
G7x06.0	Outboard	Start	127,044	245,668	330,012	497,856	581,412	664,760	747,930	830,948	Exceeds MOP	400	2,707	127,044	899,593								
		Min	68,111	130,310	174,603	262,894	306,912	350,857	394,740	438,571				68,111	474,829								
		End	127,012	245,606	329,929	497,731	581,265	664,593	747,742	830,739				127,012	899,366								
	Inboard	Start	107,861	209,700	282,055	425,920	497,486	568,845	640,026	711,054				107,861	769,772								
		Min	58,073	111,489	149,509	225,253	262,997	300,669	338,279	375,836				58,073	406,900								
		End	107,834	209,647	281,984	425,813	497,361	568,702	639,864	710,875				107,834	769,578								

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750
Pressure Torque Output: Start/Min./End (lbf-in)																						
G7x07.0	Start	Outboard	175,173	336,814	451,838	680,940	795,080	Exceeds MOP											400	175,173	1,989	903,980
	Min		93,492	178,216	238,582	358,983	419,040													93,492		476,379
	End		175,129	336,730	451,725	680,768	794,879													175,129		903,752
	Start	Inboard	155,985	300,837	403,869	608,985	711,133													155,985		808,568
	Min		83,452	159,391	213,481	321,332	375,114													83,452		426,454
	End		155,946	300,761	403,767	608,832	710,954													155,946		808,365
G7x08.0	Start	Outboard	230,619	441,574	591,603	890,237	Exceeds MOP											400	230,619	1,532	909,291	
	Min		122,747	233,347	312,119	469,167													122,747		479,198	
	End		230,561	441,463	591,454	890,012															230,561	909,062
	Start	Inboard	211,436	405,606	543,645	818,300															211,436	835,820
	Min		112,709	214,526	287,025	431,526															112,709	440,754
	End		211,383	405,504	543,508	818,094															211,383	835,610
G7x09.0	Start	Outboard	293,868	561,056	751,181	Exceeds MOP												400	293,868	1,203	905,161	
	Min		156,047	296,094	395,876														156,047		476,758	
	End		293,794	560,915	750,992																293,794	904,933
	Start	Inboard	274,685	525,088	703,224																274,685	847,468
	Min		146,009	277,273	370,782																146,009	446,570
	End		274,616	524,956	703,047																274,616	847,255
G7x10.0	Start	Outboard	364,697	694,750	Exceeds MOP													400	364,697	975	906,241	
	Min		193,312	366,277															193,312		477,230	
	End		364,605	694,575																	364,605	906,012
	Start	Inboard	345,514	658,782																	345,514	859,482
	Min		183,275	347,457																	183,275	452,763
	End		345,427	658,616																	345,427	859,266

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
		400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
Pressure Torque Output: Start/Min./End (lbf-in)																						
G7x204.0	Start	87,876	176,070	238,479	362,019	423,234	484,135	544,764	605,165	665,379	725,448	785,415	845,323	Exceeds MOP					400	87,876	3,618	873,591
	Min	48,457	94,800	127,698	193,047	225,528	257,899	290,176	322,373	354,504	386,586	418,631	450,656		48,457	465,769						
	End	87,854	176,026	238,419	361,928	423,127	484,013	544,627	605,012	665,211	725,265	785,218	845,110		87,854	873,371						
	Start	87,876	176,070	238,479	362,019	423,234	484,135	544,764	605,165	665,379	725,448	785,415	845,323		87,876	873,591						
	Min	48,457	94,800	127,698	193,047	225,528	257,899	290,176	322,373	354,504	386,586	418,631	450,656		48,457	465,769						
	End	87,854	176,026	238,419	361,928	423,127	484,013	544,627	605,012	665,211	725,265	785,218	845,110		87,854	873,371						
G7x204.5	Start	118,950	235,238	317,668	481,145	562,284	643,085	723,592	803,852	883,911	Exceeds MOP							400	118,950	2,750	883,911	
	Min	64,915	125,974	169,366	255,670	298,612	341,436	384,158	426,794	469,360		64,915	469,360									
	End	118,920	235,179	317,588	481,024	562,143	642,923	723,410	803,650	883,688		118,920	883,688									
	Start	118,950	235,238	317,668	481,145	562,284	643,085	723,592	803,852	883,911		118,950	883,911									
	Min	64,915	125,974	169,366	255,670	298,612	341,436	384,158	426,794	469,360		64,915	469,360									
	End	118,920	235,179	317,588	481,024	562,143	642,923	723,410	803,650	883,688		118,920	883,688									
G7x205.0	Start	153,816	301,516	406,336	614,492	717,926	820,996	Exceeds MOP										400	153,816	2,169	890,490	
	Min	83,357	160,868	215,996	325,734	380,378	434,895		83,357	471,686												
	End	153,777	301,440	406,234	614,338	717,745	820,790		153,777	890,266												
	Start	153,816	301,516	406,336	614,492	717,926	820,996		153,816	890,490												
	Min	83,357	160,868	215,996	325,734	380,378	434,895		83,357	471,686												
	End	153,777	301,440	406,234	614,338	717,745	820,790		153,777	890,266												
G7x206.0	Start	234,905	455,368	612,067	Exceeds MOP													400	234,905	1,456	896,428	
	Min	126,183	241,799	324,111		126,183	473,740															
	End	234,846	455,253	611,913		234,846	896,202															
	Start	234,905	455,368	612,067		234,905	896,428															
	Min	126,183	241,799	324,111		126,183	473,740															
	End	234,846	455,253	611,913		234,846	896,202															

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750
Pressure Torque Output: Start/Min./End (lbf-in)																						
G7x207.0	Start	Outboard	331,159	637,652	855,707	Exceeds MOP													400	331,159	1,049	898,368
	Min		176,945	337,607	452,063															176,945		474,469
	End		331,075	637,491	855,492																	331,075
	Start	Inboard	331,159	637,652	855,707															331,159		898,368
	Min		176,945	337,607	452,063															176,945		474,469
	End		331,075	637,491	855,492																	331,075
G7x208.0	Start	Outboard	442,055	847,179	Exceeds MOP													400	442,055	793	896,801	
	Min		235,456	447,873																	235,456	473,918
	End		441,944	846,966																		441,944
	Start	Inboard	442,055	847,179																	442,055	896,801
	Min		235,456	447,873																	235,456	473,918
	End		441,944	846,966																		441,944
G7x209.0	Start	Outboard	568,554	Exceeds MOP														400	568,554	621	895,662	
	Min		302,055																		302,055	473,470
	End		568,411																			568,411
	Start	Inboard	568,554																		568,554	895,662
	Min		302,055																		302,055	473,470
	End		568,411																			568,411
G7x210.0	Start	Outboard	710,211	Exceeds MOP														400	710,211	500	894,297	
	Min		376,587																		376,587	473,012
	End		710,033																			710,033
	Start	Inboard	710,211																		710,211	894,297
	Min		376,587																		376,587	473,012
	End		710,033																			710,033

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750	5000
			Pressure Torque Output: Start/Min./End (lbf-in)																				
G8x05.0	Start	Outboard	101,794	199,165	268,285	405,586	473,829	541,841	609,654	677,299	744,806	812,208	879,535	946,817	1,014,087	1,081,375	1,216,130	1,283,660	Exceeds MOP	400	101,794	4,765	1,287,716
	Min		55,075	106,162	142,502	214,855	250,889	286,842	322,726	358,552	394,330	430,070	465,785	501,484	537,179	572,880	644,344	680,130			55,075		682,278
	End		101,779	199,136	268,246	405,527	473,759	541,762	609,565	677,199	744,697	812,089	879,405	946,678	1,013,938	1,081,216	1,215,952	1,283,471			101,779		1,287,527
	Start	Inboard	67,845	135,511	183,413	278,278	325,302	372,096	418,691	465,118	511,408	557,591	603,700	649,764	695,816	741,886	834,205	880,516			67,845		883,299
	Min		37,314	72,859	98,098	148,249	173,182	198,034	222,817	247,542	272,219	296,858	321,472	346,070	370,664	395,264	444,527	469,211			37,314		470,693
	End		67,835	135,491	183,386	278,237	325,255	372,042	418,630	465,050	511,333	557,509	603,611	649,669	695,714	741,777	834,083	880,387			67,835		883,170
G8x06.0	Start	Outboard	149,823	290,291	390,139	588,774	687,631	786,228	884,601	982,783	1,080,810	1,178,718	1,276,540	1,374,314	Exceeds MOP	400	149,823	3,684	1,446,264				
	Min		80,438	154,091	206,530	311,039	363,133	415,136	467,060	518,919	570,723	622,485	674,218	725,934			80,438		763,993				
	End		149,801	290,248	390,082	588,688	687,530	786,113	884,471	982,638	1,080,651	1,178,545	1,276,353	1,374,112			149,801		1,446,051				
	Start	Inboard	115,880	226,647	305,281	461,487	539,130	616,512	693,670	770,638	847,450	924,143	1,000,752	1,077,311			115,880		1,133,647				
	Min		62,679	120,793	162,134	244,444	285,439	326,343	367,168	407,927	448,632	489,296	529,930	570,546			62,679		600,436				
	End		115,863	226,614	305,236	461,419	539,051	616,422	693,568	770,525	847,326	924,008	1,000,605	1,077,153			115,863		1,133,480				
G8x07.0	Start	Outboard	206,836	398,263	534,454	805,654	940,741	1,075,538	1,210,085	1,344,419	Exceeds MOP	400	206,836	2,707	1,455,516								
	Min		110,501	210,833	282,310	424,850	495,941	566,932	637,835	708,664			110,501		767,264								
	End		206,806	398,204	534,375	805,536	940,603	1,075,380	1,209,907	1,344,222			206,806		1,455,303								
	Start	Inboard	172,887	334,608	449,581	678,345	792,214	905,793	1,019,122	1,132,239			172,887		1,225,767								
	Min		92,740	177,530	237,906	358,244	418,234	478,124	537,926	597,654			92,740		647,062								
	End		172,862	334,559	449,515	678,246	792,098	905,661	1,018,972	1,132,072			172,862		1,225,587								
G8x08.0	Start	Outboard	272,517	522,360	700,018	1,053,586	1,229,611	1,405,208	Exceeds MOP	400	272,517	2,072	1,455,709										
	Min		145,152	276,132	369,410	555,357	648,065	740,624			145,152		767,257										
	End		272,477	522,283	699,915	1,053,431	1,229,431	1,405,002			272,477		1,455,495										
	Start	Inboard	238,574	458,716	615,160	926,299	1,081,110	1,235,492			238,574		1,279,883										
	Min		127,393	242,835	325,014	488,762	570,371	651,831			127,393		675,267										
	End		238,539	458,649	615,069	926,163	1,080,951	1,235,311			238,539		1,279,695										
G8x09.0	Start	Outboard	347,442	663,898	889,053	1,337,435	Exceeds MOP	400	347,442	1,637	1,459,895												
	Min		184,593	350,452	468,615	704,266			184,593		768,697												
	End		347,391	663,800	888,923	1,337,239			347,391		1,459,681												
	Start	Inboard	313,499	600,254	804,195	1,210,148			313,499		1,320,983												
	Min		166,834	317,155	424,218	637,672			166,834		696,020												
	End		313,453	600,166	804,077	1,209,970			313,453		1,320,789												
G8x10.0	Start	Outboard	431,345	822,271	1,100,536	Exceeds MOP	400	431,345	1,326	1,462,312													
	Min		228,732	433,580	579,563			228,732		769,547													
	End		431,282	822,150	1,100,374			431,282		1,462,098													
	Start	Inboard	397,396	758,617	1,015,664			397,396		1,349,771													
	Min		210,970	400,277	535,159			210,970		710,668													
	End		397,338	758,505	1,015,515			397,338		1,349,573													
G8x12.0	Start	Outboard	625,625	1,188,463	Exceeds MOP	400	625,625	921	1,462,586														
	Min		330,938	625,886			330,938		769,688														
	End		625,533	1,188,288			625,533		1,462,371														
	Start	Inboard	591,681	1,124,819			591,681		1,384,432														
	Min		313,180	592,589			313,180		728,799														
	End		591,595	1,124,654			591,595		1,384,228														

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

Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000	
Pressure Torque Output: Start/Min./End (lbf-in)																								
G8x205.0	Start	Outboard	169,639	334,676	451,698	683,864	799,131	913,938	1,028,345	1,142,417	1,256,214	1,369,799	Exceeds MOP							400	169,639	3,125	1,426,531	
			Min	92,389	179,021	240,600	363,103	424,070	484,876	545,544	606,094	666,548									726,928		92,389	757,098
			End	169,614	334,627	451,632	683,764	799,014	913,803	1,028,195	1,142,249	1,256,030									1,369,598		169,614	1,426,322
	Min	Inboard	169,639	334,676	451,698	683,864	799,131	913,938	1,028,345	1,142,417	1,256,214	1,369,799									169,639		1,426,531	
			End	92,389	179,021	240,600	363,103	424,070	484,876	545,544	606,094	666,548									726,928		92,389	757,098
			End	169,614	334,627	451,632	683,764	799,014	913,803	1,028,195	1,142,249	1,256,030									1,369,598		169,614	1,426,322
G8x206.0	Start	Outboard	265,702	516,938	695,420	1,050,261	1,226,761	1,402,741	Exceeds MOP										400	265,702	2,058	1,443,501		
			Min	143,118	274,884	368,664	555,483	648,571												741,478		143,118	763,009	
			End	265,663	516,862	695,318	1,050,107	1,226,581												1,402,535		265,663	1,443,289	
	Min	Inboard	265,702	516,938	695,420	1,050,261	1,226,761	1,402,741												265,702		1,443,501		
			End	143,118	274,884	368,664	555,483	648,571												741,478		143,118	763,009	
			End	265,663	516,862	695,318	1,050,107	1,226,581												1,402,535		265,663	1,443,289	
G8x207.0	Start	Outboard	379,724	732,871	984,035	Exceeds MOP													400	379,724	1,467	1,451,090		
			Min	203,241	388,363															520,215		203,241	765,775	
			End	379,668	732,763															983,891		379,668	1,450,877	
	Min	Inboard	379,724	732,871	984,035															379,724		1,451,090		
			End	203,241	388,363															520,215		203,241	765,775	
			End	379,668	732,763															983,891		379,668	1,450,877	
G8x208.0	Start	Outboard	511,092	981,076	1,315,177	Exceeds MOP													400	511,092	1,101	1,449,806		
			Min	272,545	518,967															694,424		272,545	765,187	
			End	511,017	980,932															1,314,984		511,017	1,449,594	
	Min	Inboard	511,092	981,076	1,315,177															511,092		1,449,806		
			End	272,545	518,967															694,424		272,545	765,187	
			End	511,017	980,932															1,314,984		511,017	1,449,594	
G8x209.0	Start	Outboard	660,941	1,264,152	Exceeds MOP													400	660,941	859	1,451,410			
			Min	351,427															667,607		351,427	765,865		
			End	660,844															1,263,966		660,844	1,451,197		
	Min	Inboard	660,941	1,264,152															660,941		1,451,410			
			End	351,427															667,607		351,427	765,865		
			End	660,844															1,263,966		660,844	1,451,197		
G8x210.0	Start	Outboard	828,742	Exceeds MOP														400	828,742	689	1,450,035			
			Min																439,702		439,702	765,244		
			End																828,620		828,620	1,449,822		
	Min	Inboard	828,742																828,742		1,450,035			
			End																439,702		439,702	765,244		
			End																828,620		828,620	1,449,822		
G8x212.0	Start	Outboard	1,217,306	Exceeds MOP														400	1,217,306	473	1,446,308			
			Min																644,118		644,118	764,056		
			End																1,217,128		1,217,128	1,446,095		
	Min	Inboard	1,217,306																1,217,306		1,446,308			
			End																644,118		644,118	764,056		
			End																1,217,128		1,217,128	1,446,095		

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

Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
			Pressure Torque Output: Start/Min./End (lbf-in)																				
G10x06.0	Start	Outboard	195,933	380,391	511,471	772,159	901,863	1,031,206	1,160,237	1,289,004	1,417,556	1,545,941	1,674,209	1,802,408	1,930,587	2,058,795	2,315,491	2,444,077	2,572,887	400	5,000	195,933	2,572,887
	Min	Outboard	105,377	202,122	270,990	408,213	476,601	544,863	613,017	681,078	749,064	816,992	884,880	952,743	1,020,599	1,088,465	1,224,295	1,292,293	1,360,369			105,377	1,360,369
	End	Outboard	195,890	380,308	511,360	771,990	901,666	1,030,981	1,159,984	1,288,722	1,417,246	1,545,604	1,673,844	1,802,015	1,930,166	2,058,346	2,314,986	2,443,544	2,572,325			195,890	2,572,325
	Start	Inboard	133,654	263,618	355,774	538,613	629,394	719,813	809,919	899,762	989,389	1,078,851	1,168,195	1,257,469	1,346,724	1,436,008	1,614,856	1,704,517	1,794,403			133,654	1,794,403
	Min	Inboard	72,788	141,019	189,519	286,006	334,027	381,921	429,707	477,400	525,019	572,579	620,099	667,594	715,082	762,581	857,676	905,306	953,014			72,788	953,014
	End	Inboard	133,625	263,561	355,697	538,496	629,256	719,655	809,742	899,565	989,173	1,078,615	1,167,939	1,257,195	1,346,430	1,435,694	1,614,503	1,704,145	1,794,011			133,625	1,794,011
G10x07.0	Start	Outboard	270,829	522,229	701,052	1,057,065	1,234,364	1,411,261	1,587,813	1,764,072	1,940,093	2,115,930	2,291,637	2,467,267	2,642,875	2,818,514	Exceeds MOP	400	4,125	270,829	2,906,363		
	Min	Outboard	144,876	276,674	370,554	557,746	651,094	744,303	837,391	930,378	1,023,281	1,116,119	1,208,913	1,301,679	1,394,438	1,487,208				144,876	1,533,603		
	End	Outboard	270,770	522,115	700,899	1,056,835	1,234,094	1,410,953	1,587,466	1,763,687	1,939,670	2,115,468	2,291,136	2,466,728	2,642,298	2,817,899				270,770	2,905,729		
	Start	Inboard	208,543	405,442	545,337	823,492	961,861	1,099,830	1,237,453	1,374,783	1,511,876	1,648,783	1,785,561	1,922,262	2,058,941	2,195,652				208,543	2,264,036		
	Min	Inboard	112,283	215,563	289,074	435,525	508,503	581,342	654,060	726,675	799,208	871,677	944,100	1,016,496	1,088,885	1,161,285				112,283	1,197,495		
	End	Inboard	208,498	405,354	545,218	823,312	961,651	1,099,590	1,237,183	1,374,483	1,511,545	1,648,423	1,785,171	1,921,843	2,058,492	2,195,173				208,498	2,263,542		
G10x08.0	Start	Outboard	357,112	685,251	918,547	1,382,764	1,613,841	1,844,336	2,074,328	2,303,894	2,533,113	2,762,064	Exceeds MOP	400	3,158	357,112	2,906,658						
	Min	Outboard	190,402	362,468	484,993	729,214	850,965	972,512	1,093,884	1,215,108	1,336,210	1,457,219				190,402	1,533,661						
	End	Outboard	357,034	685,101	918,347	1,382,462	1,613,489	1,843,934	2,073,875	2,303,391	2,532,560	2,761,461				357,034	2,906,023						
	Start	Inboard	294,833	568,478	762,851	1,149,219	1,341,372	1,532,943	1,724,010	1,914,651	2,104,946	2,294,973				294,833	2,414,967						
	Min	Inboard	157,813	301,365	403,522	607,007	708,390	809,570	910,574	1,011,430	1,112,165	1,212,806				157,813	1,276,376						
	End	Inboard	294,769	568,354	762,684	1,148,968	1,341,079	1,532,608	1,723,633	1,914,233	2,104,487	2,294,472				294,769	2,414,440						
G10x09.0	Start	Outboard	455,538	871,184	1,166,876	1,755,646	2,048,897	2,341,507	2,633,562	Exceeds MOP	400	2,495	455,538	2,919,322									
	Min	Outboard	242,222	460,115	615,334	924,862	1,079,230	1,233,374	1,387,325				242,222	1,538,038									
	End	Outboard	455,438	870,994	1,166,622	1,755,263	2,048,450	2,340,996	2,632,987				455,438	2,918,685									
	Start	Inboard	393,252	754,397	1,011,161	1,522,073	1,776,395	2,030,076	2,283,202				393,252	2,530,811									
	Min	Inboard	209,630	399,004	533,854	802,640	936,638	1,070,412	1,203,993				209,630	1,334,743									
	End	Inboard	393,166	754,233	1,010,940	1,521,741	1,776,007	2,029,633	2,282,704				393,166	2,530,259									
G10x10.0	Start	Outboard	565,758	1,079,233	1,444,693	2,172,760	2,535,556	2,897,653	Exceeds MOP	400	2,021	565,758	2,928,040										
	Min	Outboard	300,215	569,334	761,106	1,143,654	1,334,497	1,525,095				300,215	1,541,095										
	End	Outboard	565,635	1,078,997	1,444,378	2,172,286	2,535,003	2,897,020				565,635	2,927,401										
	Start	Inboard	503,472	962,446	1,288,977	1,939,187	2,263,054	2,586,221				503,472	2,613,339										
	Min	Inboard	267,622	508,223	679,625	1,021,433	1,191,905	1,362,134				267,622	1,376,423										
	End	Inboard	503,362	962,236	1,288,696	1,938,764	2,262,560	2,585,657				503,362	2,612,768										
G10x12.0	Start	Outboard	820,976	1,560,286	2,086,434	Exceeds MOP	400	1,403	820,976	2,931,594													
	Min	Outboard	434,500	821,999	1,098,110				434,500	1,542,158													
	End	Outboard	820,797	1,559,945	2,085,979				820,797	2,930,954													
	Start	Inboard	758,697	1,443,513	1,930,738				758,697	2,713,151													
	Min	Inboard	401,912	760,895	1,016,639				401,912	1,427,854													
	End	Inboard	758,532	1,443,198	1,930,316				758,532	2,712,559													
G10x14.0	Start	Outboard	1,123,861	2,130,920	2,848,027	Exceeds MOP	400	1,031	1,123,861	2,936,829													
	Min	Outboard	593,644	1,121,343	1,497,497				593,644	1,544,098													
	End	Outboard	1,123,615	2,130,454	2,847,405				1,123,615	2,936,187													
	Start	Inboard	1,061,574	2,014,133	2,692,311				1,061,574	2,776,286													
	Min	Inboard	561,052	1,060,233	1,416,016				561,052	1,460,092													
	End	Inboard	1,061,343	2,013,693	2,691,723				1,061,343	2,775,680													

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Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)					
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000		
			Pressure Torque Output: Start/Min./End (lbf-in)																						
G10x206.0	Start	Outboard	329,587	644,009	867,246	1,310,772	1,531,257	1,751,019	1,970,156	2,188,766	2,406,945	2,624,792	2,842,404	Exceeds MOP								400	3,290	329,587	2,877,206
	Min		178,165	343,141	460,510	694,219	810,628	926,785	1,042,724	1,158,478	1,274,083	1,389,572	1,504,978											178,165	1,523,438
	End		329,515	643,868	867,056	1,310,486	1,530,923	1,750,637	1,969,726	2,188,288	2,406,420	2,624,219	2,841,783											329,515	2,876,578
	Start	Inboard	329,587	644,009	867,246	1,310,772	1,531,257	1,751,019	1,970,156	2,188,766	2,406,945	2,624,792	2,842,404											329,587	2,877,206
	Min		178,165	343,141	460,510	694,219	810,628	926,785	1,042,724	1,158,478	1,274,083	1,389,572	1,504,978											178,165	1,523,438
	End		329,515	643,868	867,056	1,310,486	1,530,923	1,750,637	1,969,726	2,188,288	2,406,420	2,624,219	2,841,783											329,515	2,876,578
G10x207.0	Start	Outboard	479,372	927,672	1,246,389	1,880,557	2,196,225	2,511,092	2,825,266	Exceeds MOP												400	2,311	479,372	2,901,832
	Min		257,159	492,237	659,628	993,270	1,159,597	1,325,645	1,491,451															257,159	1,531,875
	End		479,268	927,469	1,246,117	1,880,147	2,195,745	2,510,544	2,824,649															479,268	2,901,198
	Start	Inboard	479,372	927,672	1,246,389	1,880,557	2,196,225	2,511,092	2,825,266															479,372	2,901,832
	Min		257,159	492,237	659,628	993,270	1,159,597	1,325,645	1,491,451															257,159	1,531,875
	End		479,268	927,469	1,246,117	1,880,147	2,195,745	2,510,544	2,824,649															479,268	2,901,198
G10x208.0	Start	Outboard	651,945	1,253,729	1,681,398	2,531,983	Exceeds MOP															400	1,721	651,945	2,906,181
	Min		348,215	663,833	888,515	1,336,221																		348,215	1,533,494
	End		651,803	1,253,456	1,681,031	2,531,430																		651,803	2,905,547
	Start	Inboard	651,945	1,253,729	1,681,398	2,531,983																		651,945	2,906,181
	Min		348,215	663,833	888,515	1,336,221																		348,215	1,533,494
	End		651,803	1,253,456	1,681,031	2,531,430																		651,803	2,905,547
G10x209.0	Start	Outboard	848,789	1,625,581	2,178,037	Exceeds MOP																400	1,335	848,789	2,915,535
	Min		451,852	859,119	1,149,188																			451,852	1,536,907
	End		848,604	1,625,227	2,177,562																			848,604	2,914,899
	Start	Inboard	848,789	1,625,581	2,178,037																			848,789	2,915,535
	Min		451,852	859,119	1,149,188																			451,852	1,536,907
	End		848,604	1,625,227	2,177,562																			848,604	2,914,899
G10x210.0	Start	Outboard	1,069,231	2,041,679	2,733,670	Exceeds MOP																400	1,067	1,069,231	2,918,782
	Min		567,837	1,077,557	1,440,731																			567,837	1,537,942
	End		1,068,997	2,041,233	2,733,074																			1,068,997	2,918,145
	Start	Inboard	1,069,231	2,041,679	2,733,670																			1,069,231	2,918,782
	Min		567,837	1,077,557	1,440,731																			567,837	1,537,942
	End		1,068,997	2,041,233	2,733,074																			1,068,997	2,918,145
G10x212.0	Start	Outboard	1,579,673	Exceeds MOP																		400	728	1,579,673	2,914,473
	Min		836,413																					836,413	1,536,039
	End		1,579,328																					1,579,328	2,913,837
	Start	Inboard	1,579,673																					1,579,673	2,914,473
	Min		836,413																					836,413	1,536,039
	End		1,579,328																					1,579,328	2,913,837
G10x214.0	Start	Outboard	2,185,435	Exceeds MOP																		400	530	2,185,435	2,914,186
	Min		1,154,696																					1,154,696	1,536,420
	End		2,184,958																					2,184,958	2,913,550
	Start	Inboard	2,185,435																					2,185,435	2,914,186
	Min		1,154,696																					1,154,696	1,536,420
	End		2,184,958																					2,184,958	2,913,550

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

Torque - Hydraulic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)															MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)					
			400	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500					4750	5000			
			Pressure Torque Output: Start/Min./End (lbf-in)																							
G13x08.0	Start	Outboard	457,506	879,207	1,178,733	1,774,101	2,070,187	2,365,369	2,659,770	2,953,512	3,246,715	3,539,503	3,831,997	4,124,319	4,416,591	4,708,934	5,294,322	5,587,611	Exceeds MOP	400	4,912	457,506	5,777,954			
	Min		244,230	465,389	622,770	936,248	1,092,430	1,248,296	1,403,890	1,559,254	1,714,431	1,869,462	2,024,391	2,179,260	2,334,112	2,488,988	2,798,986	2,954,192				244,230	3,054,867			
	End		457,210	878,637	1,177,970	1,772,952	2,068,846	2,363,837	2,658,048	2,951,599	3,244,613	3,537,211	3,829,515	4,121,648	4,413,730	4,705,884	5,290,893	5,583,993				457,210	5,774,211			
	Start	Inboard	336,103	651,575	875,225	1,318,839	1,539,047	1,758,352	1,976,876	2,194,740	2,412,067	2,628,978	2,845,594	3,062,039	3,278,434	3,494,900	3,928,534	4,145,946				Exceeds MOP	400	4,912	336,103	4,287,120
	Min		180,722	346,312	464,001	698,094	814,584	930,758	1,046,660	1,162,331	1,277,816	1,393,155	1,508,392	1,623,568	1,738,727	1,853,911	2,084,525	2,200,039							180,722	2,274,993
	End		335,885	651,153	874,658	1,317,984	1,538,050	1,757,213	1,975,596	2,193,319	2,410,505	2,627,275	2,843,751	3,060,056	3,276,310	3,492,636	3,925,989	4,143,261							335,885	4,284,343
G13x09.0	Start	Outboard	584,160	1,118,465	1,498,282	2,253,926	2,630,016	3,005,127	3,379,393	3,752,943	4,125,911	4,498,429	4,870,628	5,242,641	5,614,599	Exceeds MOP	400	3,881	584,160	5,809,528						
	Min		310,893	591,003	790,444	1,187,933	1,386,074	1,583,873	1,781,378	1,978,633	2,175,685	2,372,580	2,569,364	2,766,083	2,962,783				310,893	3,065,861						
	End		583,782	1,117,741	1,497,312	2,252,466	2,628,313	3,003,181	3,377,204	3,750,512	4,123,239	4,495,515	4,867,473	5,239,245	5,610,963				583,782	5,805,765						
	Start	Inboard	462,757	890,834	1,194,774	1,798,663	2,098,876	2,398,110	2,696,498	2,994,172	3,291,263	3,587,903	3,884,225	4,180,361	4,476,442				Exceeds MOP	400	3,881	462,757	4,631,611			
	Min		247,385	471,926	631,674	949,779	1,108,228	1,266,335	1,424,147	1,581,710	1,739,070	1,896,272	2,053,364	2,210,391	2,367,398							247,385	2,449,678			
	End		462,457	890,257	1,194,000	1,797,498	2,097,517	2,396,557	2,694,752	2,992,232	3,289,131	3,585,579	3,881,710	4,177,653	4,473,543							462,457	4,628,611			
G13x10.0	Start	Outboard	725,992	1,386,182	1,855,776	2,790,667	3,256,248	3,720,775	4,184,390	4,647,236	5,109,455	5,571,188	Exceeds MOP	400	3,144	725,992	5,836,982									
	Min		385,496	731,504	977,967	1,469,392	1,714,454	1,959,149	2,203,526	2,447,635	2,691,525	2,935,246				385,496	3,075,571									
	End		725,522	1,385,284	1,854,574	2,788,860	3,254,139	3,718,365	4,181,680	4,644,226	5,106,145	5,567,580				725,522	5,833,201									
	Start	Inboard	604,579	1,158,532	1,552,244	2,335,368	2,725,066	3,113,709	3,501,442	3,888,404	4,274,740	4,660,590				Exceeds MOP	400	3,144	604,579	4,882,675						
	Min		321,983	612,418	819,185	1,231,219	1,436,586	1,641,586	1,846,267	2,050,680	2,254,875	2,458,900							321,983	2,576,361						
	End		604,187	1,157,782	1,551,238	2,333,856	2,723,301	3,111,693	3,499,174	3,885,886	4,271,971	4,657,572							604,187	4,879,513						
G13x12.0	Start	Outboard	1,054,405	2,005,200	2,681,568	4,028,260	4,698,983	5,368,225	Exceeds MOP	400	2,183	1,054,405	5,857,285													
	Min		558,243	1,056,537	1,411,495	2,119,303	2,472,293	2,824,765				558,243	3,082,488													
	End		1,053,722	2,003,901	2,679,832	4,025,651	4,695,940	5,364,748				1,053,722	5,853,491													
	Start	Inboard	933,002	1,777,568	2,378,060	3,572,997	4,167,843	4,761,207				Exceeds MOP	400	2,183	933,002	5,194,726										
	Min		494,736	937,460	1,252,726	1,881,150	2,194,447	2,507,227							494,736	2,735,894										
	End		932,397	1,776,417	2,376,520	3,570,683	4,165,144	4,758,124							932,397	5,191,361										
G13x14.0	Start	Outboard	1,444,157	2,739,491	3,661,584	5,498,908	Exceeds MOP	400	1,604	1,444,157	5,880,052															
	Min		762,969	1,441,620	1,925,274	2,890,189				762,969	3,090,536															
	End		1,443,222	2,737,716	3,659,213	5,495,346				1,443,222	5,876,243															
	Start	Inboard	1,322,754	2,511,859	3,358,075	5,043,645				Exceeds MOP	400	1,604	1,322,754	5,393,224												
	Min		699,461	1,322,543	1,766,505	2,652,035							699,461	2,835,870												
	End		1,321,897	2,510,232	3,355,901	5,040,379							1,321,897	5,389,731												
G13x16.0	Start	Outboard	1,894,610	3,587,597	4,793,354	Exceeds MOP	400	1,228	1,894,610				5,890,692													
	Min		999,448	1,886,241	2,518,438				999,448				3,094,194													
	End		1,893,383	3,585,274	4,790,250				1,893,383				5,886,877													
	Start	Inboard	1,773,207	3,359,966	4,489,845				Exceeds MOP	400	1,228	1,773,207	5,517,983													
	Min		935,940	1,767,164	2,359,668							935,940	2,899,226													
	End		1,772,059	3,357,790	4,486,938							1,772,059	5,514,409													
G13x18.0	Start	Outboard	2,405,766	4,549,520	Exceeds MOP	400	970	2,405,766				5,893,755														
	Min		1,267,681	2,390,401				1,267,681				3,094,971														
	End		2,404,207	4,546,573				2,404,207				5,889,938														
	Start	Inboard	2,284,362	4,321,888				Exceeds MOP	400	970	2,284,362	5,599,352														
	Min		1,204,173	2,271,324							1,204,173	2,940,965														
	End		2,282,883	4,319,089							2,282,883	5,595,725														

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)																
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000															
Pressure Torque Output: Start/Min./End (lbf-in)																																						
G01x01.5-SR4	Start	10,861																	Please consult factory	4,382	5,423	6,465	8,558	9,613	10,675	3,348	3,749	5,000	10,675									
	Min.	5,399																		2,234	2,811	3,386	4,538	5,115	5,696		1,882		5,696									
	End	9,232																			2,759	3,799	4,840	6,931	7,985		9,046		2,127	9,046								
G01x01.5-SR5	Start	10,166																	Please consult factory	5,997	7,039	8,079	9,121	11,214	12,269	13,332	3,150	5,580	5,000	13,332								
	Min.	4,470																		2,413	3,044	3,630	4,212	5,373	5,954	6,538		1,997		6,538								
	End	6,578																			2,413	3,454	4,493	5,534	7,625	8,679		9,741		1,997	9,741							
G01x01.5-SR6	Start	7,292																	Please consult factory	4,814	5,867	6,915	7,959	9,000	10,041	11,082	13,176	14,231	15,293	2,332	4,101	5,000	15,293					
	Min.	3,221																		2,030	2,622	3,207	3,786	4,363	4,939	5,514	6,666	7,244	7,825		7,825							
	End	4,618																			2,143	3,195	4,242	5,285	6,325	7,365	8,405	10,497	11,550		12,612		1,431	12,612				
G01x01.5-SR7	Start	5,248																	Please consult factory	3,048	4,129	5,200	6,261	7,315	8,363	9,406	10,448	11,488	12,530	14,623	15,678	16,741	1,750	3,048	5,000	16,741		
	Min.	2,317																		974	1,806	2,400	2,986	3,567	4,145	4,720	5,294	5,867	6,440	7,590	8,167	8,748		974		8,748		
	End	3,172																			974	2,055	3,124	4,184	5,237	6,284	7,327	8,367	9,407	10,447	12,538	13,592		14,654		974	14,654	
G01x01.5-SR8	Start	3,706																	Please consult factory	3,018	4,113	5,194	6,265	7,326	8,380	9,428	10,471	11,513	12,553	13,595	15,688	16,743	17,806	1,311	2,182	5,000	17,806	
	Min.	1,643																		1,321	1,924	2,516	3,102	3,684	4,262	4,838	5,411	5,984	6,557	7,130	8,278	8,855	9,435		586		9,435	
	End	2,108																			1,422	2,515	3,595	4,665	5,725	6,778	7,824	8,867	9,907	10,947	11,988	14,079	15,133		16,194		586	16,194
G01x01.5-SR9	Start	2,534																	Please consult factory	1,575	3,808	4,902	5,984	7,054	8,116	9,169	10,217	11,261	12,302	13,343	14,385	16,478	17,533	18,595	978	1,475	5,000	18,595
	Min.	1,136																		361	1,858	2,452	3,041	3,624	4,204	4,781	5,357	5,930	6,502	7,074	7,646	8,794	9,371	9,951		261		9,951
	End	1,320																			361	2,592	3,685	4,766	5,835	6,896	7,948	8,995	10,038	11,078	12,118	13,158	15,250	16,303		17,365		261

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)					
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000				
		Pressure Torque Output: Start/Min./End (lbf-in)																								
G01x01.7-SR1	Start	17,668																Please consult factory	9,099	12,148	13,680	Exceeds MOP	3,832	8,078	4,820	14,110
	Min.	8,399															4,154		5,817	6,647	6,880					
	End	13,913															5,352		8,398	9,928	10,358					
G01x01.7-SR2	Start	14,687																Please consult factory	6,302	7,821	9,340	Exceeds MOP	3,221	6,125	4,820	15,870
	Min.	7,178														2,962	3,791		4,617	8,148						
	End	12,154														3,777	5,295		6,812	13,336						
G01x01.7-SR3	Start	12,734																Please consult factory	6,392	7,914	9,433	Exceeds MOP	2,821	5,300	4,820	17,482
	Min.	6,249														3,086	3,913		4,738	9,086						
	End	10,544														4,208	5,729		7,246	15,288						
G01x01.7-SR4	Start	10,727																Please consult factory	4,783	6,314	7,839	Exceeds MOP	2,410	4,230	4,820	18,929
	Min.	5,352														2,353	3,183		4,008	9,995						
	End	9,098														3,160	4,689		6,213	17,292						
G01x01.7-SR5	Start	10,032																Please consult factory	7,440	8,970	10,496	Exceeds MOP	2,267	6,006	4,820	21,586
	Min.	4,423														3,165	4,007		4,840	10,849						
	End	6,444														3,854	5,383		6,907	17,986						
G01x01.7-SR6	Start	7,158																Please consult factory	4,760	6,317	7,863	Exceeds MOP	1,678	4,310	4,820	23,547
	Min.	3,174														1,951	2,807		3,648	12,127						
	End	4,485														2,089	3,644		5,189	20,858						
G01x01.7-SR7	Start	5,114																Please consult factory	4,639	6,207	7,764	Exceeds MOP	1,260	3,121	4,820	24,995
	Min.	2,270														2,060	2,909		3,749	13,046						
	End	3,039														2,564	4,131		5,686	22,900						
G01x01.7-SR8	Start	3,572																Please consult factory	2,525	5,704	7,272	Exceeds MOP	944	2,165	4,820	26,060
	Min.	1,595														929	2,766		3,608	13,732						
	End	1,975														929	4,104		5,671	24,440						
G01x01.7-SR9	Start	2,400																Please consult factory	1,701	3,315	6,493	Exceeds MOP	704	1,403	4,820	26,849
	Min.	1,088														488	1,591		3,289	14,247						
	End	1,186														488	2,100		5,275	25,611						

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)																	
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000																
Pressure Torque Output: Start/Min./End (lbf-in)																																						
G01x02.0-SR0	Start	23,530																Please consult factory	13,046	Exceeds MOP					3,476	12,833	3,691	14,739										
	Min.	10,645																5,387	5,387		6,325																	
	End	16,795																	6,321		6,108	8,012																
G01x02.0-SR1	Start	17,560																Please consult factory	9,375	11,601	13,822	16,039	Exceeds MOP					2,635	8,349	3,691	17,733							
	Min.	8,361																	4,251	5,464	6,670	7,871		3,689	8,788													
	End	13,804																		5,628	7,852	10,070		12,285	4,602	13,977												
G01x02.0-SR2	Start	14,578																Please consult factory	6,658	8,902	11,135	13,361	15,582	17,799	Exceeds MOP					2,215	6,343	3,691	19,493					
	Min.	7,139																	3,114	4,330	5,537	6,739	7,938	9,135		2,943	10,050											
	End	12,046																		4,134	6,375	8,606	10,830	13,048		15,264	3,819	16,955										
G01x02.0-SR3	Start	12,625																Please consult factory	6,015	8,270	10,514	12,747	14,973	17,194	19,411	Exceeds MOP					1,940	5,471	3,691	21,105				
	Min.	6,211																	2,846	4,064	5,274	6,478	7,678	8,877	10,073		2,551	10,987										
	End	10,435																		3,832	6,085	8,326	10,557	12,781	15,000		17,215	3,289	18,907									
G01x02.0-SR4	Start	10,618																Please consult factory	5,193	7,462	9,718	11,961	14,195	16,421	18,641	20,859	Exceeds MOP					1,657	4,344	3,691	22,552			
	Min.	5,314																	2,550	3,770	4,982	6,188	7,390	8,589	9,786	10,982		2,092	11,895									
	End	8,989																		3,569	5,836	8,090	10,331	12,562	14,786	17,004		19,220	2,721	20,911								
G01x02.0-SR5	Start	9,923																Please consult factory	7,849	10,119	12,374	14,618	16,851	19,077	21,298	23,515	Exceeds MOP					1,559	6,104	3,691	25,209			
	Min.	4,385																	3,365	4,599	5,820	7,031	8,238	9,440	10,639	11,836		2,402	12,751									
	End	6,336																		4,263	6,531	8,784	11,025	13,256	15,480	17,699		19,914	2,520	21,606								
G01x02.0-SR6	Start	7,049																Please consult factory	7,524	9,810	12,080	14,336	16,579	18,813	21,039	23,259	25,477	Exceeds MOP					1,154	4,329	3,691	27,170		
	Min.	3,135																	3,448	4,678	5,898	7,110	8,317	9,520	10,720	11,918	13,114		1,658	14,027								
	End	4,376																		4,851	7,135	9,402	11,655	13,897	16,128	18,352	20,570		22,786	1,658	24,477							
G01x02.0-SR7	Start	5,005																Please consult factory	4,341	8,972	11,258	13,528	15,783	18,026	20,260	22,486	24,707	26,924	Exceeds MOP					866	3,085	3,691	28,618	
	Min.	2,231																	1,899	4,384	5,607	6,823	8,034	9,240	10,441	11,640	12,837	14,033		1,011	14,946							
	End	2,930																		2,266	6,892	9,176	11,444	13,697	15,938	18,170	20,393	22,612		24,827	1,011	26,519						
G01x02.0-SR8	Start	3,463																Please consult factory	3,057	5,406	10,037	12,323	14,593	16,848	19,092	21,325	23,551	25,772	27,989	Exceeds MOP					649	2,100	3,691	29,683
	Min.	1,556																	1,348	2,608	5,076	6,297	7,512	8,721	9,926	11,128	12,326	13,523	14,719		504	15,632						
	End	1,866																		1,460	3,806	8,433	10,717	12,984	15,238	17,479	19,710	21,934	24,152		26,368	504	28,059					
G01x02.0-SR9	Start	2,291	1,471	3,846	6,195	10,826	13,112	15,382	17,638	19,881	22,115	24,341	26,561	28,779					Exceeds MOP					484	1,319	3,691	30,472											
	Min.	1,049	258	1,884	3,132	5,595	6,815	8,029	9,238	10,443	11,644	12,842	14,038	15,234						105											105	16,146						
	End	1,077	258	2,630	4,977	9,604	11,888	14,155	16,408	18,650	20,881	23,105	25,323	27,539																			29,230					

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																	MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)																
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750	5000																				
		Pressure Torque Output: Start/Min./End (lbf-in)																																				
G01x02.2-SR0	Start	23,440																		Please consult factory	15,625	Exceeds MOP													2,567	13,375	2,916	17,662
	Min.	10,614																	6,699		6,699		5,465	7,808														
	End	16,704																			8,897		8,897	6,650	10,932													
G01x02.2-SR1	Start	17,469																		Please consult factory	9,361	Exceeds MOP												1,945	8,677	2,916	20,655	
	Min.	8,329																	4,175		5,846		3,805	10,248														
	End	13,713																			5,613		8,708	4,930	16,897													
G01x02.2-SR2	Start	14,488																		Please consult factory	8,007	Exceeds MOP												1,635	6,568	2,916	22,415	
	Min.	7,108																	3,794		5,462		3,021	11,507														
	End	11,955																			5,480		8,591	4,044	19,875													
G01x02.2-SR3	Start	12,534																		Please consult factory	6,486	Exceeds MOP												1,432	5,631	2,916	24,027	
	Min.	6,179																	3,066		4,741		2,607	12,443														
	End	10,345																			4,303		7,432	3,448	21,826													
G01x02.2-SR4	Start	10,528																		Please consult factory	7,934	Exceeds MOP												1,223	4,440	2,916	25,475	
	Min.	5,282																	3,988		5,656		2,125	13,351														
	End	8,899																			6,308		9,436	2,817	23,831													
G01x02.2-SR5	Start	9,833																		Please consult factory	10,590	Exceeds MOP												1,151	6,183	2,916	28,131	
	Min.	4,352																	4,820		6,497		2,431	14,208														
	End	6,245																			7,002		10,131	2,599	24,525													
G01x02.2-SR6	Start	6,958																		Please consult factory	6,224	Exceeds MOP												852	4,332	2,916	30,092	
	Min.	3,103																	2,738		6,116		1,662	15,483														
	End	4,285																			3,552		9,873	1,662	27,397													
G01x02.2-SR7	Start	4,915																		Please consult factory	4,471	Exceeds MOP												640	3,054	2,916	31,540	
	Min.	2,199																	1,973		3,681		980	16,402														
	End	2,839																			2,396		5,593	980	29,438													
G01x02.2-SR8	Start	3,373	2,307																		5,536	Exceeds MOP												479	2,035	2,916	32,605	
	Min.	1,524	711																2,680		4,375		439	17,087														
	End	1,775	711																		3,936		7,134	439	30,979													
G01x02.2-SR9	Start	2,201	3,097																		6,325	Exceeds MOP												357	1,236	2,916	33,394	
	Min.	987	1,496																3,204		4,895		23	17,602														
	End	987	1,882																		5,107		8,305	23	32,150													

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

Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)									
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000								
			Pressure Torque Output: Start/Min./End (lbf-in)																												
G01x02.5-SR0	Start	23,344						Please consult factory	13,875	17,915	Exceeds MOP											1,986	13,648	2,362	19,721						
	Min.	10,580						5,685	7,877	5,685		7,877											5,561		8,850						
	End	16,609							7,149	11,185		7,149	11,185												6,922	12,989					
G01x02.5-SR1	Start	17,373						Please consult factory	12,811	16,869	Exceeds MOP												1,506	8,833	2,362	22,714					
	Min.	8,295						5,996	8,162	5,996		8,162	10,316											3,862		11,279					
	End	13,618							9,060	13,114		9,060	13,114	17,150												5,086	18,954				
G01x02.5-SR2	Start	14,392						Please consult factory	10,494	14,571	Exceeds MOP												1,266	6,658	2,362	24,474					
	Min.	7,074						5,100	7,268	5,100		7,268	9,425	11,575												3,055	12,536				
	End	11,860							7,966	12,039		7,966	12,039	16,092	20,128												4,133	21,932			
G01x02.5-SR3	Start	12,439						Please consult factory	12,106	16,183	Exceeds MOP													1,108	5,668	2,362	26,086				
	Min.	6,145						6,043	8,207	6,043		8,207	10,362	12,511													2,619	13,472			
	End	10,249							9,917	13,990		9,917	13,990	18,043	22,080													3,485	23,883		
G01x02.5-SR4	Start	10,432						Please consult factory	5,330	13,554	Exceeds MOP													947	4,453	2,362	27,534				
	Min.	5,249						2,598	6,955	2,598		6,955	9,117	11,271	13,420													2,131	14,380		
	End	8,803							3,707	11,922		3,707	11,922	15,995	20,048	24,084													2,830	25,888	
G01x03.0-SR0	Start	23,153						Please consult factory	18,806		Exceeds MOP													1,304	13,872	1,640	22,321				
	Min.	10,513						8,300		8,300																			5,645	10,176	
	End	16,418							12,075			12,075																		7,146	15,587
G01x03.0-SR1	Start	17,182						Please consult factory	9,177	21,800	Exceeds MOP													988	8,872	1,640	25,315				
	Min.	8,229						4,038	10,734	4,038		10,734																	3,875	12,593	
	End	13,427							5,429	18,040		5,429	18,040																	5,125	21,552
G01x03.0-SR2	Start	14,201						Please consult factory	10,937	23,560	Exceeds MOP													831	6,642	1,640	27,075				
	Min.	7,008						5,326	11,992	5,326		11,992																		3,050	13,849
	End	11,669							8,408	21,018		8,408	21,018																	4,118	24,530
G01x03.0-SR3	Start	12,248						Please consult factory	6,191	12,549	Exceeds MOP													727	5,604	1,640	28,687				
	Min.	6,079						2,908	6,268	2,908		6,268	12,928																	2,596	14,784
	End	10,058							4,007	10,359		4,007	10,359	22,970																3,421	26,481
G01x03.0-SR4	Start	10,241						Please consult factory	7,638	13,996	Exceeds MOP													621	4,344	1,640	30,134				
	Min.	5,182						3,831	7,180	3,831		7,180	13,836																	2,091	15,693
	End	8,612							6,012	12,364		6,012	12,364	24,975																2,721	28,486

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
Pressure Torque Output: Start/Min./End (lbf-in)																							
G01x03.5-SR0	Start	22,962			16,465	Exceeds MOP													927	13,850	1,205	23,792	
	Min.	10,446	Please consult factory	7,042																		5,635	10,941
	End	16,227		9,736																			7,124
G01x03.5-SR1	Start	16,991	Please consult factory	10,490	19,459	Exceeds MOP													703	8,800	1,205	26,785	
	Min.	8,162		4,753	9,492																	3,852	13,353
	End	13,236		6,742	15,701																		5,053
G01x03.5-SR2	Start	14,010	Please consult factory	12,250	21,219	Exceeds MOP													591	6,526	1,205	28,545	
	Min.	6,941		6,033	10,753																	3,010	14,608
	End	11,478		9,720	18,680																		4,001
G01x03.5-SR3	Start	12,057	Please consult factory	13,862	22,831	Exceeds MOP													517	5,467	1,205	30,157	
	Min.	6,012		6,974	11,689																	2,548	15,543
	End	9,868		11,671	20,631																		3,285
G01x03.5-SR4	Start	10,050	6,301	15,310	24,278	Exceeds MOP													442	4,205	1,205	31,605	
	Min.	5,116	3,151	7,885	12,598															2,044		16,451	
	End	8,422	4,676	13,676	22,636																	2,582	29,955

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)													
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000												
Pressure Torque Output: Start/Min./End (lbf-in)																																		
G2x01.7-SR2	Start	26,441																Please consult factory	12,767	14,630	4,687	12,299	5,000	14,630										
	Min.	12,462																	5,663	6,682				5,406		6,682								
	End	20,635																		6,972		8,834			6,504		8,834							
G2x01.7-SR3	Start	23,634																Please consult factory	13,182	15,037	16,900	4,212	11,054	5,000	16,900									
	Min.	11,140																		6,021	7,032		8,043			4,852		8,043						
	End	18,367																			7,924		9,777		11,639		5,798		11,639					
G2x01.7-SR4	Start	21,025																Please consult factory	11,996	15,686	17,541	19,404	3,771	10,311	5,000	19,404								
	Min.	9,799																		5,361	7,378	8,384		9,392			4,431		9,392					
	End	15,865																			6,843	10,531		12,384		14,246		5,160		14,246				
G2x02.0-SR1	Start	30,570																Please consult factory	15,569	18,254	23,639	26,345	Exceeds MOP	3,719	15,236	4,921	28,202							
	Min.	14,221																		6,708	8,185	11,118			12,584			6,525		13,587				
	End	23,239																			8,250	10,932			16,313		19,017		7,917		20,873			
G2x02.0-SR2	Start	26,309																Please consult factory	12,939	15,623	18,307	20,991	26,377	29,082	Exceeds MOP	3,223	12,649	4,921	30,940					
	Min.	12,416																		5,691	7,162	8,624	10,083	12,996			14,455			5,531		15,455		
	End	20,503																			7,144	9,826	12,507	15,190			20,571		23,275		6,854		25,131	
G2x02.0-SR3	Start	23,502																Please consult factory	12,521	15,209	17,893	20,577	23,261	28,647	31,352	Exceeds MOP	2,896	11,401	4,921	33,210				
	Min.	11,094																		5,591	7,059	8,519	9,975	11,430	14,338			15,796			4,975		16,795	
	End	18,235																			7,263	9,949	12,632	15,313	17,995			23,376		26,080		6,144		27,936
G2x02.0-SR4	Start	20,893																Please consult factory	12,330	15,025	17,713	20,397	23,080	25,765	31,150	33,856	Exceeds MOP	2,593	10,633	4,921	35,714			
	Min.	9,753																		5,479	6,950	8,411	9,867	11,321	12,772	15,679			17,136			4,547		18,135
	End	15,734																			7,177	9,870	12,556	15,238	17,919	20,602			25,983		28,686		5,482	
G2x02.2-SR1	Start	30,460																Please consult factory	16,008	19,719	23,424	27,124	Exceeds MOP	2,746	15,948	3,634	29,107							
	Min.	14,182																		6,812	8,835	10,841			12,838			6,779		13,906				
	End	23,129																			8,688	12,397			16,099		19,796		8,629		21,777			
G2x02.2-SR2	Start	26,199																Please consult factory	15,024	18,745	22,457	26,162	29,862	Exceeds MOP	2,380	13,233	3,634	31,845						
	Min.	12,378																		6,714	8,726	10,726	12,720			14,708			5,740		15,774			
	End	20,394																			9,227	12,946	16,655			20,356		24,054		7,438		26,035		
G2x02.2-SR3	Start	23,392																Please consult factory	13,559	17,294	21,015	24,727	28,432	32,132	Exceeds MOP	2,138	11,881	3,634	34,115					
	Min.	11,056																		6,057	8,074	10,077	12,072	14,062			16,049			5,146		17,112		
	End	18,126																			8,301	12,032	15,751	19,460			23,161		26,859		6,624		28,840	
G2x02.2-SR4	Start	20,783																Please consult factory	12,312	16,063	19,797	23,519	27,231	30,936	34,636	Exceeds MOP	1,914	11,018	3,634	36,619				
	Min.	9,715																		5,387	7,414	9,423	11,422	13,414	15,403			17,389			4,683		18,452	
	End	15,624																			7,159	10,907	14,639	18,357	22,066			25,768		29,465		5,866		31,446

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000			
			Pressure Torque Output: Start/Min./End (lbf-in)																							
G2x02.5-SR1	Start	30,345							Please consult factory	18,780	23,654	28,513	Exceeds MOP								2,125	16,337	2,812	29,717		
	Min.	14,142								8,241	10,866	13,473													6,917	14,118
	End	23,014								11,459	16,328	21,184													9,017	22,386
G2x02.5-SR2	Start	26,084							Please consult factory	16,627	21,518	26,392	Exceeds MOP								1,842	13,526	2,812	32,455		
	Min.	12,337								7,516	10,139	12,745													5,844	15,985
	End	20,278								10,829	15,716	20,586													7,730	26,644
G2x02.5-SR3	Start	23,276							Please consult factory	13,986	18,897	23,788	Exceeds MOP								1,655	12,113	2,812	34,724		
	Min.	11,015								6,239	8,872	11,486													5,230	17,323
	End	18,010								8,727	13,635	18,522													6,856	29,449
G2x02.5-SR4	Start	20,668							Please consult factory	11,554	16,489	21,401	Exceeds MOP								1,482	11,198	2,812	37,228		
	Min.	9,674								4,943	7,595	10,219													4,749	18,663
	End	15,508								6,402	11,333	16,241													6,046	32,056
G2x03.0-SR1	Start	30,114							Please consult factory	19,859	27,450	Exceeds MOP									1,395	16,661	1,845	30,328		
	Min.	14,061								8,753	12,801														7,036	14,330
	End	22,783								12,536	20,122														9,341	22,997
G2x03.0-SR2	Start	25,853							Please consult factory	22,597	30,188	Exceeds MOP									1,209	13,720	1,845	33,065		
	Min.	12,256								10,646	14,672														5,915	16,197
	End	20,047								16,794	24,379														7,925	27,254
G2x03.0-SR3	Start	23,045							Please consult factory	24,867	32,458	Exceeds MOP									1,086	12,224	1,845	35,335		
	Min.	10,934								11,991	16,012														5,269	17,535
	End	17,779								19,599	27,185														6,967	30,060
G2x03.0-SR4	Start	20,437							Please consult factory	12,090	27,370	34,962	Exceeds MOP								972	11,230	1,845	37,839		
	Min.	9,593								5,220	13,334	17,352													4,758	18,875
	End	15,277								6,937	22,206	29,791													6,078	32,666

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750				
Pressure Torque Output: Start/Min./End (lbf-in)																						
G2x03.5-SR1	Start	29,769	Please consult factory	16,901	Exceeds MOP														992	16,554	1,312	30,379
	Min.	13,940		7,185		6,998	14,349															
	End	22,438		9,581		9,234	23,048															
G2x03.5-SR2	Start	25,508	Please consult factory	19,639	Exceeds MOP														859	13,525	1,312	33,117
	Min.	12,135		9,093		5,840	16,216															
	End	19,703		13,838		7,729	27,305															
G2x03.5-SR3	Start	22,700	Please consult factory	21,909	Exceeds MOP														772	12,014	1,312	35,386
	Min.	10,813		10,443		5,193	17,553															
	End	17,434		16,644		6,757	30,111															
G2x03.5-SR4	Start	20,092	Please consult factory	13,561	Exceeds MOP														691	10,993	1,312	37,890
	Min.	9,472		6,046		4,672	18,893															
	End	14,933		8,407		5,841	32,717															
G2x04.0-SR1	Start	29,651	Please consult factory	16,918	Exceeds MOP														744	16,569	984	30,496
	Min.	13,899		7,191		7,004	14,390															
	End	22,321		9,598		9,249	23,165															
G2x04.0-SR2	Start	25,390	Please consult factory	19,656	Exceeds MOP														645	13,548	984	33,234
	Min.	12,094		9,099		5,856	16,256															
	End	19,585		13,856		7,753	27,423															
G2x04.0-SR3	Start	22,583	Please consult factory	21,926	Exceeds MOP														579	11,974	984	35,504
	Min.	10,772		10,449		5,178	17,594															
	End	17,317		16,661		6,717	30,228															
G2x04.0-SR4	Start	19,974	Please consult factory	24,430	Exceeds MOP														518	10,921	984	38,008
	Min.	9,431		11,793		4,644	18,934															
	End	14,815		19,267		5,769	32,834															

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)									
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000								
Pressure Torque Output: Start/Min./End (lbf-in)																														
G3x02.0-SR4	Start	35,692																Please consult factory	17,535	20,139	22,759	4,419	16,694	5,000	22,759					
	Min.	16,577															7,680		9,124	10,566	7,209					10,566				
	End	26,925																	8,777	11,379	13,998					7,936	13,998			
G3x02.2-SR1	Start	53,878																Please consult factory	29,594	33,453		4,579	26,964	5,000	33,453					
	Min.	24,938															12,935		15,043		11,489					15,043				
	End	40,831															16,558		20,415		13,929					20,415				
G3x02.2-SR2	Start	46,831																Please consult factory	31,152	34,994	38,854	4,001	23,520	5,000	38,854					
	Min.	21,705															14,210		16,297	18,385	10,025					18,385				
	End	35,433															19,761		23,601	27,459	12,133					27,459				
G3x02.2-SR3	Start	40,771																Please consult factory	24,342	28,154	35,802	3,504	20,592	5,000	43,503					
	Min.	18,923															10,841		12,925	17,078	19,154					21,236				
	End	30,785															14,364		18,175	25,819	29,659					33,517	10,616	33,517		
G3x02.2-SR4	Start	35,558																Please consult factory	20,715	24,527	28,338	3,077	18,074	5,000	47,499					
	Min.	16,531															9,160		11,245	13,319	15,389					19,526	21,597	23,674		
	End	26,792															11,955		15,765	19,574	23,385					31,029	34,869	38,727	9,316	38,727
G3x02.5-SR1	Start	53,738																Please consult factory	29,858	35,051	40,247	3,419	28,175	4,527	51,226					
	Min.	24,889															12,846		15,675	18,491	24,105					Exceeds MOP				
	End	40,690															16,822		22,013	27,206	37,616					Exceeds MOP		15,140	38,180	
G3x02.5-SR2	Start	46,691																Please consult factory	24,863	30,064	35,258	2,987	24,592	4,527	56,626					
	Min.	21,656															10,555		13,392	16,208	19,013					21,812	27,408	Exceeds MOP		
	End	35,292															13,475		18,673	23,866	29,056					34,250	44,660	13,204	45,223	
G3x02.5-SR3	Start	40,630																Please consult factory	24,302	29,512	34,713	2,616	21,503	4,527	61,276					
	Min.	18,873															10,630		13,457	16,266	19,066					21,861	24,652	30,240	Exceeds MOP	
	End	30,645															14,324		19,532	24,731	29,923					35,114	40,307	50,717	11,527	51,281
G3x02.5-SR4	Start	35,418																Please consult factory	23,073	28,298	33,508	2,297	18,817	4,527	65,271					
	Min.	16,481															10,286		13,110	15,918	18,717					21,508	24,299	27,087	32,668	Exceeds MOP
	End	26,651															14,312		19,534	24,742	29,941					35,133	40,324	45,517	55,928	10,058
G3x03.0-SR1	Start	53,456																Please consult factory	32,685	41,144	49,583	2,155	29,464	2,853	53,054					
	Min.	24,791															14,125		18,673	23,190	Exceeds MOP									
	End	40,409															19,647		28,103	36,537	Exceeds MOP						16,427	20,008		
G3x03.0-SR2	Start	46,409																Please consult factory	29,600	38,085	46,545	1,883	25,619	2,853	58,455					
	Min.	21,557															12,923		17,474	21,993	26,495					Exceeds MOP				
	End	35,011															18,210		26,691	35,147	43,581					Exceeds MOP		14,230	47,051	
G3x03.0-SR3	Start	40,349																Please consult factory	25,734	34,249	42,735	1,649	22,284	2,853	63,104					
	Min.	18,775															11,241		15,801	20,327	24,833					29,329	Exceeds MOP			
	End	30,364															15,755		24,267	32,748	41,204					49,639	Exceeds MOP		12,307	53,109
G3x03.0-SR4	Start	35,136																Please consult factory	21,179	29,730	38,245	1,448	19,395	2,853	67,100					
	Min.	16,383															9,139		13,716	18,253	22,767					27,267	31,757	Exceeds MOP		
	End	26,370															12,419		20,966	29,477	37,959					46,414	54,849	10,636	58,319	

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
Pressure Torque Output: Start/Min./End (lbf-in)																							
G3x03.5-SR1	Start	53,175			Please consult factory	29,938	42,314	Exceeds MOP												1,500	29,938	1,986	53,961
	Min.	24,692				12,555	19,177		12,555	25,369													
	End	40,128				16,902	29,272		16,902	40,913													
G3x03.5-SR2	Start	46,128			Please consult factory	35,338	47,715	Exceeds MOP												1,310	25,902	1,986	59,361
	Min.	21,459				15,921	22,496		10,873	28,669													
	End	34,730				23,946	36,316		14,514	47,957													
G3x03.5-SR3	Start	40,068			Please consult factory	39,988	52,364	Exceeds MOP												1,148	22,484	1,986	64,011
	Min.	18,676				18,780	25,335		9,457	31,499													
	End	30,083				30,003	42,374		12,507	54,015													
G3x03.5-SR4	Start	34,855			Please consult factory	43,984	56,360	Exceeds MOP												1,008	19,490	1,986	68,006
	Min.	16,284				21,223	27,768		8,214	33,927													
	End	26,089				35,213	47,584		10,731	59,225													
G3x04.0-SR1	Start	52,894			Please consult factory	Exceeds MOP		Exceeds MOP												1,110	30,000	1,470	54,285
	Min.	24,594				Exceeds MOP			12,572	25,480													
	End	39,847				Exceeds MOP			16,963	41,237													
G3x04.0-SR2	Start	45,847		Please consult factory	27,956		Exceeds MOP													970	25,923	1,470	59,685
	Min.	21,360				11,972			10,883	28,780													
	End	34,449				16,566			14,535	48,281													
G3x04.0-SR3	Start	39,787		Please consult factory	32,605		Exceeds MOP													850	22,434	1,470	64,334
	Min.	18,578				14,858			9,441	31,610													
	End	29,802				22,624			12,457	54,338													
G3x04.0-SR4	Start	34,574	Please consult factory	19,636	36,601	Exceeds MOP														746	19,364	1,470	68,330
	Min.	16,186		8,313	17,313		8,167	34,038															
	End	25,808		10,877	27,834		10,605	59,549															
G3x04.5-SR1	Start	52,613		Please consult factory	42,446		Exceeds MOP													858	29,961	1,136	54,382
	Min.	24,495				19,210			12,565	25,519													
	End	39,566				29,404			16,925	41,335													
G3x04.5-SR2	Start	45,566	Please consult factory	25,850	47,846	Exceeds MOP														749	25,762	1,136	59,783
	Min.	21,262		10,866	22,528		10,819	28,820															
	End	34,168		14,462	36,448		14,373	48,379															
G3x04.5-SR3	Start	39,506	Please consult factory	30,500	52,496	Exceeds MOP														656	22,210	1,136	64,432
	Min.	18,479		13,764	25,367		9,350	31,649															
	End	29,521		20,519	42,505		12,233	54,436															
G3x04.5-SR4	Start	34,293	Please consult factory	34,495	56,492	Exceeds MOP														576	19,142	1,136	68,428
	Min.	16,087		16,224	27,801		8,082	34,077															
	End	25,527		25,729	47,716		10,382	59,647															

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000			
			Pressure Torque Output: Start/Min./End (lbf-in)																							
G4x02.5-SR4	Start	66,925																	Please consult factory	44,014	49,275	54,566	4,112	35,889	5,000	54,566
	Min.	30,073																19,197		22,091	24,983	14,674		24,983		
	End	47,400																24,506		29,764	35,050	16,387		35,050		
G4x03.0-SR1	Start	110,738																	Please consult factory	63,078	81,349	90,519	3,982	62,422	5,000	99,721
	Min.	49,955																25,867		35,843	40,804	25,505		45,762		
	End	79,973																32,347		50,606	59,769	31,691		68,964		
G4x03.0-SR2	Start	96,562																	Please consult factory	57,651	66,762	75,878	3,486	57,140	5,000	112,520
	Min.	42,885																23,154		28,167	33,137	22,871		52,904		
	End	67,182																28,299		37,404	46,513	27,789		83,130		
G4x03.0-SR3	Start	81,031																	Please consult factory	50,210	59,334	68,448	2,942	48,091	5,000	123,318
	Min.	36,079																20,444		25,444	30,400	19,273		59,919		
	End	56,392																25,593		34,711	43,819	23,476		98,649		
G4x03.0-SR4	Start	66,583																	Please consult factory	41,244	50,409	59,550	2,437	38,930	5,000	132,658
	Min.	29,953																17,043		22,040	26,990	15,771		66,236		
	End	47,059																21,738		30,897	40,031	19,426		113,087		
G4x03.5-SR1	Start	110,396																	Please consult factory	68,400	82,170	95,922	Exceeds MOP	64,926	3,495	109,389
	Min.	49,835																28,293		35,753	43,156	26,398		50,380		
	End	79,631																37,665		51,426	65,168	34,194		78,625		
G4x03.5-SR2	Start	96,220																	Please consult factory	67,403	81,200	94,970	Exceeds MOP	59,274	3,495	122,188
	Min.	42,765																28,075		35,533	42,938	23,643		57,510		
	End	66,841																38,044		51,831	65,592	29,922		92,791		
G4x03.5-SR3	Start	80,689																	Please consult factory	50,496	64,369	78,200	Exceeds MOP	49,718	3,495	132,986
	Min.	35,959																20,289		27,809	35,241	19,864		64,515		
	End	56,051																25,879		39,742	53,563	25,101		108,310		
G4x03.5-SR4	Start	66,241																	Please consult factory	45,913	59,836	73,709	Exceeds MOP	40,049	3,495	142,326
	Min.	29,832																19,356		26,838	34,255	16,174		70,825		
	End	46,717																26,404		40,317	54,180	20,544		122,748		
G4x04.0-SR1	Start	110,054																	Please consult factory	69,690	88,924	108,112	Exceeds MOP	66,222	2,542	111,332
	Min.	49,715																28,752		39,097	49,347	26,874		51,065		
	End	79,290																38,954		58,175	77,349	35,489		80,567		
G4x04.0-SR2	Start	95,878																	Please consult factory	63,201	82,490	101,724	Exceeds MOP	60,186	2,542	124,132
	Min.	42,644																25,605		35,989	46,262	23,966		58,193		
	End	66,499																33,845		53,120	72,341	30,833		94,733		
G4x04.0-SR3	Start	80,347																	Please consult factory	54,646	73,998	93,287	Exceeds MOP	50,302	2,542	134,929
	Min.	35,839																22,424		32,805	43,082	20,068		65,196		
	End	55,709																30,026		49,365	68,640	25,685		110,252		
G4x04.0-SR4	Start	65,899																	Please consult factory	63,987	83,339	102,627	Exceeds MOP	40,357	2,542	144,270
	Min.	29,712																28,935		39,211	49,436	16,279		71,505		
	End	46,376																44,465		63,803	83,078	20,852		124,690		

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000	
Pressure Torque Output: Start/Min./End (lbf-in)																								
G4x04.5-SR1	Start	109,668			Please consult factory	67,073	92,392	Exceeds MOP											1,493	66,363	1,942	111,779		
	Min.	49,579				27,302	40,893															26,917	51,226	
	End	78,904				36,339	61,640																35,630	81,013
G4x04.5-SR2	Start	95,492			Please consult factory	79,873	105,191	Exceeds MOP											1,307	60,261	1,942	124,578		
	Min.	42,508				34,552	48,051															23,993	58,353	
	End	66,113				50,505	75,806																30,908	95,179
G4x04.5-SR3	Start	79,961			Please consult factory	90,670	115,989	Exceeds MOP											1,103	50,262	1,942	135,376		
	Min.	35,703				41,655	55,085															20,053	65,356	
	End	55,323				66,025	91,325																25,646	110,698
G4x04.5-SR4	Start	65,513		Please consult factory	49,074	100,011	Exceeds MOP												914	40,268	1,942	144,716		
	Min.	29,577				20,992		48,016	61,410														16,254	71,665
	End	45,990				29,562		80,463	105,763															20,762
G4x05.0-SR1	Start	109,320			Please consult factory	107,759	Exceeds MOP												1,181	66,618	1,536	112,390		
	Min.	49,457				48,970																	27,003	51,429
	End	78,557				76,996																		35,885
G4x05.0-SR2	Start	95,144			Please consult factory	120,558	Exceeds MOP												1,034	60,396	1,536	125,190		
	Min.	42,386				56,104																	24,039	58,556
	End	65,766				91,162																		31,042
G4x05.0-SR3	Start	79,614		Please consult factory	66,787	131,356	Exceeds MOP												873	50,309	1,536	135,988		
	Min.	35,580				28,920		63,112															20,077	65,559
	End	54,976				42,159		106,681																25,692
G4x05.0-SR4	Start	65,166	Please consult factory	43,656	76,128	140,696	Exceeds MOP												723	40,140	1,536	145,328		
	Min.	29,455		18,100	35,356	69,424																	16,205	71,867
	End	45,643		24,148	56,597	121,119																		20,635
G4x06.0-SR1	Start	108,626			Please consult factory	105,961	Exceeds MOP												796	66,559	1,036	112,904		
	Min.	49,213				47,957																	26,979	51,630
	End	77,863				75,200																		35,826
G4x06.0-SR2	Start	94,450	Please consult factory	70,460	118,761	Exceeds MOP													697	60,199	1,036	125,703		
	Min.	42,141		29,485	55,093																		23,969	58,756
	End	65,072		41,099	89,366																			30,846
G4x06.0-SR3	Start	78,919	Please consult factory	81,257	129,558	Exceeds MOP													588	49,871	1,036	136,501		
	Min.	35,335		36,635	62,103																		19,904	65,759
	End	54,282		56,618	104,885																			25,254
G4x06.0-SR4	Start	64,471	42,131	90,598	138,899	Exceeds MOP													487	39,606	1,036	145,841		
	Min.	29,211	17,362	43,020	68,417																	16,001	72,067	
	End	44,949	22,625	71,056	119,323																		20,101	126,261

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)					
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000				
Pressure Torque Output: Start/Min./End (lbf-in)																											
G5x03.5-SR3	Start	181,164																	Please consult factory	139,450	153,632	167,882	4,120	117,989	5,000	167,882	
	Min.	75,863																56,550		64,398	72,222	44,477					72,222
	End	111,142																		69,442	83,619	97,864					47,988
G5x03.5-SR4	Start	150,610																	Please consult factory	100,704	114,764	128,832	3,443	97,498	5,000	185,485	
	Min.	63,565																38,816		46,706	54,504	36,997					85,443
	End	93,544																43,655		57,710	69,986	40,450					128,408
G5x04.0-SR1	Start	251,900																	Please consult factory	175,368	217,364	238,440	3,916	168,327	5,000	259,589	
	Min.	105,933																67,636		90,808	102,294	63,690					113,754
	End	156,875																80,369		122,351	143,420	73,330					164,562
G5x04.0-SR2	Start	225,513																	Please consult factory	179,214	200,165	242,161	3,514	159,445	5,000	284,386	
	Min.	92,364																69,997		81,581	104,519	58,906					127,358
	End	132,086																85,802		106,747	148,728	66,039					190,940
G5x04.0-SR3	Start	180,715																	Please consult factory	137,752	158,723	179,672	2,833	123,722	5,000	305,786	
	Min.	75,703																54,416		65,964	77,403	46,590					145,416
	End	110,693																67,744		88,709	109,650	53,719					235,724
G5x04.0-SR4	Start	150,161																	Please consult factory	113,280	134,345	155,355	2,367	102,046	5,000	323,390	
	Min.	63,406																44,906		56,468	67,897	38,661					158,300
	End	93,095																56,227		77,285	98,288	44,996					266,268
G5x04.5-SR1	Start	251,451																	Please consult factory	185,576	214,368	243,134	2,892	173,127	3,799	277,531	
	Min.	105,774																72,357		88,153	103,797	65,453					122,381
	End	156,426																90,574		119,356	148,113	78,128					182,499
G5x04.5-SR2	Start	225,064																	Please consult factory	181,540	210,373	239,165	2,595	163,635	3,799	302,328	
	Min.	92,205																70,416		86,233	101,888	60,454					135,966
	End	131,637																88,128		116,951	145,733	70,228					208,876
G5x04.5-SR3	Start	180,266																	Please consult factory	145,079	174,048	202,941	2,092	126,724	3,799	323,728	
	Min.	75,544																57,815		73,581	89,185	47,689					153,970
	End	110,244																75,069		104,029	132,911	56,720					253,660
G5x04.5-SR4	Start	149,712																	Please consult factory	104,446	133,620	162,683	1,748	104,212	3,799	341,332	
	Min.	63,247																39,585		55,545	71,233	39,455					166,837
	End	92,647																47,395		76,560	105,613	47,161					284,204
G5x05.0-SR1	Start	251,002																	Please consult factory	177,813	215,547	253,200	2,238	175,999	2,920	278,766	
	Min.	105,616																67,503		88,154	108,513	66,500					122,268
	End	155,978																82,812		120,535	158,175	80,999					183,733
G5x05.0-SR2	Start	224,615																	Please consult factory	202,610	240,344	277,997	2,008	165,986	2,920	303,563	
	Min.	92,045																81,450		101,889	122,137	61,312					135,853
	End	131,189																109,190		146,913	184,553	72,578					210,110
G5x05.0-SR3	Start	179,817																	Please consult factory	148,218	186,174	224,010	1,619	128,275	2,920	324,963	
	Min.	75,384																59,191		79,701	99,987	48,261					153,858
	End	109,796																78,207		116,150	153,974	58,270					254,894
G5x05.0-SR4	Start	149,263																	Please consult factory	127,727	165,821	203,777	1,353	105,255	2,920	342,566	
	Min.	63,088																52,103		72,585	92,852	39,844					166,724
	End	92,198																70,668		108,750	146,694	48,204					285,438

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000
Pressure Torque Output: Start/Min./End (lbf-in)																							
G5x06.0-SR1	Start	250,104			Please consult factory	185,936	244,421	Exceeds MOP											1,469	178,671	1,929	286,197	
	Min.	105,298				71,474	103,091															67,488	125,428
	End	155,080				90,933	149,399																83,671
G5x06.0-SR2	Start	223,717			Please consult factory	210,733	269,218	Exceeds MOP											1,318	168,044	1,929	310,994	
	Min.	91,726				85,359	116,738															62,079	139,003
	End	130,291				117,311	175,776																74,636
G5x06.0-SR3	Start	178,919			Please consult factory	232,133	290,618	Exceeds MOP											1,062	129,221	1,929	332,394	
	Min.	75,065				103,833	134,859															48,587	156,993
	End	108,898				162,094	220,560																59,216
G5x06.0-SR4	Start	148,365		Please consult factory	132,206	249,736	308,221	Exceeds MOP											888	105,763	1,929	349,998	
	Min.	62,771				54,372	116,838		147,765													40,034	169,854
	End	91,300				75,146	192,638		251,104														48,712
G5x07.0-SR1	Start	249,206		Please consult factory	Exceeds MOP														1,044	179,136	1,372	287,981	
	Min.	104,980																				67,618	126,072
	End	154,182																					84,135
G5x07.0-SR2	Start	222,820		Please consult factory	189,300	Exceeds MOP													937	168,336	1,372	312,778	
	Min.	91,407					73,641															62,171	139,645
	End	129,393					95,885																74,928
G5x07.0-SR3	Start	178,021		Please consult factory	210,700	Exceeds MOP													755	129,080	1,372	334,178	
	Min.	74,746					92,331															48,523	157,632
	End	108,000					140,669																59,075
G5x07.0-SR4	Start	147,467		Please consult factory	145,015	228,304	Exceeds MOP												631	105,275	1,372	351,782	
	Min.	62,453				61,256		105,396														39,828	170,492
	End	90,403				87,951		171,213															48,224
G5x08.0-SR1	Start	248,101		Please consult factory	274,771	Exceeds MOP													783	178,528	1,029	287,611	
	Min.	104,589					119,122															67,397	125,942
	End	153,078					179,740																83,528
G5x08.0-SR2	Start	221,715		Please consult factory	188,662	299,568	Exceeds MOP												703	167,766	1,029	312,408	
	Min.	91,014				73,410		132,709														61,983	139,515
	End	128,289				95,247		206,117															74,358
G5x08.0-SR3	Start	176,917		Please consult factory	210,062	320,969	Exceeds MOP												567	128,617	1,029	333,808	
	Min.	74,353				92,106		150,736														48,416	157,503
	End	106,896				140,031		250,901															58,612
G5x08.0-SR4	Start	146,363	116,343	227,666	338,572	Exceeds MOP													474	104,740	1,029	351,412	
	Min.	62,061	46,012	105,172	163,608															39,694		170,363	
	End	89,298	59,288	170,575	281,445																	47,689	294,280

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000			
Pressure Torque Output: Start/Min./End (lbf-in)																										
G7x04.0-SR4	Start	304,389																	Please consult factory	229,429	252,810	276,285	4,232	204,446	5,000	276,285
	Min.	126,687																90,668		103,614	116,500	76,640		116,500		
	End	184,884																		109,943	133,318	156,787		84,966		156,787
G7x04.5-SR1	Start	500,137																	Please consult factory			355,906	4,969	351,795	5,000	355,906
	Min.	205,389																			132,701	130,393		132,701		
	End	297,053																				152,858		148,749		152,858
G7x04.5-SR2	Start	441,180																	Please consult factory	323,660	356,657	389,756	4,392	309,431	5,000	389,756
	Min.	181,696																122,930		141,225	159,385	114,951		159,385		
	End	263,211																		145,721	178,710	211,801		131,496		211,801
G7x04.5-SR3	Start	362,795																	Please consult factory	270,104	302,930	368,708	3,625	253,698	5,000	368,708
	Min.	150,183																103,809		121,971	157,885	75,743		193,584		
	End	218,174																		125,507	158,324	224,086		109,104		290,166
G7x04.5-SR4	Start	303,837																	Please consult factory	238,321	271,142	303,955	3,048	211,779	5,000	303,955
	Min.	126,491																94,117		112,151	130,041	79,342		218,781		
	End	184,332																		118,832	151,645	184,450		92,297		349,109
G7x05.0-SR1	Start	499,586																	Please consult factory	396,318	483,611	527,373	Exceeds MOP	358,840	4,888	527,373
	Min.	205,193																153,821		201,556	225,243	132,982		238,284		
	End	296,502																		193,260	280,531	324,282		155,791		348,478
G7x05.0-SR2	Start	440,628																	Please consult factory	343,027	386,591	430,169	Exceeds MOP	316,188	4,888	430,169
	Min.	181,500																132,385		156,329	180,054	117,446		263,696		
	End	262,660																		165,084	208,636	252,203		138,252		407,421
G7x05.0-SR3	Start	362,244																	Please consult factory	300,895	344,502	388,075	Exceeds MOP	259,153	4,888	344,502
	Min.	149,987																119,696		143,490	167,085	96,617		297,050		
	End	217,623																		156,289	199,886	243,448		114,558		485,786
G7x05.0-SR4	Start	303,286																	Please consult factory	247,335	291,081	334,745	Exceeds MOP	215,950	4,888	334,745
	Min.	126,295																98,171		121,996	145,597	80,846		321,907		
	End	183,781																		127,844	171,579	215,232		96,467		544,729
G7x06.0-SR1	Start	498,483																	Please consult factory	384,491	453,203	521,824	Exceeds MOP	367,983	3,150	521,824
	Min.	204,800																145,511		183,089	220,192	136,372		242,311		
	End	295,399																		181,436	250,131	318,734		164,932		359,863
G7x06.0-SR2	Start	439,525																	Please consult factory	349,509	418,341	487,054	Exceeds MOP	323,592	3,150	487,054
	Min.	181,108																134,441		171,908	208,918	120,142		267,695		
	End	261,557																		171,564	240,379	309,074		145,653		418,806
G7x06.0-SR3	Start	361,141																	Please consult factory	325,578	394,557	463,389	Exceeds MOP	264,458	3,150	463,389
	Min.	149,595																131,943		169,099	205,946	98,544		301,039		
	End	216,520																		180,967	249,928	318,743		119,862		497,171
G7x06.0-SR4	Start	302,183																	Please consult factory	220,924	290,277	359,429	Exceeds MOP	219,812	3,150	359,429
	Min.	125,902																82,887		120,587	157,656	82,273		325,887		
	End	182,678																		101,440	170,775	239,910		100,329		556,114

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000	
		Pressure Torque Output: Start/Min./End (lbf-in)																					
G7x07.0-SR1	Start	497,380				Please consult factory	384,567	483,330	Exceeds MOP											1,718	371,909	2,218	569,292
	Min.	204,408					144,782	198,442		137,807	244,552												
	End	294,296					181,512	280,250		168,857	366,190												
G7x07.0-SR2	Start	438,422				Please consult factory	418,417	517,180	Exceeds MOP											1,518	326,564	2,218	603,142
	Min.	180,716					171,191	224,124		121,225	269,920												
	End	260,454					240,454	339,193		148,625	425,133												
G7x07.0-SR3	Start	360,038			Please consult factory	364,477	463,465	562,229	Exceeds MOP											1,253	266,426	2,218	648,190
	Min.	149,203				152,403	205,239	257,695		99,293	303,258												
	End	215,418				219,856	318,819	417,558		121,830	503,498												
G7x07.0-SR4	Start	301,080			Please consult factory	398,328	497,316	596,079	Exceeds MOP											1,053	220,680	2,218	682,041
	Min.	125,510				177,891	230,367	282,634		82,564	328,101												
	End	181,576				278,799	377,762	476,501		101,196	562,441												
G7x08.0-SR1	Start	496,023			Please consult factory	488,420	Exceeds MOP													1,281	372,052	1,654	570,071
	Min.	203,926				201,121		137,884		244,876													
	End	292,940				285,338		169,000		366,969													
G7x08.0-SR2	Start	437,065			Please consult factory	522,270	Exceeds MOP													1,132	326,546	1,654	603,921
	Min.	180,233				226,780		121,252		270,242													
	End	259,098				344,281		148,606		425,912													
G7x08.0-SR3	Start	358,681		Please consult factory	301,158	567,318	Exceeds MOP													934	265,890	1,654	648,969
	Min.	148,720			118,346	260,335		99,086		303,579													
	End	214,061			156,553	422,646		121,294		504,277													
G7x08.0-SR4	Start	299,723		Please consult factory	335,008	601,169	Exceeds MOP													785	219,996	1,654	682,820
	Min.	125,028			144,267	285,269		82,313		328,421													
	End	180,219			215,495	481,589		100,512		563,219													

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000	
Pressure Torque Output: Start/Min./End (lbf-in)																							
G7x09.0-SR1	Start	494,886		Please consult factory	376,902	Exceeds MOP													994	372,765	1,283	571,683	
	Min.	203,521			140,401																	138,117	245,359
	End	291,803			173,849																		169,713
G7x09.0-SR2	Start	435,928		Please consult factory	410,753	Exceeds MOP													878	326,580	1,283	605,533	
	Min.	179,829			166,890																	121,191	270,721
	End	257,961			232,792																		148,640
G7x09.0-SR3	Start	357,543		Please consult factory	283,174	Exceeds MOP													725	265,881	1,283	650,581	
	Min.	148,316			108,562		200,993															99,095	304,057
	End	212,924			138,573		311,157																121,284
G7x09.0-SR4	Start	298,585		Please consult factory	317,025	Exceeds MOP													610	220,105	1,283	684,432	
	Min.	124,623			134,674		226,146															82,447	328,898
	End	179,082			197,516		370,100																100,621
G7x10.0-SR1	Start	493,748		Please consult factory	549,908	Exceeds MOP													795	372,773	1,027	573,208	
	Min.	203,117			233,602																	138,110	246,019
	End	290,666			346,811																		169,721
G7x10.0-SR2	Start	434,790		Please consult factory	367,685	Exceeds MOP													703	326,994	1,027	607,059	
	Min.	179,424			143,659		259,046															121,458	271,376
	End	256,824			189,735		405,754																149,055
G7x10.0-SR3	Start	356,406		Please consult factory	412,733	Exceeds MOP													580	265,445	1,027	652,107	
	Min.	147,911			178,126		292,414															98,951	304,711
	End	211,787			268,100		484,119																120,849
G7x10.0-SR4	Start	297,448	229,877		446,584	662,657	Exceeds MOP												488	219,458	1,027	685,958	
	Min.	124,219	87,922		203,410	317,279														82,223		329,551	
	End	177,945	110,391		327,043	543,062																99,975	566,356

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)						
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500	4750	5000			
Pressure Torque Output: Start/Min./End (lbf-in)																										
G8x05.0-SR2	Start	593,839																	Please consult factory	377,783	422,662	Exceeds MOP	4,348	350,551	4,765	425,359
	Min.	264,461																155,886		180,340	140,938			181,805		
	End	420,435																		204,410	249,283			177,183		251,979
G8x05.0-SR3	Start	502,744																	Please consult factory	307,962	352,608	Exceeds MOP	3,692	297,608	4,765	489,647
	Min.	224,228																125,440		149,852	119,743			223,907		
	End	356,156																		161,403	206,041			151,050		343,061
G8x06.0-SR1	Start	737,906																	Please consult factory	536,869	611,046	Exceeds MOP	3,307	479,596	4,664	882,663
	Min.	320,504																218,289		258,504	186,960			404,185		
	End	495,618																		294,611	368,777			237,347		640,355
G8x06.0-SR2	Start	592,533																	Please consult factory	390,619	464,940	Exceeds MOP	2,666	365,622	4,664	959,164
	Min.	264,001																159,963		200,138	146,352			463,972		
	End	419,129																		217,244	291,554			192,252		785,706
G8x06.0-SR3	Start	501,437																	Please consult factory	380,470	454,907	Exceeds MOP	2,264	310,064	4,664	1,023,453
	Min.	223,769																162,355		202,324	124,230			505,108		
	End	354,849																		233,900	308,326			163,504		876,788
G8x07.0-SR1	Start	736,599																	Please consult factory	590,098	699,549	Exceeds MOP	2,270	489,256	3,201	896,697
	Min.	320,043																245,161		303,936	190,491			409,134		
	End	494,312																		347,832	457,267			247,005		654,387
G8x07.0-SR2	Start	591,226																	Please consult factory	447,157	556,981	Exceeds MOP	1,829	371,900	3,201	973,199
	Min.	263,542																189,146		247,857	148,557			468,898		
	End	417,822																		273,775	383,582			198,529		799,738
G8x07.0-SR3	Start	500,131																	Please consult factory	401,380	511,446	Exceeds MOP	1,554	314,893	3,201	1,037,487
	Min.	223,309																172,495		231,166	125,986			510,026		
	End	353,543																		254,806	364,856			168,332		890,820
G8x08.0-SR1	Start	734,992																	Please consult factory	540,550	690,158	Exceeds MOP	1,667	490,791	2,350	899,018
	Min.	319,476																218,116		298,544	191,081			409,924		
	End	492,705																		298,292	447,878			248,540		656,707
G8x08.0-SR2	Start	589,619																	Please consult factory	467,028	617,051	Exceeds MOP	1,343	372,576	2,350	975,519
	Min.	262,977																199,613		279,563	148,813			469,684		
	End	416,215																		293,642	443,643			199,204		802,059
G8x08.0-SR3	Start	498,523																	Please consult factory	531,317	681,340	Exceeds MOP	1,141	315,045	2,350	1,039,808
	Min.	222,744																241,558		321,092	126,044			510,811		
	End	351,936																		384,724	534,725			168,484		893,140

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000	
Pressure Torque Output: Start/Min./End (lbf-in)																							
G8x09.0-SR1	Start	733,644			Please consult factory	665,598	861,485	Exceeds MOP											1,281	493,575	1,806	905,299	
	Min.	319,001				284,614	388,866															192,073	412,134
	End	491,358				423,321	619,180																251,324
G8x09.0-SR2	Start	588,271			Please consult factory	742,099	937,986	Exceeds MOP											1,032	373,951	1,806	981,800	
	Min.	262,503				345,188	448,727															149,291	471,883
	End	414,868				568,673	764,531																200,579
G8x09.0-SR3	Start	497,176		Please consult factory	412,990	806,388	1,002,275	Exceeds MOP											877	315,839	1,806	1,046,089	
	Min.	222,270				178,381	386,522		489,887													126,348	513,006
	End	350,589				266,415	659,755		855,613														169,278
G8x10.0-SR1	Start	732,297		Please consult factory	Exceeds MOP														1,018	495,035	1,435	908,918	
	Min.	318,526																				192,654	413,442
	End	490,010																					252,784
G8x10.0-SR2	Start	586,924		Please consult factory	553,629	Exceeds MOP													820	374,354	1,435	985,419	
	Min.	262,029					245,146															149,457	473,185
	End	413,521					380,231																200,982
G8x10.0-SR3	Start	495,829	Please consult factory	368,821	617,918	Exceeds MOP													696	314,917	1,435	1,049,707	
	Min.	221,797					154,806	286,795														125,882	514,306
	End	349,241					222,252	471,313															168,356
G8x12.0-SR1	Start	729,148	Please consult factory	582,908	Exceeds MOP														689	493,033	972	909,425	
	Min.	317,415					240,157															191,743	413,563
	End	486,862					340,644																250,782
G8x12.0-SR2	Start	583,775	Please consult factory	659,409	Exceeds MOP														556	373,334	972	985,926	
	Min.	260,922					301,265															149,210	473,306
	End	410,373					485,995																199,962
G8x12.0-SR3	Start	492,680	354,909	723,698	Exceeds MOP														472	313,529	972	1,050,215	
	Min.	220,690	147,714	342,692																		125,505	514,426
	End	346,093	208,342	577,077																		166,968	903,546

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)							
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000						
Pressure Torque Output: Start/Min./End (lbf-in)																													
G10x06.0-SR4	Start	1,005,480																	Please consult factory	787,851	961,167	1,048,056	1,135,162	3,836	731,087	5,000	1,135,162		
	Min.	410,215																		301,148	396,218	443,335	490,327					269,489	490,327
	End	587,740																			370,159	543,437	630,307					717,393	313,407
G10x07.0-SR1	Start	1,710,150																	Please consult factory	1,377,932	1,510,820	1,643,949		4,295	466,819	5,000	672,132		
	Min.	695,297																		527,113	599,854	672,132	931,083					1,269,105	672,132
	End	997,270																			665,124	797,984	931,083						466,819
G10x07.0-SR2	Start	1,376,429																	Please consult factory	1,009,453	1,141,905	1,274,387	1,539,654	3,465	990,909	5,000	1,805,672		
	Min.	570,403																		380,267	453,025	525,045	667,901					369,990	810,118
	End	835,583																			468,687	601,110	733,564					998,773	450,148
G10x07.0-SR3	Start	1,254,487																	Please consult factory	1,013,400	1,145,874	1,278,326	1,410,808	3,162	966,755	5,000	1,942,093		
	Min.	500,669																		376,629	449,636	521,733	593,367					350,596	877,859
	End	699,192																			458,158	590,603	723,026					855,479	411,523
G10x07.0-SR4	Start	1,003,763																	Please consult factory	861,372	994,046	1,126,593	1,259,067	2,539	749,259	5,000	2,055,286		
	Min.	409,605																		337,997	410,108	481,557	552,656					276,194	976,815
	End	586,024																			443,664	576,309	708,827					841,271	331,575
G10x08.0-SR1	Start	1,708,039																	Please consult factory	1,392,880	1,576,739	1,760,566		3,089	468,714	3,782	747,279		
	Min.	694,542																		534,355	634,944	734,565	Exceeds MOP					1,274,423	747,279
	End	995,159																			680,069	863,887	1,047,674					Exceeds MOP	561,638
G10x08.0-SR2	Start	1,374,317																	Please consult factory	1,002,077	1,186,487	1,370,637	1,554,603	2,493	996,909	3,782	1,945,820		
	Min.	569,652																		375,144	476,268	575,964	674,967					372,278	884,303
	End	833,472																			461,314	645,683	829,792					1,013,718	456,147
G10x08.0-SR3	Start	1,252,375																	Please consult factory	1,138,498	1,322,908	1,507,057	1,691,023	2,275	972,245	3,782	2,082,240		
	Min.	499,914																		444,558	544,834	644,112	742,859					352,706	952,044
	End	697,081																			583,229	767,598	951,708					1,135,634	417,012
G10x08.0-SR4	Start	1,001,652																	Please consult factory	881,788	1,066,946	1,251,691	1,436,101	1,826	752,635	3,782	2,195,433		
	Min.	408,854																		348,342	448,541	547,690	646,282					277,390	1,050,644
	End	583,913																			464,075	649,192	833,898					1,018,267	334,950
G10x09.0-SR1	Start	1,706,269																	Please consult factory	1,442,352	1,686,826			2,344	1,289,617	2,840	1,774,763		
	Min.	693,910																		558,492	691,319	Exceeds MOP						474,376	738,723
	End	993,390																			729,530	973,951	Exceeds MOP						576,829
G10x09.0-SR2	Start	1,372,547																	Please consult factory	1,113,932	1,359,230	1,604,074	1,848,549	1,891	1,006,819	2,840	1,936,485		
	Min.	569,022																		434,572	567,256	698,517	828,995					375,834	875,843
	End	831,702																			573,144	818,388	1,063,179					1,307,600	466,054
G10x09.0-SR3	Start	1,250,605																	Please consult factory	1,004,518	1,250,353	1,495,651	1,740,495	1,726	980,886	2,840	2,072,906		
	Min.	499,282																		369,028	503,391	635,441	766,409					355,908	943,584
	End	695,311																			449,278	695,059	940,303					1,185,094	425,651
G10x09.0-SR4	Start	999,882																	Please consult factory	871,254	1,117,711	1,363,546	1,608,844	1,385	757,653	2,840	2,186,099		
	Min.	408,224																		341,424	474,217	605,494	735,957					279,171	1,042,225
	End	582,143																			453,544	699,946	945,728					1,190,972	339,967

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

Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)	
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000					4500
			Pressure Torque Output: Start/Min./End (lbf-in)																		
G10x10.0-SR1	Start	1,704,499						Please consult factory	1,491,155	1,803,741	Exceeds MOP							1,846	1,298,316	2,260	1,816,234
	Min.	693,277							583,276	752,062									477,559		758,777
	End	991,620							778,322	1,090,840									585,525		1,103,330
G10x10.0-SR2	Start	1,370,777			Please consult factory	1,025,854	1,339,705	1,652,877	1,965,464	Exceeds MOP							1,489	1,012,028	2,260	1,977,956	
	Min.	568,393				385,259	555,313	722,747	889,031									377,668		895,671	
	End	829,933				485,085	798,867	1,111,971	1,424,489									471,262		1,436,979	
G10x10.0-SR3	Start	1,248,835			Please consult factory	1,162,275	1,476,125	1,789,298	2,101,884	Exceeds MOP							1,359	984,930	2,260	2,114,377	
	Min.	498,649				454,565	623,550	790,639	956,772									357,327		963,409	
	End	693,542				607,000	920,782	1,233,887	1,546,405									429,694		1,558,895	
G10x10.0-SR4	Start	998,112			Please consult factory	1,275,468	1,589,318	1,902,491	2,215,077	Exceeds MOP							1,091	760,308	2,260	2,227,570	
	Min.	407,594				557,494	724,180	890,031	1,055,350									280,200		1,061,958	
	End	580,373				857,669	1,171,451	1,484,555	1,797,073									342,622		1,809,563	
G10x12.0-SR1	Start	1,700,363			Please consult factory	1,796,175	Exceeds MOP										1,237	1,302,248	1,515	1,824,307	
	Min.	691,799				746,634												478,900		761,725	
	End	987,485				1,083,276												589,457		1,111,401	
G10x12.0-SR2	Start	1,366,641		Please consult factory	1,017,666	1,957,898	Exceeds MOP										998	1,013,895	1,515	1,986,029	
	Min.	566,922			380,412	883,665												378,345		898,586	
	End	825,798			476,899	1,416,925												473,128		1,445,050	
G10x12.0-SR3	Start	1,244,699		Please consult factory	1,154,087	2,094,318	Exceeds MOP										911	986,168	1,515	2,122,450	
	Min.	497,171			449,778	951,406												357,828		966,316	
	End	689,407			598,814	1,538,840												430,932		1,566,966	
G10x12.0-SR4	Start	993,976	Please consult factory	795,124	1,267,280	2,207,511	Exceeds MOP										731	759,179	1,515	2,235,643	
	Min.	406,116		299,443	552,795	1,050,009												279,699		1,064,858	
	End	576,238		377,430	849,483	1,789,509												341,493		1,817,634	
G10x14.0-SR1	Start	1,696,716		Please consult factory	1,593,963	Exceeds MOP										890	1,305,002	1,090	1,830,153		
	Min.	690,495			637,028												479,847		763,723		
	End	983,838			881,109												592,210		1,117,246		
G10x14.0-SR2	Start	1,362,994	Please consult factory	1,098,482	1,755,686	Exceeds MOP										718	1,014,235	1,090	1,991,875		
	Min.	565,625		424,347	775,555												378,398		900,561		
	End	822,151		557,697	1,214,757												473,469		1,450,895		
G10x14.0-SR3	Start	1,241,052	Please consult factory	1,234,903	1,892,107	Exceeds MOP										655	984,709	1,090	2,128,296		
	Min.	495,867		493,284	843,320												357,023		968,286		
	End	685,760		679,613	1,336,673												429,474		1,572,811		
G10x14.0-SR4	Start	990,328	Please consult factory	1,348,096	2,005,300	Exceeds MOP										526	757,740	1,090	2,241,489		
	Min.	404,812		595,520	942,443												279,163		1,066,824		
	End	572,592		930,281	1,587,342												340,055		1,823,479		

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

Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)						
			500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000					
Pressure Torque Output: Start/Min./End (lbf-in)																												
G13x08.0-SR3	Start	2,737,543																	Please consult factory	2,325,283	2,535,971	2,747,200	4,277	2,137,710	5,000	2,747,200		
	Min.	1,067,257																		867,845	984,597	1,100,424					762,316	1,100,424
	End	1,453,476																			1,041,483	1,252,034					1,463,127	854,032
G13x08.0-SR4	Start	2,214,744																	Please consult factory	1,746,987	1,956,689	2,166,460	3,468	1,720,144	5,000	3,008,600		
	Min.	869,640																		631,592	748,821	864,352					616,405	1,320,456
	End	1,192,245																			724,792	934,358					1,143,993	697,966
G13x09.0-SR1	Start	3,807,080																	Please consult factory	3,144,038	3,432,030		Exceeds MOP	4,383	4,837	3,532,383		
	Min.	1,483,822																		1,149,505	1,309,285						1,073,840	1,364,457
	End	2,024,770																			1,362,158	1,649,963						1,227,630
G13x09.0-SR2	Start	3,284,280																	Please consult factory	2,830,702	3,405,438	3,693,430	Exceeds MOP	3,786	4,837	3,793,782		
	Min.	1,286,206																		1,062,779	1,377,842	1,533,869					925,474	1,588,031
	End	1,763,540																			1,310,256	1,884,619					2,172,425	1,064,736
G13x09.0-SR3	Start	2,735,266																	Please consult factory	2,282,345	2,569,322	2,856,246	Exceeds MOP	3,158	4,837	4,106,325		
	Min.	1,066,439																		836,105	994,995	1,151,886					776,761	1,825,083
	End	1,451,200																			998,572	1,285,363					1,572,101	892,995
G13x09.0-SR4	Start	2,212,466																	Please consult factory	1,969,121	2,256,587	2,543,745	Exceeds MOP	2,561	4,837	4,367,725		
	Min.	868,822																		749,167	906,619	1,062,275					628,055	2,038,497
	End	1,189,969																			946,782	1,234,062					1,521,034	729,316
G13x10.0-SR1	Start	3,804,802																	Please consult factory	3,207,730			Exceeds MOP	3,392	3,743	3,570,610		
	Min.	1,483,004																		1,177,924							1,087,719	1,378,289
	End	2,022,494																			1,425,809							1,264,624
G13x10.0-SR2	Start	3,282,003																	Please consult factory	2,722,156	3,095,740	3,469,130	Exceeds MOP	2,929	3,743	3,832,010		
	Min.	1,285,387																		996,112	1,202,222	1,405,518					936,734	1,601,637
	End	1,761,264																			1,201,779	1,575,122					1,948,270	1,095,696
G13x10.0-SR3	Start	2,732,988																	Please consult factory	2,286,394	2,660,781	3,034,698	Exceeds MOP	2,444	3,743	4,144,552		
	Min.	1,065,620																		833,371	1,039,652	1,242,736					786,403	1,838,579
	End	1,448,924																			1,002,619	1,376,764					1,750,439	918,733
G13x10.0-SR4	Start	2,210,188																	Please consult factory	1,797,059	2,172,800	2,547,794	Exceeds MOP	1,982	3,743	4,405,952		
	Min.	868,004																		650,091	856,720	1,059,624					634,948	2,051,913
	End	1,187,693																			774,832	1,150,329					1,525,081	747,763
G13x12.0-SR1	Start	3,799,480																	Please consult factory	3,132,032			Exceeds MOP	2,226	2,456	3,604,022		
	Min.	1,481,092																		1,129,784							1,099,017	1,390,228
	End	2,017,175																			1,350,159							1,295,161
G13x12.0-SR2	Start	3,276,680																	Please consult factory	2,819,661	3,393,432		Exceeds MOP	1,922	2,456	3,865,421		
	Min.	1,283,475																		1,045,338	1,358,771						945,687	1,613,380
	End	1,755,945																			1,299,222	1,872,620						1,120,076
G13x12.0-SR3	Start	2,727,666																	Please consult factory	2,557,191	3,132,204	3,705,974	Exceeds MOP	1,604	2,456	4,177,964		
	Min.	1,063,708																		978,980	1,290,535	1,598,281					793,216	1,850,227
	End	1,443,605																			1,273,241	1,847,881					2,421,279	937,000
G13x12.0-SR4	Start	2,204,866																	Please consult factory	2,242,142	2,818,591	3,393,604	Exceeds MOP	1,301	2,456	4,439,364		
	Min.	866,091																		891,545	1,201,305	1,508,026					639,581	2,063,493
	End	1,182,374																			1,219,627	1,795,702					2,370,342	759,916

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Torque - Hydraulic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)						
		500	750	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4500	4750					5000					
Pressure Torque Output: Start/Min./End (lbf-in)																											
G13x14.0-SR1	Start	3,794,787				Please consult factory	Exceeds MOP													1,583	3,102,351	1,747	3,636,042				
	Min.	1,479,406																								1,108,427	1,402,110
	End	2,012,485																									
G13x14.0-SR2	Start	3,271,987				Please consult factory	Exceeds MOP													1,367	2,659,664	1,747	3,897,442				
	Min.	1,281,789																								952,956	1,625,068
	End	1,751,254																									
G13x14.0-SR3	Start	2,722,972				Please consult factory	Exceeds MOP													1,141	2,233,949	1,747	4,209,984				
	Min.	1,062,022																								798,331	1,861,817
	End	1,438,915																									
G13x14.0-SR4	Start	2,200,173				Please consult factory	Exceeds MOP													925	1,788,105	1,747	4,471,384				
	Min.	864,405																								641,693	2,075,018
	End	1,177,684																									
G13x16.0-SR1	Start	3,790,094				Please consult factory	Exceeds MOP													1,187	3,112,614	1,310	3,649,479				
	Min.	1,477,719																								1,112,016	1,406,768
	End	2,007,795																									
G13x16.0-SR2	Start	3,267,294				Please consult factory	Exceeds MOP													1,025	2,666,041	1,310	3,910,879				
	Min.	1,280,103																								955,108	1,629,649
	End	1,746,564																									
G13x16.0-SR3	Start	2,718,279				Please consult factory	Exceeds MOP													855	2,234,500	1,310	4,223,422				
	Min.	1,060,336																								797,924	1,866,347
	End	1,434,224																									
G13x16.0-SR4	Start	2,195,479				Please consult factory	Exceeds MOP													694	1,790,058	1,310	4,484,821				
	Min.	862,719																								642,619	2,079,536
	End	1,172,994																									
G13x18.0-SR1	Start	3,785,400				Please consult factory	Exceeds MOP													925	3,117,453	1,021	3,657,141				
	Min.	1,476,033																								1,113,870	1,409,762
	End	2,003,105																									
G13x18.0-SR2	Start	3,262,600				Please consult factory	Exceeds MOP													799	2,669,857	1,021	3,918,540				
	Min.	1,278,416																								956,830	1,632,595
	End	1,741,874																									
G13x18.0-SR3	Start	2,713,586				Please consult factory	Exceeds MOP													667	2,238,810	1,021	4,231,083				
	Min.	1,058,650																								800,317	1,869,259
	End	1,429,534																									
G13x18.0-SR4	Start	2,190,786				Please consult factory	Exceeds MOP													541	1,789,588	1,021	4,492,483				
	Min.	861,033																								642,676	2,082,441
	End	1,168,303																									

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