

**Data sheet**

Sheet No.: GHM 1.01 RevB

Date: August 2010

**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)												
			35	50	65	80	100	140	175	200	250	275	300	340	
			Pressure Torque Output Start/Min./End (Nm)												
G01101.5	Start/End Minimum									2167	2476	3095	3405	3714	4209
	Minimum									1143	1307	1633	1797	1960	2222
G01101.5	Start/End Minimum									1429	1633	2042	2246	2450	2777
	Minimum									754	862	1078	1185	1293	1466
G01101.7	Start/End Minimum							1685	2359	2949	3370	4213			
	Minimum							889	1245	1556	1779	2223			
G01101.7	Start/End Minimum							1135	1589	1986	2270	2837	3121	3405	3858
	Minimum							599	839	1048	1198	1497	1647	1797	2036
G01102.0	Start/End Minimum					1761	2201	3081	3852	4402					
	Minimum					929	1162	1626	2033	2323					
G01102.0	Start/End Minimum					1321	1651	2311	2889	3301	4127				
	Minimum					697	871	1220	1525	1742	2178				
G01102.2	Start/End Minimum			1393	1811	2228	2786	3900							
	Minimum			735	956	1176	1470	2058							
G01102.2	Start/End Minimum			1118	1453	788	2235	3129	3912	4471					
	Minimum			590	767	944	1180	1652	2065	2359					
G01102.5	Start/End Minimum			1719	2235	2751	3439								
	Minimum			907	1180	1452	1815								
G01102.5	Start/End Minimum			1444	1878	2311	2889	4044							
	Minimum			762	991	1220	1525	2134							
G01103.0	Start/End Minimum		1733	2476	3219	3962									
	Minimum		915	1307	1699	2091									
G01103.0	Start/End Minimum		1541	2201	2861	3521	4402								
	Minimum		813	1162	1510	1859	2323								
G01103.5	Start/End Minimum		2359	3370	4381										
	Minimum		1245	1779	2312										
G01103.5	Start/End Minimum		2167	3095	4024										
	Minimum		1143	1633	2124										
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)												
			35	50	65	80	100	140	175	200	250	275	300	340	
			Operating Pressure (Bar)												

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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**Data sheet**

Sheet No.: GHM 1.02 RevB

Date: August 2010

**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series (cont.)**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G2101.7	Start/End Minimum						2040	2856	3570	4080	5100	5609	6119	
	Start/End Minimum						1077	1507	1884	2153	2691	2961	3230	
G2102.0	Start/End Minimum				1732	2131	2664	3730	4662	5328	6661			
	Start/End Minimum				914	1125	1406	1969	2461	2812	3515			
G2102.2	Start/End Minimum			1686	2192	2698	3372	4721	5901	6744				
	Start/End Minimum			890	1157	1424	1780	2491	3114	3559				
G2102.5	Start/End Minimum			2081	2706	3330	4163	5828						
	Start/End Minimum			1099	1428	1758	2197	3076						
G2103.0	Start/End Minimum		2098	2997	3896	4796	5995							
	Start/End Minimum		1107	1582	2056	2531	3164							
G2103.5	Start/End Minimum		2856	4080	5304	6527								
	Start/End Minimum		1507	2153	2799	3445								
G2104.0	Start/End Minimum		3730	5328										
	Start/End Minimum		1969	2812										
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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# Data sheet

Sheet No.: GHM 1.03 RevB

Date: August 2010

G-Series

## Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators G-Series (cont.)

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G3102.0	Start/End Minimum					2595	3243	4541	5676	6487	8109	8919	9730	11028
	Minimum				1369	1712	2397	2996	3424	4280	4707	5135	5820	
G3102.0	Start/End Minimum					1581	1976	2767	3459	3953	4941	5435	5929	6720
	Minimum				835	1043	1460	1825	2086	2608	2869	3129	3547	
G3102.2	Start/End Minimum					3284	4105	5747	7184	8210	10262			
	Minimum				1733	2167	3033	3791	4333	5416				
G3102.2	Start/End Minimum					2270	2838	3973	4967	5676	7095	7805	8514	9649
	Minimum				1198	1498	2097	2621	2996	3745	4119	4494	5093	
G3102.5	Start/End Minimum				3294	4054	5068	7095	8869	10136				
	Minimum			1739	2140	2675	3745	4681	5349					
G3102.5	Start/End Minimum				2471	3041	3801	5321	6652	7602	9502	10452	11403	
	Minimum			1304	1605	2006	2808	3511	4012	5015	5517	6018		
G3103.0	Start/End Minimum			3649	4744	5838	7298	10217						
	Minimum		1926	2504	3081	3852	5392							
G3103.0	Start/End Minimum			3015	3920	4825	6031	8443	10554					
	Minimum		1591	2069	2546	3183	4456	5570						
G3103.5	Start/End Minimum		3477	4967	6456	7946	9933							
	Minimum		1835	2621	3408	4194	5242							
G3103.5	Start/End Minimum		3033	4333	5633	6933	8666							
	Minimum		1601	2287	2973	3659	4574							
G3104.0	Start/End Minimum		4541	6487	8433	10379								
	Minimum		2397	3424	4451	5478								
G3104.0	Start/End Minimum		4097	5853	7609	9365	11707							
	Minimum		2163	3089	4016	4943	6179							
G3104.5	Start/End Minimum		5747	8210	10673									
	Minimum		3033	4333	5633									
G3104.5	Start/End Minimum		5304	7576	9849									
	Minimum		2799	3999	5198									
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

NOTE: Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.

Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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# Data sheet

Sheet No.: GHM 1.04 RevB

Date: August 2010

G-Series

## Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators G-Series (cont.)

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)												
			35	50	65	80	100	140	175	200	250	275	300	340	
			Pressure Torque Output Start/Min./End (Nm)												
G4102.5	Start/End Minimum					4923	6154	8615	10769	12308	15385	16923	18462	20923	
						2598	3248	4547	5684	6496	8120	8932	9744	11043	
	Start/End Minimum					3151	3938	5514	6892	7877	9846	10831	11815	13391	
						1663	2079	2910	3638	4157	5197	5716	6236	7067	
G4103.0	Start/End Minimum				5760	7089	8862	12406	15508	17723	22154				
					3040	3742	4677	6548	8185	9354	11692				
	Start/End Minimum				4320	5317	6646	9305	11631	13292	16615	18277	19938	22597	
					2280	2806	3508	4911	6138	7015	8769	9646	10523	11926	
G4103.5	Start/End Minimum			6031	7840	9649	12062	16886	21108						
				3183	4138	5093	6366	8912	11140						
	Start/End Minimum			4923	6400	7877	9846	13785	17231	19692					
				2598	3378	4157	5197	7275	9094	10393					
G4104.0	Start/End Minimum		5514	7877	10240	12603	15754	22055							
			2910	4157	5404	6652	8315	11640							
	Start/End Minimum		4738	6769	8800	10831	13538	18954	23692						
			2501	3573	4644	5716	7145	10003	12504						
G4104.5	Start/End Minimum		6978	9969	12960	15951	19938								
			3683	5262	6840	8418	10523								
	Start/End Minimum		6203	8862	11520	14178	17723								
			3274	4677	6080	7483	9354								
G4105.0	Start/End Minimum		8615	12308	16000	19692									
			4547	6496	8444	10393									
	Start/End Minimum		7840	11200	14560	17920	22400								
			4138	5911	7684	9458	11822								
G4106.0	Start/End Minimum		12406	17723	23040										
			6548	9354	12160										
	Start/End Minimum		11631	16615	21600										
			6138	8769	11400										
Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)												
			35	50	65	80	100	140	175	200	250	275	300	340	
			Pressure Torque Output Start/Min./End (Nm)												

- NOTE:
- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
  - Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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# Data sheet

Sheet No.: GHM 1.05 RevB

Date: August 2010

G-Series

## Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators G-Series (cont.)

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G5103.5	Start/End Minimum					12487	15609	21853	27316	31218	39023	42925	46827	53071
						6590	8238	11533	14417	16476	20595	22655	24714	28010
	Start/End Minimum					8410	10512	14717	18396	21024	26280	28909	31537	35741
						4438	5548	7767	9709	11096	13870	15257	16644	18864
G5104.0	Start/End Minimum				13252	16310	20387	28542	35678	40775	50968			
					6994	8608	10760	15064	18830	21520	26900			
	Start/End Minimum				9939	12232	15290	21407	26758	30581	38226	42049	45871	51988
					5245	6456	8070	11298	14122	16140	20175	22192	24210	27438
G5104.5	Start/End Minimum			12901	16772	20642	25803	36124	45155	51605				
				6809	8852	10894	13618	19065	23832	27236				
	Start/End Minimum			10353	13459	16565	20706	28988	36235	41412	51765			
				5464	7103	8742	10928	15299	19124	21856	27320			
G5105.0	Start/End Minimum		11149	15928	20706	25484	31855	44597						
			5884	8406	10928	13450	16812	23537						
	Start/End Minimum		9365	13379	17393	21407	26758	37462	46827	53517				
			4943	7061	9180	11298	14122	19771	24714	28245				
G5106.0	Start/End Minimum		16055	22936	29816	36697	45871							
			8473	12105	15736	19368	24210							
	Start/End Minimum		14271	20387	26503	32620	40775							
			7532	10760	13988	17216	21520							
G5107.0	Start/End Minimum		21853	31218	40583	49949								
			11533	16476	21419	26362								
	Start/End Minimum		20069	28670	37271	45871								
			10592	15131	19671	24210								
G5108.0	Start/End Minimum		28542	40775	53007									
			15064	21520	27976									
	Start/End Minimum		26758	38226	49694									
			14122	20175	26227									
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

NOTE:

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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**Data sheet**

Sheet No.: GHM 1.06 RevB

Date: August 2010

**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series (cont.)**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G7104.0	Start/End Minimum						25021	35029	43786	50042	62552	68807	75062	85071
							13205	18488	23109	26411	33014	36315	39616	44898
	Start/End Minimum						17104	23946	29932	34208	42760	47036	51312	58154
							9027	12638	15797	18054	22568	24825	27081	30692
G7104.5	Start/End Minimum					25334	31667	44334	55417	63334	79167	87084	95001	
						13370	16713	23398	29248	33426	41783	45961	50139	
	Start/End Minimum					19000	23750	33250	41563	47500	59375	65313	71251	80751
						10028	12535	17549	21936	25070	31337	34471	37604	42618
G7105.0	Start/End Minimum					31276	39095	54733	68416	78190	97737			
						16507	20633	28887	36109	41267	51584			
	Start/End Minimum					24943	31178	43650	54562	62356	77946	85740	93535	
						13164	16455	23037	28797	32910	41138	45252	49366	
G7106.0	Start/End Minimum			28148	36593	45037	56297	78815	98519					
				14856	19313	23770	29712	41597	51996					
	Start/End Minimum			24190	31447	38704	48380	67732	84665	96760				
				12767	16597	20427	25534	35747	44684	51068				
G7107.0	Start/End Minimum		26819	38313	49807	61301	76626							
			14155	20221	26287	32353	40442							
	Start/End Minimum		24048	34355	44661	54968	68709	96193						
			12692	18132	23571	29011	36263	50769						
G7108.0	Start/End Minimum		35029	50042	65054	80066	100083							
			18488	26411	34334	42257	52822							
	Start/End Minimum		32258	46083	59908	73733	92166							
			17025	24322	31618	38915	48643							
G7109.0	Start/End Minimum		44334	63334	82334	101334								
			23398	33426	43454	53482								
	Start/End Minimum		41563	59375	77188	95001								
			21936	31337	40738	50139								
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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**Data sheet**

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**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series (cont.)**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G7110.0	Start/End Minimum		54733	78190	101647									
			28887	41267	53647									
	Start/End Minimum		51962	74232	96501									
			27424	39178	50931									
G8105.0	Start/End Minimum							64869	81086	92670	115837	127421	139004	157538
								34236	42795	48909	61136	67250	73363	83145
	Start/End Minimum							45246	56557	64637	80796	88876	96955	109883
								23880	29850	34114	42642	46907	51171	57994
G8106.0	Start/End Minimum					53378	66722	93411	116764	133444	166805			
						28172	35214	49300	61625	70429	88036			
	Start/End Minimum					42165	52706	73788	92235	105412	131764	144941	158117	
						22254	27817	38944	48680	55634	69542	76497	83451	
G8107.0	Start/End Minimum				59030	72653	90816	127143	158928					
					31155	38345	47931	67103	83879					
	Start/End Minimum				49920	61440	76800	107520	134400	153600				
					26347	32427	40533	56747	70933	81067				
G8108.0	Start/End Minimum			59308	77101	94894	118617	166064						
				31302	40692	50083	62603	87645						
	Start/End Minimum			52300	67990	83681	104601	146441						
				27603	35884	44165	55206	77288						
G8109.0	Start/End Minimum		52544	75062	97581	120100	150125							
			27731	39616	51501	63386	79232							
	Start/End Minimum		47638	68054	88470	108887	136108							
			25142	35917	46693	57468	71835							
G8110.0	Start/End Minimum		64869	92670	120470	148271								
			34236	48909	63582	78254								
	Start/End Minimum		59963	85661	111360	137058								
			31647	45210	58773	72336								
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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**Data sheet**

Sheet No.: GHM 1.08 RevB

Date: August 2010

**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series (cont.)**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G8112.0	Start/End Minimum		93411	133444										
			49300	70429										
	Start/End Minimum		88505	126436	164367									
			46711	66730	86749									
G10106.0	Start/End Minimum							122602	153252	175145	218932	240825	262718	297747
								64706	80883	92438	115547	127102	138657	157144
	Start/End Minimum							86630	108288	123757	154697	170166	185636	210387
								45721	57152	65316	81645	89810	97974	111038
G10107.0	Start/End Minimum					95357	119196	166875	208593	238392	297990	327789		
						50327	62909	88073	110091	125818	157273	173000		
	Start/End Minimum					74802	93502	130903	163629	187004	233755	257131	280506	317907
						39479	49348	69088	86360	98697	123371	135708	148045	167784
G10108.0	Start/End Minimum				101195	124548	155685	217959	272448	311370				
					53409	65734	82167	115034	143792	164334				
	Start/End Minimum				84494	103993	129991	181987	227484	259981	324977			
					44594	54885	68606	96049	120061	137212	171516			
G10109.0	Start/End Minimum			98519	128075	157631	197039	275854						
				51996	67595	83194	103993	145590						
	Start/End Minimum			85672	111374	137076	171345	239882	299853					
				45216	58781	72345	90432	126605	158256					
G10110.0	Start/End Minimum			121629	158117	194606	243258							
				64193	83451	102709	128386							
	Start/End Minimum			108782	141416	174051	217563	304589						
				57413	74636	91860	114825	160755						
G10112.0	Start/End Minimum		122602	175145	227689	280233								
			64706	92438	120169	147901								
	Start/End Minimum		113609	162298	210988	259677	324597							
			59960	85657	111355	137052	171315							
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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**Data sheet**

Sheet No.: GHM 1.09 RevB

Date: August 2010

**G-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators  
G-Series (cont.)**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Pressure Torque Output Start/Min./End (Nm)											
G10114.0	Start/End Minimum		166875	238392	309910									
			88073	125818	163564									
	Start/End Minimum		157882	225545	293209									
			83326	119038	154749									
G13108.0	Start/End Minimum						200166	280233	350291	400332	500415	550457	600499	
							105643	147901	184876	211287	264108	290519	316930	
	Start/End Minimum						150125	210174	262718	300249	375312	412843	450374	510424
							79232	110925	138657	158465	198081	217889	237697	269390
G13109.0	Start/End Minimum					202668	253335	354669	443337	506671	633338			
						106964	133705	187187	233983	267410	334262			
	Start/End Minimum					162635	203294	284611	355764	406588	508234	559058	609881	
						85835	107294	150212	187764	214588	268235	295058	321882	
G13110.0	Start/End Minimum				203294	250208	312760	437864	547329	625519				
					107294	132054	165068	231095	288868	330135				
	Start/End Minimum				170767	210174	262718	367805	459757	525436	656795			
					90127	110925	138657	194119	242649	277314	346642			
G13111.0	Start/End Minimum				245985	302751	378439	529815	662269					
					129826	159785	199732	279625	349531					
	Start/End Minimum				213458	262718	328398	459757	574696	656795				
					112659	138657	173321	242649	303312	346642				
G13112.0	Start/End Minimum			225187	292743	360299	450374	630523						
				118849	154503	190158	237697	332776						
	Start/End Minimum				200166	260216	320266	400332	560465					
					105643	137336	169029	211287	295801					
G13114.0	Start/End Minimum			306504	398456	490407	613009							
				161766	210296	258826	323532							
	Start/End Minimum				281484	365929	450374	562967						
					148561	193129	237697	297122						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	80	100	140	175	200	250	275	300	340
			Operating Pressure (Bar)											

**NOTE:**

- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
- Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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# Data sheet

Sheet No.: GHM 1.10 RevB

Date: August 2010

G-Series

## Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators G-Series (cont.)

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (Bar)																
			35	50	65	80	100	140	175	200	250	275	300	340					
			Pressure Torque Output Start/Min./End (Nm)																
G13116.0	Start/End Minimum		280233	400332	520432	640532													
			147901	211287	274672	338058													
	Start/End Minimum		262718	375312	487905	600499													
			138657	198081	257505	316930													
G13108.0	Start/End Minimum		354669	506671	658672														
			187187	267410	347632														
	Start/End Minimum		337155	481650	626145														
			177943	254204	330465														
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (Nm)																
			35	50	65	80	100	140	175	200	250	275	300	340					
			Operating Pressure (Bar)																

- NOTE:
- Standard configuration produces clockwise rotation when the inboard side of piston is pressurized. Inboard side of piston equals < torque.
  - Standard configuration produces counterclockwise rotation when the outboard side of piston is pressurized. Outboard side of piston equals > torque.



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