

Data sheet

Sheet No.: GHI 1.01 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

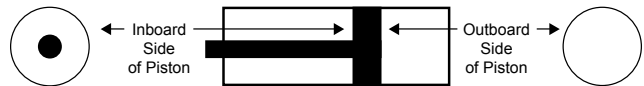
All Published Torques are Guaranteed Minimum Values.

**Double-Acting Actuators
G-Series**

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G01001.5	Start/End Minimum						15109	18886	22664	30218	37773
	Start/End Minimum						7974	9968	11961	15948	19936
G01001.7	Start/End Minimum				10283	15424	20565	25706	30848		
	Start/End Minimum				5427	8140	10854	13567	16281		
G01002.0	Start/End Minimum			10073	13430	20145	26861	33576	40291		
	Start/End Minimum			5316	7088	10632	14176	17721	21265		
G01002.2	Start/End Minimum			12748	16998	25497	33995				
	Start/End Minimum			6728	8971	13457	17942				
G01002.5	Start/End Minimum		10492	15739	20985	31477					
	Start/End Minimum		5538	8307	11075	16613					
G01003.0	Start/End Minimum		15109	22664	30218						
	Start/End Minimum		7974	11961	15948						
G01003.5	Start/End Minimum		20565	30848							
	Start/End Minimum		10854	16281							
G01003.5	Start/End Minimum		18886	28330	37773						
	Start/End Minimum		9968	14952	19936						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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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 Process Management

Data sheet

Sheet No.: GHI 1.02 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

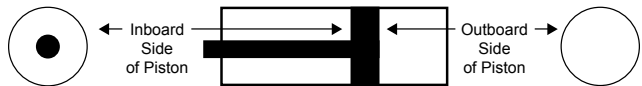
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)									
			500	750	1000	1500	2000	2500	3000	4000	5000	
			Pressure Torque Output Start/Min./End (lb-in)									
G2001.7	Start/End Minimum						24895	31118	37342	49789		
							13139	16424	19708	26278		
	Start/End Minimum						16766	20957	25149	33532		
							8849	11061	13273	17697		
G2002.0	Start/End Minimum				16258	24387	32515	40644	48773			
					8580	12871	17161	21451	25741			
	Start/End Minimum				12193	18290	24387	30483	36580			
					6435	9653	12871	16088	19306			
G2002.2	Start/End Minimum			15432	20576	30864	41152	51441				
				8145	10860	16289	21719	27149				
	Start/End Minimum			12384	16512	24768	33024	41279				
				6536	8715	13072	17429	21786				
G2002.5	Start/End Minimum			19052	25403	38104	50805					
				10055	13407	20110	26814					
	Start/End Minimum			16004	21338	32007	42677					
				8446	11262	16893	22524					
G2003.0	Start/End Minimum		18290	27435	36580	54870						
			9653	14480	19306	28959						
	Start/End Minimum		16258	24387	32515	48773						
			8580	12871	17161	25741						
G2003.5	Start/End Minimum		24895	37342	49789							
			13139	19708	26278							
	Start/End Minimum		22862	34294	45725							
			12066	18099	24133							
G2004.0	Start/End Minimum		32515	48773								
			17161	25741								
	Start/End Minimum		30483	45725								
			16088	24133								
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)									
			500	750	1000	1500	2000	2500	3000	4000	5000	
			Operating Pressure (PSIG)									

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.: GHI 1.03 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

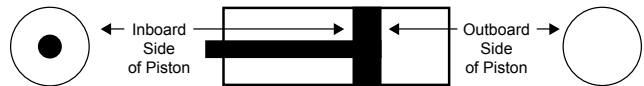
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G3002.0	Start/End Minimum					29688	39584	49480	59376	79168	98960
						15669	20892	26114	31337	41783	52229
	Start/End Minimum					18091	24122	30152	36182	48243	60304
G3002.2	Start/End Minimum					37574	50099	62623	75148	100197	
						19831	26441	33051	39661	52882	
	Start/End Minimum					25977	34636	43295	51954	69272	
G3002.5	Start/End Minimum				30925	46388	61850	77313	92775		
					16322	24482	32643	40804	48965		
	Start/End Minimum				23194	34791	46388	57984	69581		
G3003.0	Start/End Minimum			33399	44532	66798	89064				
				17627	23503	35255	47006				
	Start/End Minimum			27601	36801	55201	73602				
G3003.5	Start/End Minimum		30307	45460	60613	90920					
			15995	23993	31990	47985					
	Start/End Minimum		26441	39661	52882	79323					
G3004.0	Start/End Minimum		39584	59376	79168						
			20892	31337	41783						
	Start/End Minimum		35718	53578	71437						
G3004.5	Start/End Minimum		50099	75148	100197						
			26441	39661	52882						
	Start/End Minimum		46233	69349	92466						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.: GHI 1.04 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

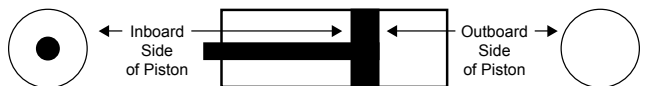
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G4002.5	Start/End Minimum					56328	75104	93880	112656	150207	187759
						29729	39638	49548	59457	79276	99095
	Start/End Minimum					36050	48066	60083	72100	96133	120166
						19026	25368	31710	38053	50737	63421
G4003.0	Start/End Minimum				54075	81112	108149	135187	162224		
					28539	42809	57079	71349	85618		
	Start/End Minimum				40556	60834	81112	101390	121668		
					21405	32107	42809	53511	64214		
G4003.5	Start/End Minimum			55201	73602	110402	147203	184004			
				29134	38845	58268	77691	97113			
	Start/End Minimum			45062	60083	90124	120166	150207			
				23783	31710	47566	63421	79276			
G4004.0	Start/End Minimum		48066	72100	96133	144199	192265				
			25368	38053	50737	76105	101473				
	Start/End Minimum		41307	61961	82614	123921	165228				
			21801	32701	43602	65403	87204				
G4004.5	Start/End Minimum		60834	91251	121668	182502					
			32107	48160	64214	96320					
	Start/End Minimum		54075	81112	108149	162224					
			28539	42809	57079	85618					
G4005.0	Start/End Minimum		75104	112656	150207						
			39638	59457	79276						
	Start/End Minimum		68344	102517	136689						
			36071	54106	72141						
G4006.0	Start/End Minimum		108149	162224							
			57079	85618							
	Start/End Minimum		101390	152085							
			53511	80267							
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.



Data sheet

Sheet No.: GHI 1.05 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

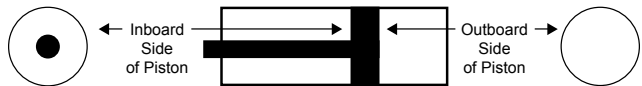
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G5003.5	Start/End Minimum					142874	190498	238123	285747	380997	476246
						75406	100541	125676	150811	201082	251352
	Start/End Minimum					96221	128295	160368	192442	256590	320737
						50783	67711	84639	101567	135422	169278
G5004.0	Start/End Minimum				124407	186611	248814	311018	373221		
					65659	98489	131319	164148	196978		
	Start/End Minimum				93305	139958	186611	233263	279916		
					49244	73867	98489	123111	147733		
G5004.5	Start/End Minimum			118090	157453	236179	314905	393632	472358		
				62325	83100	124650	166200	207750	249300		
	Start/End Minimum			94763	126351	189526	252702	315877	379053		
				50014	66685	100028	133370	166713	200056		
G5005.0	Start/End Minimum		97193	145790	194386	291579	388772				
			51296	76944	102593	153889	205185				
	Start/End Minimum		81642	122463	163284	244926	326569				
			43089	64633	86178	129267	172356				
G5006.0	Start/End Minimum		139958	209937	279916	419874					
			73867	110800	147733	221600					
	Start/End Minimum		124407	186611	248814	373221					
			65659	98489	131319	196978					
G5007.0	Start/End Minimum		190498	285747	380997						
			100541	150811	201082						
	Start/End Minimum		174947	262421	349895						
			92333	138500	184667						
G5008.0	Start/End Minimum		248814	373221							
			131319	196978							
	Start/End Minimum		233263	349895							
			123111	184667							
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.: GHI 1.06 RevB

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G-Series

Torque Ratings – (Hydraulic)

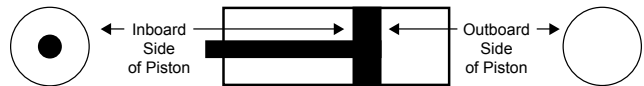
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G7004.0	Start/End Minimum						305363	381704	458044	610726	763407
							161164	201455	241746	322327	402909
	Start/End Minimum						208744	260930	313116	417488	521860
							110171	137713	165256	220341	275426
G7004.5	Start/End Minimum					289856	386475	483094	579712	772950	
						152980	203973	254966	305959	407946	
	Start/End Minimum					217392	289856	362320	434784	579712	
						114735	152980	191225	229469	305959	
G7005.0	Start/End Minimum					357847	477129	596412	715694		
						188864	251818	314773	377727		
	Start/End Minimum					285383	380511	475638	570766		
						150619	200825	251031	301238		
G7006.0	Start/End Minimum			257650	343533	515300	687066	858833			
				135982	181309	271964	362618	453273			
	Start/End Minimum			221418	295224	442836	590448	738060			
				116859	155813	233719	311625	389531			
G7007.0	Start/End Minimum		233793	350690	467587	701380	935174				
			123391	185086	246782	370173	493564				
	Start/End Minimum		209639	314458	419277	628916	838555				
			110643	165964	221285	331928	442571				
G7008.0	Start/End Minimum		305363	458044	610726	916088					
			161164	241746	322327	483491					
	Start/End Minimum		281208	421812	562416	843624					
			148415	222623	296831	445246					
G7009.0	Start/End Minimum		386475	579712	772950						
			203973	305959	407946						
	Start/End Minimum		362320	543480	724640						
			191225	286837	382449						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.: GHI 1.07 RevB

Date: August 2010

G-Series

Torque Ratings – (Hydraulic)

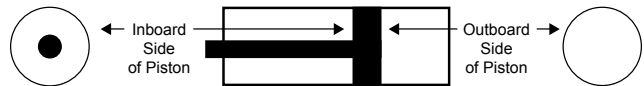
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G7010.0	Start/End Minimum		477129	715694							
			251818	377727							
	Start/End Minimum		452975	679462							
			239070	358605							
G8005.0	Start/End Minimum						565487	706858	848230	1130973	1413717
							298451	373064	447677	596903	746128
	Start/End Minimum						394427	493034	591640	788854	986067
							208170	260212	312255	416340	520424
G8006.0	Start/End Minimum					610726	814301	1017876	1221451		
						322327	429770	537212	644655		
	Start/End Minimum					482431	643241	804051	964862		
						254616	339488	424360	509233		
G8007.0	Start/End Minimum				554177	831265	1108354	1385442			
					292482	438723	584965	731206			
	Start/End Minimum				468647	702971	937294	1171618			
					247342	371012	494683	618354			
G8008.0	Start/End Minimum			542867	723823	1085734	1447646				
				286513	382018	573027	764035				
	Start/End Minimum			478720	638293	957440	1276586				
				252658	336877	505315	673754				
G8009.0	Start/End Minimum		458044	687066	916088	1374133					
			241746	362618	483491	725237					
	Start/End Minimum		415279	622919	830559	1245838					
			219175	328763	438350	657526					
G8010.0	Start/End Minimum		565487	848230	1130973						
			298451	447677	596903						
	Start/End Minimum		522722	784083	1045443						
			275881	413821	551762						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.: GHI 1.08 RevB

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G-Series

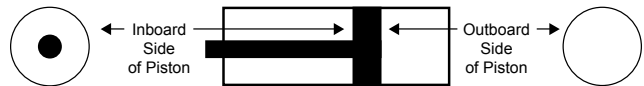
Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G8012.0	Start/End Minimum		814301	1221451							
			429770	644655							
	Start/End Minimum		771536	1157304							
			407199	610799							
G10006.0	Start/End Minimum						1068770	1335962	1603155	2137540	2671925
							564073	705091	846109	1128146	1410182
	Start/End Minimum						755190	943987	1132785	1510380	1887974
							398572	498215	597859	797145	996431
G10007.0	Start/End Minimum					1091036	1454714	1818393	2182072	2909429	
						575824	767766	959707	1151649	1535532	
	Start/End Minimum					855851	1141134	1426418	1711702	2282269	
						451699	602265	752832	903398	1204531	
G10008.0	Start/End Minimum				950018	1425026	1900035	2375044	2850053		
					501398	752097	1002796	1253495	1504195		
	Start/End Minimum				793228	1189841	1586455	1983069	2379683		
					418648	627972	837296	1046620	1255944		
G10009.0	Start/End Minimum			901775	1202366	1803549	2404732	3005915			
				475937	634582	951873	1269164	1586455			
	Start/End Minimum			784182	1045576	1568364	2091152	2613940			
				413874	551832	827748	1103664	1379579			
G10010.0	Start/End Minimum			1113302	1484403	2226604	2968805				
				587576	783435	1175152	1566869				
	Start/End Minimum			995709	1327613	1991419	2655225				
				525513	700684	1051027	1401369				
G10012.0	Start/End Minimum		1068770	1603155	2137540						
			564073	846109	1128146						
	Start/End Minimum		990375	1485562	1980750						
			522698	784047	1045396						
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

- 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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Sheet No.: GHI 1.09 RevB

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G-Series

Torque Ratings – (Hydraulic)

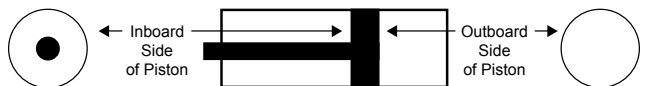
All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G10014.0	Start/End Minimum		1454714	2182072	2909429						
			767766	1151649	1535532						
	Start/End Minimum		1376319	2064479	2752639						
			726391	1089586	1452782						
G13008.0	Start/End Minimum						2442902	3053628	3664354	4885805	
							1289310	1611637	1933964	2578619	
	Start/End Minimum						1832177	2290221	2748265	3664354	
							966982	1208728	1450473	1933964	
G13009.0	Start/End Minimum					2318849	3091798	3864748	4637698		
						1223837	1631782	2039728	2447674		
	Start/End Minimum					1860805	2481073	3101341	3721609		
						982091	1309455	1636819	1964183		
G13010.0	Start/End Minimum				1908518	2862776	3817035	4771294	5725553		
					1007273	1510910	2014546	2518183	3021819		
	Start/End Minimum				1603155	2404732	3206309	4007887	4809464		
					846109	1269164	1692219	2115274	2538328		
G13011.0	Start/End Minimum				2309306	3463959	4618612	5773266			
					1218801	1828201	2437601	3047001			
	Start/End Minimum				2003943	3005915	4007887	5009859			
					1057637	1586455	2115274	2644092			
G13012.0	Start/End Minimum			2061199	2748265	4122398	5496531				
				1087855	1450473	2175710	2900947				
	Start/End Minimum				1832177	2442902	3664354	4885805			
					966982	1289310	1933964	2578619			
G13014.0	Start/End Minimum			2805521	3740694	5611042					
				1480692	1974255	2961383					
	Start/End Minimum				2576499	3435332	5152997				
					1359819	1813092	2719637				
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

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.: GHI 1.10 RevB

Date: August 2010

G-Series

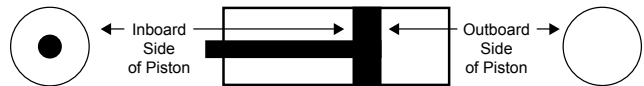
Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

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

Actuator Model	See Bettis' Definitions	Direction of Rotation	Operating Pressure (PSIG)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Pressure Torque Output Start/Min./End (lb-in)								
G13016.0	Start/End Minimum		2442902	3664354	4885805						
			1289310	1933964	2578619						
	Start/End Minimum		2290221	3435332	4580442						
			1208728	1813092	2417456						
G13008.0	Start/End Minimum		3091798	4637698							
			1631782	2447674							
	Start/End Minimum		2939117	4408676							
			1551201	2326801							
Actuator Model	See Bettis' Definitions	Direction of Rotation	Pressure Torque Output Start/Min./End (lb-in)								
			500	750	1000	1500	2000	2500	3000	4000	5000
			Operating Pressure (PSIG)								

- 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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