

# Bettis GH-Series

## Pneumatic Spring-Return Actuator Torque Chart Imperial

**BETTIS™**



# Torque - Pneumatic 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)																
			40	50	60	70	80	90	100	110	120	130	140	150	160	170					180	190	200													
Pressure Torque Output: Start/Min./End (lbf-in)																																				
GH2x12-SR0	Start	39,628																		Please consult factory	27,357	33,147	38,937	44,729	50,520	56,313	62,105	Exceeds MOP	95	24,462	168	66,740				
	Min	17,942																				11,543	14,625	17,691	20,747	23,799	26,847			29,895		9,991	32,329			
	End	28,604																					16,343	22,128	27,914	33,700	39,488			45,275		51,063	13,450	55,695		
GH2x12-SR1	Start	31,011																		Please consult factory	20,707	26,496	32,285	38,075	43,866	49,657	55,448	61,241	67,034	Exceeds MOP	75	17,813	163	68,772		
	Min	14,467																				9,111	12,178	15,232	18,279	21,323	24,366	27,408	30,448			33,487		7,569	34,399	
	End	23,679																					13,384	19,168	24,952	30,738	36,524	42,310	48,097			53,885		59,673	10,492	61,410
GH2x12-SR2	Start	26,750																		Please consult factory	17,656	23,445	29,233	35,023	40,813	46,603	52,394	58,186	63,979	Exceeds MOP	65	14,763	158	68,613		
	Min	12,660																				7,941	11,000	14,049	17,094	20,135	23,177	26,215	29,254			32,293		6,402	34,725	
	End	20,944																					11,858	17,641	23,425	29,210	34,995	40,781	46,568			52,355		58,143	8,966	62,773
GH2x12-SR3	Start	23,942																		Please consult factory	14,139	19,926	25,715	31,503	37,293	43,083	48,873	54,664	60,456	66,248	Exceeds MOP	58	12,981	154	68,566	
	Min	11,337																				6,229	9,294	12,344	15,389	18,431	21,472	24,510	27,549	30,588			33,627		5,612	34,842
	End	18,676																					8,880	14,663	20,447	26,231	32,015	37,801	43,587	49,373			55,160		60,948	7,723
GH2x12-SR4	Start	21,334																		Please consult factory	16,643	22,430	28,218	34,007	39,797	45,587	51,377	57,168	62,960	68,752	Exceeds MOP	52	12,013	150	68,752	
	Min	9,996																				7,585	10,641	13,688	16,730	19,771	22,810	25,849	28,887	31,926			34,965		5,122	34,965
	End	16,174																					11,486	17,269	23,053	28,837	34,622	40,407	46,193	51,979			57,767		63,554	6,860

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			40	50	60	70	80	90	100	110	120	130	140	150	160	170					180	190	200
Pressure Torque Output: Start/Min./End (lbf-in)																							
GH3x14-SR0	Start	66,512																		108	39,322	200	117,751
	Min	30,620																			16,388		57,736
	End	50,046																			22,868		101,261
GH3x14-SR1	Start	54,537																		89	31,694	194	121,194
	Min	25,298																	13,350		60,463		
	End	41,489																	18,656		108,116		
GH3x14-SR2	Start	47,490																		78	27,723	187	120,625
	Min	22,063																	11,726		60,604		
	End	36,091																	16,333		109,193		
GH3x14-SR3	Start	41,429																		68	23,854	181	120,158
	Min	19,279																	10,085		60,735		
	End	31,444																	13,877		110,137		
GH3x14-SR4	Start	36,217																		60	21,036	176	119,891
	Min	16,885																	8,947		60,919		
	End	27,450																	12,276		111,086		
GH3x16-SR0	Start	66,343																		82	39,683	154	120,964
	Min	30,575																	16,609		59,441		
	End	49,877																	23,229		104,473		
GH3x16-SR1	Start	54,368																		67	31,316	146	120,491
	Min	25,254																	13,178		60,113		
	End	41,321																	18,279		107,413		
GH3x16-SR2	Start	47,321																		59	27,690	141	120,246
	Min	22,018																	11,740		60,424		
	End	35,923																	16,300		108,814		
GH3x16-SR3	Start	41,261																		51	23,313	137	120,379
	Min	19,234																	9,828		60,871		
	End	31,275																	13,335		110,357		
GH3x16-SR4	Start	36,048																		45	20,539	133	119,858
	Min	16,841																	8,715		60,922		
	End	27,281																	11,779		111,053		

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		40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190					200												
		Pressure Torque Output: Start/Min./End (lbf-in)																																
GH4x20-SR0	Start	148,775																		Please consult factory	114,895	136,576	158,258	179,942	201,626	223,312	244,999	Exceeds MOP	95	104,055	160	244,999		
	Min	64,085																	46,240		57,832	69,341	80,805	92,241	103,664	115,066	40,388			115,066				
	End	97,551																			63,695	85,361	107,027	128,695	150,364	172,035	193,706			52,863		193,706		
GH4x20-SR1	Start	111,701																		Please consult factory	88,164	109,843	131,522	153,203	174,885	196,569	218,254	239,939	Exceeds MOP	71	68,655	152	244,277	
	Min	50,518																	38,252		49,721	61,147	72,548	83,943	95,320	106,697	118,075	27,841			120,349			
	End	80,935																			57,416	79,079	100,743	122,408	144,075	165,743	187,412	209,082			37,920		213,416	
GH4x20-SR2	Start	97,525																		Please consult factory	57,611	79,287	100,964	122,642	144,322	166,003	187,685	209,369	231,053	Exceeds MOP	60	57,611	145	241,896
	Min	43,443																	22,304		33,936	45,421	56,852	68,256	79,651	91,028	102,405	113,782	22,304			119,465		
	End	68,145																			28,260	49,920	71,582	93,245	114,909	136,574	158,241	179,909	201,578			28,260		212,413
GH4x20-SR3	Start	81,994																		Please consult factory	68,409	90,084	111,762	133,440	155,120	176,801	198,483	220,166	241,851	Exceeds MOP	53	53,236	140	241,851
	Min	36,632																	29,572		41,043	52,460	63,855	75,236	86,612	97,986	109,350	120,714	21,463			120,714		
	End	57,355																			43,779	65,439	87,101	108,764	130,428	152,093	173,760	195,428	217,097			28,617		217,097
GH4x20-SR4	Start	67,546																		Please consult factory	56,074	77,749	99,425	121,102	142,780	164,460	186,141	207,823	229,507	Exceeds MOP	44	43,070	136	242,517
	Min	30,500																	24,545		35,997	47,401	58,786	70,161	81,531	92,894	104,257	115,620	17,606			122,439		
	End	48,021																			36,558	58,217	79,877	101,539	123,202	144,866	166,531	188,198	209,866			23,563		222,867

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		40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190					200														
		Pressure Torque Output: Start/Min./End (lbf-in)																																		
GH5x24-SR0	Start	303,445																		Please consult factory	254,046	294,766	335,488	376,212	416,939	457,668	Exceeds MOP	103	225,543	168	490,252					
	Min	126,824																	100,780		122,613	144,290	165,872	187,387	208,866	85,321			226,031							
	End	186,821																			137,437	178,144	218,853	259,564	300,277	340,993			108,944		373,567					
GH5x24-SR1	Start	253,860																		Please consult factory	200,606	241,322	282,040	322,760	363,482	404,207	444,933	485,662	Exceeds MOP	86	184,320	168	518,246			
	Min	107,020																	78,848		100,701	122,353	143,906	165,403	186,858	208,286	229,694	70,005			246,821					
	End	158,835																			105,599	146,301	187,006	227,713	268,421	309,133	349,846	390,561			89,318		423,135			
GH5x24-SR2	Start	227,474																		Please consult factory	184,689	225,403	266,119	306,837	347,557	388,279	429,004	469,730	510,459	Exceeds MOP	77	172,476	168	543,043		
	Min	93,449																	70,713		92,664	114,366	135,938	157,448	178,903	200,341	221,749	243,157	64,031			260,268				
	End	134,046																			91,276	131,976	172,679	213,383	254,090	294,799	335,510	376,223	416,939			79,066		449,513		
GH5x24-SR3	Start	182,676																		Please consult factory	124,669	165,378	206,090	246,803	287,519	328,237	368,957	409,679	450,404	491,130	531,859	Exceeds MOP	60	124,669	165	552,224
	Min	76,768																	45,709		67,794	89,480	111,023	132,493	153,925	175,331	196,723	218,094	239,465	260,837	45,709			271,521		
	End	112,653																			54,665	95,361	136,060	176,760	217,462	258,167	298,874	339,583	380,294	421,007	461,723			54,665		482,081
GH5x24-SR4	Start	152,122																		Please consult factory	142,272	182,982	223,693	264,407	305,122	345,840	386,561	427,283	468,007	508,734	549,462	Exceeds MOP	52	109,706	161	553,535
	Min	64,457																	59,432		81,062	102,554	123,992	145,397	166,779	188,149	209,519	230,877	252,222	273,569	41,882			275,703		
	End	95,056																			85,209	125,905	166,603	207,304	248,006	288,711	329,418	370,127	410,838	451,551	492,266			52,654		496,338

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		40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190					200															
		Pressure Torque Output: Start/Min./End (lbf-in)																																			
GH7x28-SR0	Start	618,860																	Please consult factory	548,454	618,922	689,394	759,872	830,354	900,840	971,332	Exceeds MOP	121	485,037	196	1,013,629						
	Min	250,364																213,459		251,446	289,152	326,672	364,058	401,357	438,623	178,807						460,937					
	End	354,533																		284,145	354,595	425,050	495,509	565,973	636,442	706,916						220,743	749,203				
GH7x28-SR1	Start	501,292																	Please consult factory	393,418	463,872	534,330	604,793	675,261	745,734	816,211	886,693	957,180	1,027,671	Exceeds MOP	98	379,328	196	1,069,968			
	Min	206,556																149,223		187,369	225,083	262,557	299,900	337,161	374,332	411,492	448,591	485,671	507,920								
	End	298,208																		190,361	260,797	331,237	401,683	472,133	542,588	613,048	683,512	753,981	824,454						866,741		
GH7x28-SR2	Start	442,335																	Please consult factory	356,819	427,268	497,722	568,181	638,644	709,112	779,584	850,062	920,544	991,030	1,061,522	Exceeds MOP	87	335,685	192	1,075,621		
	Min	182,841																137,564		175,567	213,165	250,565	287,829	325,017	362,175	399,266	436,344	473,423	510,451	517,855							
	End	264,366																		178,872	249,304	319,740	390,180	460,626	531,076	601,531	671,991	742,455	812,924	883,397						897,493	
GH7x28-SR3	Start	363,950																	Please consult factory	331,423	401,867	472,317	542,770	613,229	683,692	754,160	824,633	895,110	965,592	1,036,079	Exceeds MOP	71	268,027	186	1,078,373		
	Min	151,298																134,528		172,174	209,557	246,802	283,957	321,064	358,138	395,205	432,218	469,233	506,249	528,460							
	End	219,329																		186,810	257,237	327,668	398,104	468,545	538,991	609,441	679,896	750,355	820,819	891,288						933,572	
GH7x28-SR4	Start	304,992																	Please consult factory	224,399	294,834	365,274	435,718	506,167	576,621	647,079	717,543	788,011	858,483	928,960	999,442	1,069,929	Exceeds MOP	60	224,399	181	1,076,978
	Min	127,583																84,658		122,712	160,207	197,491	234,652	271,751	308,823	345,856	382,867	419,879	456,893	493,871	530,844	534,541					
	End	185,487																		104,914	175,331	245,753	316,180	386,611	457,047	527,488	597,934	668,384	738,839	809,298	879,762	950,231					
GH7x32-SR0	Start	618,041																	Please consult factory	553,114	645,256	737,404	829,558	921,716	1,013,881	Exceeds MOP	92	479,403	157	1,078,399							
	Min	250,144																216,092		265,662	314,815	363,728	412,481	461,153	175,822						495,163						
	End	353,715																		288,803	380,923	473,048	565,178	657,313	749,454						215,111	813,956					
GH7x32-SR1	Start	500,473																	Please consult factory	425,184	517,316	609,453	701,596	793,744	885,897	978,056	1,070,220	Exceeds MOP	75	379,120	152	1,088,653					
	Min	206,337																166,631		216,124	265,139	313,927	362,583	411,164	459,659	508,135	141,529						517,831				
	End	297,389																		222,118	314,227	406,342	498,461	590,586	682,716	774,852	866,992						176,066	885,421			
GH7x32-SR2	Start	441,516																	Please consult factory	366,907	459,034	551,166	643,304	735,446	827,594	919,748	1,011,906	Exceeds MOP	66	330,058	146	1,067,204					
	Min	182,622																143,189		192,687	241,657	290,403	339,006	387,543	436,016	484,483	123,078						513,519				
	End	263,547																		188,958	281,061	373,170	465,284	557,404	649,529	741,659	833,795						152,118	889,078			
GH7x32-SR3	Start	363,131																	Please consult factory	319,834	411,956	504,082	596,214	688,352	780,495	872,643	964,796	1,056,955	Exceeds MOP	55	273,776	142	1,075,387				
	Min	151,079																128,445		177,682	226,480	275,102	323,625	372,096	420,516	468,906	517,299	103,443						526,977			
	End	218,510																		175,224	267,323	359,426	451,535	543,649	635,769	727,894	820,024	912,159						129,177	930,587		
GH7x32-SR4	Start	304,173																	Please consult factory	261,569	353,685	445,806	537,933	630,065	722,202	814,345	906,493	998,646	Exceeds MOP	46	224,724	138	1,072,373				
	Min	127,364																105,015		154,203	202,955	251,520	299,988	348,412	396,800	445,190	493,545	85,001						532,213			
	End	184,668																		142,074	234,167	326,266	418,369	510,478	602,592	694,712	786,837	878,967						105,239	952,675		

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			40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190				
Pressure Torque Output: Start/Min./End (lbf-in)																						
GH8x32-SR0	Start	939,867																	119	701,997	200	1,583,160
	Min	391,135																		264,369		732,867
	End	574,488																				336,652
GH8x32-SR1	Start	740,728																	94	506,175	200	1,659,218
	Min	322,507																		198,378		807,161
	End	498,441																		263,922		1,416,796
GH8x32-SR2	Start	595,355																	76	386,948	200	1,735,719
	Min	265,933																		156,043		866,029
	End	421,951																		213,574		1,562,147
GH8x32-SR3	Start	504,260																	64	320,763	194	1,734,722
	Min	225,673																		128,867		872,723
	End	357,672																		174,201		1,587,953
GH8x36-SR0	Start	938,897																	93	692,933	169	1,744,066
	Min	390,876																		259,545		817,607
	End	573,518																		327,590		1,378,569
GH8x36-SR1	Start	739,758																	74	506,272	163	1,737,125
	Min	322,250																		198,585		848,144
	End	497,471																		264,019		1,494,691
GH8x36-SR2	Start	594,385																	59	375,382	157	1,730,629
	Min	265,677																		149,984		863,448
	End	420,981																		202,009		1,557,058
GH8x36-SR3	Start	503,290																	50	315,243	152	1,725,756
	Min	225,417																		126,069		868,111
	End	356,702																		168,683		1,578,988

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			40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190					200											
Pressure Torque Output: Start/Min./End (lbf-in)																																		
GH10x40-SR1	Start	1,713,615																	Please consult factory	1,429,146	1,652,696	1,876,257	2,099,828	2,323,409	2,547,001	2,770,604	2,994,217	3,217,840	3,441,475	105	1,317,375	200	3,441,475	
	Min	698,408																547,066		667,803	787,376	906,255	1,024,753	1,142,919	1,260,904	1,378,749	1,496,536	1,614,123	1,614,123					
	End	1,000,734																		716,327	939,828	1,163,340	1,386,862	1,610,395	1,833,938	2,057,492	2,281,056	2,504,631	2,728,216		2,728,216			
GH10x40-SR2	Start	1,379,894																Please consult factory	1,143,801	1,367,329	1,590,869	1,814,419	2,037,979	2,261,550	2,485,132	2,708,724	2,932,326	3,155,939	3,379,563	Exceeds MOP	85	1,032,040	194	3,469,015
	Min	573,401															448,371		568,421	687,395	805,804	923,913	1,041,747	1,159,484	1,277,059	1,394,638	1,512,115	1,629,498	1,629,498					
	End	839,047																	603,006	826,486	1,049,976	1,273,477	1,496,989	1,720,511	1,944,044	2,167,587	2,391,141	2,614,705	2,838,280		2,838,280			
GH10x40-SR3	Start	1,257,952																Please consult factory	1,056,703	1,280,221	1,503,750	1,727,290	1,950,840	2,174,400	2,397,971	2,621,552	2,845,144	3,068,747	3,292,360	Exceeds MOP	77	989,650	188	3,471,258
	Min	503,636															396,099		517,163	636,630	755,339	873,592	991,580	1,109,414	1,227,066	1,344,642	1,462,221	1,579,648	1,579,648					
	End	702,656																	501,452	724,921	948,401	1,171,892	1,395,393	1,618,905	1,842,427	2,065,959	2,289,503	2,513,056	2,736,621		2,736,621			
GH10x40-SR4	Start	1,007,228																Please consult factory	1,169,896	1,393,414	1,616,943	1,840,483	2,064,032	2,287,593	2,511,164	2,734,745	2,958,337	3,181,940	3,405,553	Exceeds MOP	60	722,891	182	3,450,277
	Min	412,460															259,237		381,093	500,513	618,998	737,045	854,870	972,449	1,090,016	1,207,438	1,324,810	1,442,185	1,559,562		1,676,860	1,676,860		
	End	589,488																	305,213	528,661	752,120	975,590	1,199,070	1,422,560	1,646,061	1,869,573	2,093,095	2,316,628	2,540,171		2,763,725	2,987,289		2,987,289
GH10x44-SR1	Start	1,712,267																Please consult factory	1,412,136	1,683,604	1,955,084	2,226,575	2,498,078	2,769,593	3,041,119	3,312,657				Exceeds MOP	87	1,330,698	166	3,475,586
	Min	698,048															538,037		684,615	829,529	973,647	1,117,239	1,260,539	1,403,628	1,546,548				493,484		1,632,213			
	End	999,386																	699,321	970,730	1,242,150	1,513,582	1,785,026	2,056,481	2,327,948	2,599,427					617,900	2,762,320		
GH10x44-SR2	Start	1,378,545																Please consult factory	1,030,957	1,302,402	1,573,858	1,845,326	2,116,806	2,388,298	2,659,801	2,931,315	3,202,842	3,474,380		Exceeds MOP	70	1,030,957	160	3,474,380
	Min	573,041															387,226		533,930	678,587	822,341	965,650	1,108,730	1,251,507	1,394,273	1,536,896	1,679,424					387,226		1,679,424
	End	837,699																	490,186	761,572	1,032,969	1,304,378	1,575,799	1,847,231	2,118,675	2,390,130	2,661,597	2,933,076						490,186
GH10x44-SR3	Start	1,256,603																Please consult factory	1,167,377	1,438,822	1,710,279	1,981,747	2,253,227	2,524,719	2,796,222	3,067,736	3,339,263			Exceeds MOP	64	1,004,516	154	3,447,876
	Min	503,274															456,587		602,291	746,531	890,129	1,033,318	1,176,327	1,319,090	1,461,856	1,604,429					367,651	1,661,440		
	End	701,308																	612,102	883,488	1,154,885	1,426,294	1,697,715	1,969,147	2,240,590	2,512,046	2,783,513					449,276		2,892,103
GH10x44-SR4	Start	1,005,880																Please consult factory	1,009,137	1,280,570	1,552,015	1,823,472	2,094,940	2,366,420	2,637,912	2,909,415	3,180,929	3,452,456		Exceeds MOP	51	764,857	150	3,452,456
	Min	412,100															415,020		559,486	703,045	846,116	988,903	1,131,642	1,274,158	1,416,676	1,559,198	1,701,612					282,758		1,701,612
	End	588,140																	591,396	862,770	1,134,156	1,405,554	1,676,963	1,948,383	2,219,815	2,491,259	2,762,714	3,034,181						347,169

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





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