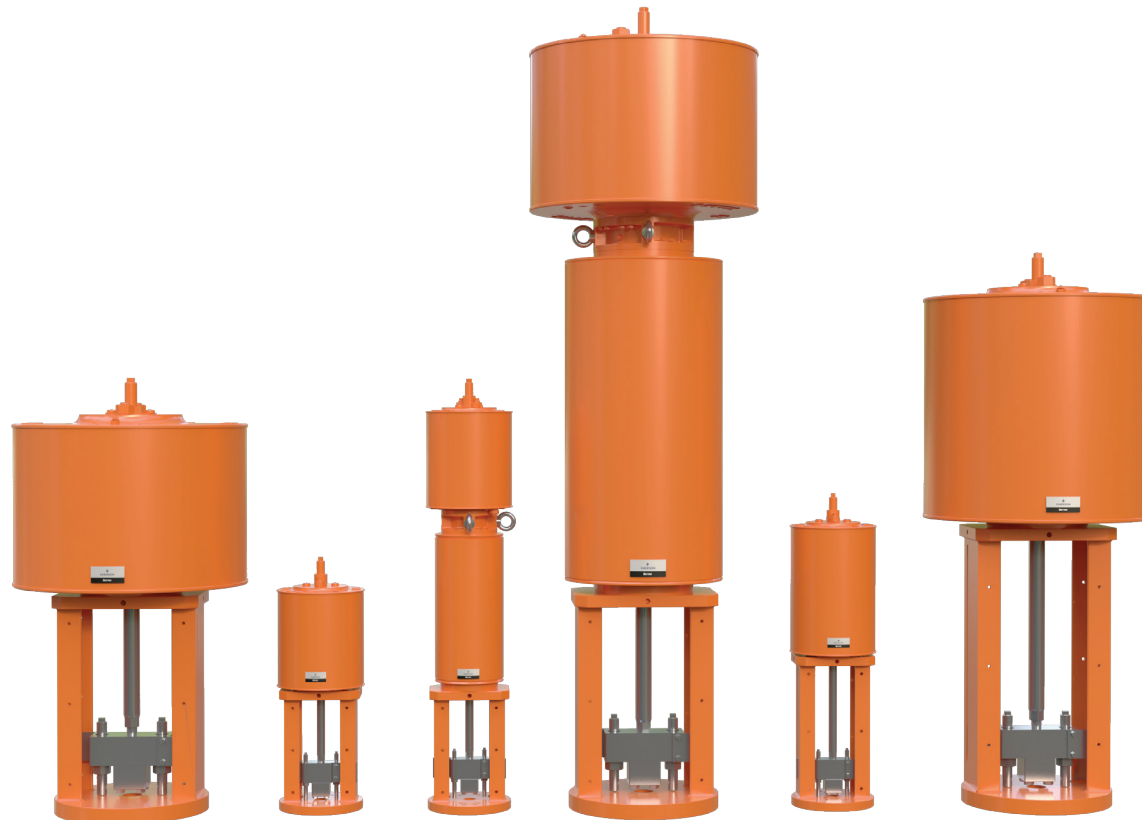


Bettis GVO-G Series

Pneumatic Double-Acting and Spring-Return Linear Actuator Thrust Chart Metric



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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5				
			Pressure Thrust Output: Start/Mid./End (N)																								
GVO-G0105	Outboard	Start	3,139	3,719	4,298	5,457	6,036	6,616	7,776	8,356	9,517	10,097	11,258	11,839	12,420	13,581	14,163	14,744	15,325	2.8	2,908	13.8	15,674				
		Mid.	3,334	3,918	4,502	5,670	6,254	6,838	8,006	8,590	9,758	10,343	11,512	12,096	12,681	13,850	14,434	15,019	15,604					3,101			
		End	3,139	3,719	4,298	5,457	6,036	6,616	7,776	8,356	9,517	10,097	11,258	11,839	12,420	13,581	14,163	14,744	15,325						2,908		
	Inboard	Start	2,996	3,551	4,106	5,218	5,773	6,329	7,441	7,997	9,110	9,666	10,780	11,336	11,893	13,007	13,565	14,122	14,679							2,774	
		Mid.	3,191	3,751	4,311	5,430	5,991	6,551	7,671	8,231	9,352	9,912	11,033	11,594	12,154	13,276	13,837	14,397	14,958								2,967
		End	2,996	3,551	4,106	5,218	5,773	6,329	7,441	7,997	9,110	9,666	10,780	11,336	11,893	13,007	13,565	14,122	14,679								
GVO-G0107	Outboard	Start	6,457	7,609	8,760	11,064	12,216	13,368	15,673	16,825	19,131	20,284	22,590	23,744	24,897	27,205	28,359	29,513	30,667	2.8	5,997	13.8	31,360				
		Mid.	6,720	7,878	9,035	11,351	12,509	13,667	15,983	17,141	19,458	20,616	22,933	24,092	25,250	27,568	28,727	29,886	31,045					6,257			
		End	6,457	7,609	8,760	11,064	12,216	13,368	15,673	16,825	19,131	20,284	22,590	23,744	24,897	27,205	28,359	29,513	30,667						5,997		
	Inboard	Start	6,314	7,441	8,569	10,825	11,953	13,081	15,338	16,466	18,724	19,853	22,112	23,241	24,371	26,631	27,761	28,891	30,022							5,863	
		Mid.	6,576	7,710	8,844	11,112	12,246	13,380	15,648	16,782	19,051	20,185	22,455	23,589	24,724	26,994	28,129	29,264	30,399								6,123
		End	6,314	7,441	8,569	10,825	11,953	13,081	15,338	16,466	18,724	19,853	22,112	23,241	24,371	26,631	27,761	28,891	30,022								
GVO-G0108	Outboard	Start	8,414	9,906	11,398	14,383	15,875	17,368	20,354	21,847	24,834	26,328	29,316	30,810	32,305	35,294	36,789	38,284	39,780	2.8	7,817	13.8	40,677				
		Mid.	8,727	10,226	11,725	14,724	16,223	17,723	20,723	22,222	25,223	26,723	29,723	31,224	32,724	35,725	37,226	38,727	40,228					8,127			
		End	8,414	9,906	11,398	14,383	15,875	17,368	20,354	21,847	24,834	26,328	29,316	30,810	32,305	35,294	36,789	38,284	39,780						7,817		
	Inboard	Start	8,270	9,738	11,206	14,143	15,612	17,081	20,019	21,488	24,427	25,897	28,837	30,307	31,778	34,720	36,191	37,662	39,133							7,683	
		Mid.	8,583	10,058	11,533	14,484	15,960	17,436	20,387	21,863	24,815	26,292	29,244	30,721	32,197	35,151	36,627	38,104	39,581								7,993
		End	8,270	9,738	11,206	14,143	15,612	17,081	20,019	21,488	24,427	25,897	28,837	30,307	31,778	34,720	36,191	37,662	39,133								
GVO-G0109	Outboard	Start	10,786	12,683	14,581	18,377	20,275	22,173	25,971	27,870	31,668	33,568	37,367	39,267	41,168	44,969	46,870	48,771	50,672	2.8	10,027	13.8	51,813				
		Mid.	11,135	13,040	14,946	18,758	20,664	22,570	26,383	28,289	32,102	34,009	37,823	39,730	41,637	45,451	47,359	49,266	51,174					10,372			
		End	10,786	12,683	14,581	18,377	20,275	22,173	25,971	27,870	31,668	33,568	37,367	39,267	41,168	44,969	46,870	48,771	50,672						10,027		
	Inboard	Start	10,642	12,516	14,389	18,137	20,011	21,886	25,635	27,510	31,261	33,136	36,888	38,764	40,640	44,393	46,270	48,147	50,025							9,893	
		Mid.	10,991	12,872	14,754	18,518	20,400	22,282	26,047	27,929	31,694	33,577	37,343	39,226	41,109	44,876	46,759	48,643	50,526								10,238
		End	10,642	12,516	14,389	18,137	20,011	21,886	25,635	27,510	31,261	33,136	36,888	38,764	40,640	44,393	46,270	48,147	50,025								
GVO-G0110	Outboard	Start	14,395	16,906	19,418	24,442	26,954	29,466	34,492	37,005	42,031	44,545	49,573	52,087	54,602	59,632	62,147			2.8	13,391	12.8	63,656				
		Mid.	14,787	17,308	19,828	24,870	27,391	29,912	34,955	37,476	42,520	45,041	50,085	52,607	55,130	60,174	62,697							13,779			
		End	14,395	16,906	19,418	24,442	26,954	29,466	34,492	37,005	42,031	44,545	49,573	52,087	54,602	59,632	62,147								13,391		
	Inboard	Start	14,251	16,739	19,226	24,202	26,690	29,179	34,156	36,645	41,624	44,114	49,094	51,584	54,075	59,057	61,548									13,256	
		Mid.	14,643	17,140	19,637	24,631	27,128	29,625	34,620	37,117	42,112	44,610	49,606	52,104	54,603	59,600	62,098										13,645
		End	14,251	16,739	19,226	24,202	26,690	29,179	34,156	36,645	41,624	44,114	49,094	51,584	54,075	59,057	61,548										
GVO-G0112	Outboard	Start	20,775	24,369	27,963	35,152	38,747	42,342	49,534	53,130	60,322	63,919								2.8	19,338	9.0	63,919				
		Mid.	21,235	24,840	28,445	35,655	39,261	42,866	50,077	53,683	60,895	64,502												19,793			
		End	20,775	24,369	27,963	35,152	38,747	42,342	49,534	53,130	60,322	63,919													19,338		
	Inboard	Start	20,631	24,201	27,771	34,913	38,484	42,055	49,198	52,770	59,915	63,487														19,204	
		Mid.	21,091	24,672	28,253	35,415	38,997	42,578	49,742	53,324	60,488	64,070															19,659
		End	20,631	24,201	27,771	34,913	38,484	42,055	49,198	52,770	59,915	63,487															
GVO-G0114	Outboard	Start	25,320	29,687	34,054	42,788	47,156	51,525	60,262											2.8	23,573	7.2	62,010				
		Mid.	25,835	30,215	34,594	43,353	47,733	52,113	60,874															24,084			
		End	25,320	29,687	34,054	42,788	47,156	51,525	60,262																23,573		
	Inboard	Start	25,176	29,519	33,862	42,549	46,893	51,237	59,926																	23,439	
		Mid.	25,692	30,047	34,402	43,114	47,470	51,826	60,538																		23,949
		End	25,176	29,519	33,862	42,549	46,893	51,237	59,926																		

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
			Pressure Thrust Output: Start/Mid./End (N)																					
GVO-G0209	Outboard	Start	10,786	12,683	14,581	18,377	20,275	22,173	25,971	27,870	31,668	33,568	37,367	39,267	41,168	44,969	46,870	48,771	50,672	2.8	10,027	13.8	51,813	
		Mid.	11,135	13,040	14,946	18,758	20,664	22,570	26,383	28,289	32,102	34,009	37,823	39,730	41,637	45,451	47,359	49,266	51,174				52,318	
		End	10,786	12,683	14,581	18,377	20,275	22,173	25,971	27,870	31,668	33,568	37,367	39,267	41,168	44,969	46,870	48,771	50,672				51,813	
	Inboard	Start	10,642	12,516	14,389	18,137	20,011	21,886	25,635	27,510	31,261	33,136	36,888	38,764	40,640	44,393	46,270	48,147	50,025				9,893	51,151
		Mid.	10,991	12,872	14,754	18,518	20,400	22,282	26,047	27,929	31,694	33,577	37,343	39,226	41,109	44,876	46,759	48,643	50,526				10,238	51,656
		End	10,642	12,516	14,389	18,137	20,011	21,886	25,635	27,510	31,261	33,136	36,888	38,764	40,640	44,393	46,270	48,147	50,025				9,893	51,151
GVO-G0210	Outboard	Start	14,395	16,906	19,418	24,442	26,954	29,466	34,492	37,005	42,031	44,545	49,573	52,087	54,602	59,632	62,147	Exceeds MOP	2.8	12.8	63,656			
		Mid.	14,787	17,308	19,828	24,870	27,391	29,912	34,955	37,476	42,520	45,041	50,085	52,607	55,130	60,174	62,697				64,210			
		End	14,395	16,906	19,418	24,442	26,954	29,466	34,492	37,005	42,031	44,545	49,573	52,087	54,602	59,632	62,147				63,656			
	Inboard	Start	14,251	16,739	19,226	24,202	26,690	29,179	34,156	36,645	41,624	44,114	49,094	51,584	54,075	59,057	61,548				13,256	63,043		
		Mid.	14,643	17,140	19,637	24,631	27,128	29,625	34,620	37,117	42,112	44,610	49,606	52,104	54,603	59,600	62,098				13,645	63,597		
		End	14,251	16,739	19,226	24,202	26,690	29,179	34,156	36,645	41,624	44,114	49,094	51,584	54,075	59,057	61,548				13,256	63,043		
GVO-G0212	Outboard	Start	20,774	24,368	27,962	35,151	38,746	42,341	49,532	53,128	60,321	63,917	Exceeds MOP	2.8	9.0	63,917								
		Mid.	21,235	24,839	28,444	35,655	39,260	42,865	50,077	53,683	60,895	64,501				64,501								
		End	20,774	24,368	27,962	35,151	38,746	42,341	49,532	53,128	60,321	63,917				63,917								
	Inboard	Start	20,630	24,200	27,770	34,911	38,482	42,053	49,197	52,768	59,913	63,486				19,202	63,486							
		Mid.	21,091	24,672	28,252	35,415	38,996	42,578	49,741	53,323	60,487	64,069				19,658	64,069							
		End	20,630	24,200	27,770	34,911	38,482	42,053	49,197	52,768	59,913	63,486				19,202	63,486							
GVO-G0214	Outboard	Start	25,320	29,687	34,054	42,788	47,156	51,525	60,262	Exceeds MOP	2.8	7.2	62,010											
		Mid.	25,835	30,215	34,594	43,353	47,733	52,113	60,874				62,626											
		End	25,320	29,687	34,054	42,788	47,156	51,525	60,262				62,010											
	Inboard	Start	25,176	29,519	33,862	42,549	46,893	51,237	59,926				61,664											
		Mid.	25,692	30,047	34,402	43,114	47,470	51,826	60,538				62,281											
		End	25,176	29,519	33,862	42,549	46,893	51,237	59,926				61,664											
GVO-G0216	Outboard	Start	33,564	39,324	45,085	56,608	62,370	Exceeds MOP	2.8	5.5	62,370													
		Mid.	34,150	39,925	45,700	57,250	63,026				63,026													
		End	33,564	39,324	45,085	56,608	62,370				62,370													
	Inboard	Start	33,420	39,157	44,894	56,369	62,107				62,107													
		Mid.	34,006	39,757	45,508	57,011	62,762				62,762													
		End	33,420	39,157	44,894	56,369	62,107				62,107													

Notes:
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MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G0310	Outboard	Start	14,323	16,824	19,325	24,329	26,832	29,334	34,340	36,843	41,850	44,353	49,362	51,866	54,371	59,381	61,886	64,391	66,897	2.8	13,322	13.8	68,401
		Mid.	14,722	17,232	19,743	24,765	27,277	29,788	34,811	37,322	42,346	44,858	49,882	52,394	54,907	59,932	62,445	64,958	67,471				68,978
		End	14,323	16,824	19,325	24,329	26,832	29,334	34,340	36,843	41,850	44,353	49,362	51,866	54,371	59,381	61,886	64,391	66,897				68,401
	Inboard	Start	14,098	16,562	19,026	23,955	26,420	28,885	33,815	36,281	41,213	43,680	48,613	51,080	53,547	58,482	60,950	63,418	65,886				67,368
		Mid.	14,497	16,970	19,444	24,391	26,865	29,339	34,287	36,761	41,710	44,184	49,134	51,608	54,083	59,034	61,509	63,984	66,460				67,945
		End	14,098	16,562	19,026	23,955	26,420	28,885	33,815	36,281	41,213	43,680	48,613	51,080	53,547	58,482	60,950	63,418	65,886				67,368
GVO-G0312	Outboard	Start	20,702	24,286	27,870	35,039	38,624	42,209	49,380	52,966	60,139	63,726	70,900	74,488	78,075	Exceeds MOP				2.8	11.7	83,099	
		Mid.	21,169	24,764	28,359	35,550	39,145	42,741	49,933	53,529	60,721	64,318	71,511	75,108	78,705							83,740	
		End	20,702	24,286	27,870	35,039	38,624	42,209	49,380	52,966	60,139	63,726	70,900	74,488	78,075							83,099	
	Inboard	Start	20,477	24,023	27,570	34,664	38,212	41,760	48,856	52,404	59,502	63,051	70,151	73,701	77,251							82,222	
		Mid.	20,944	24,502	28,060	35,175	38,733	42,291	49,408	52,967	60,084	63,643	70,761	74,321	77,880							82,864	
		End	20,477	24,023	27,570	34,664	38,212	41,760	48,856	52,404	59,502	63,051	70,151	73,701	77,251							82,222	
GVO-G0314	Outboard	Start	25,247	29,604	33,961	42,676	47,034	51,392	60,110	64,469	73,188	77,548	Exceeds MOP							2.8	9.3	80,164	
		Mid.	25,770	30,139	34,509	43,248	47,618	51,989	60,729	65,100	73,842	78,213										80,835	
		End	25,247	29,604	33,961	42,676	47,034	51,392	60,110	64,469	73,188	77,548										80,164	
	Inboard	Start	25,023	29,342	33,661	42,302	46,622	50,943	59,585	63,907	72,551	76,874										79,468	
		Mid.	25,545	29,877	34,209	42,874	47,207	51,539	60,205	64,538	73,205	77,539										80,139	
		End	25,023	29,342	33,661	42,302	46,622	50,943	59,585	63,907	72,551	76,874										79,468	
GVO-G0316	Outboard	Start	33,491	39,242	44,993	56,496	62,248	68,000	79,506	Exceeds MOP										2.8	7.2	81,807	
		Mid.	34,084	39,849	45,614	57,145	62,911	68,677	80,209													82,516	
		End	33,491	39,242	44,993	56,496	62,248	68,000	79,506													81,807	
	Inboard	Start	33,267	38,980	44,694	56,122	61,836	67,551	78,982													81,268	
		Mid.	33,860	39,587	45,315	56,771	62,499	68,228	79,685													81,977	
		End	33,267	38,980	44,694	56,122	61,836	67,551	78,982													81,268	
GVO-G0320	Outboard	Start	53,432	62,545	71,659	Exceeds MOP														2.8	4.5	80,773	
		Mid.	54,164	63,295	72,427																	81,559	
		End	53,432	62,545	71,659																	80,773	
	Inboard	Start	53,207	62,283	71,360																	80,436	
		Mid.	53,939	63,033	72,127																	81,222	
		End	53,207	62,283	71,360																	80,436	

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G0412	Outboard	Start	20,620	24,193	27,765	34,911	38,485	42,059	49,207	52,781	59,931	63,507	70,658	74,234	77,810	84,964	88,541	92,119	95,696	2.8	13.8	19,191	97,843
		Mid.	21,095	24,678	28,262	35,430	39,014	42,598	49,767	53,352	60,522	64,107	71,277	74,863	78,448	85,620	89,206	92,792	96,378			19,661	98,530
		End	20,620	24,193	27,765	34,911	38,485	42,059	49,207	52,781	59,931	63,507	70,658	74,234	77,810	84,964	88,541	92,119	95,696			19,191	97,843
	Inboard	Start	20,297	23,815	27,334	34,372	37,892	41,412	48,452	51,973	59,015	62,536	69,580	73,102	76,625	83,670	87,193	90,717	94,241			18,889	96,355
		Mid.	20,771	24,301	27,831	34,891	38,421	41,951	49,012	52,543	59,605	63,136	70,199	73,731	77,262	84,326	87,858	91,390	94,923			19,359	97,042
		End	20,297	23,815	27,334	34,372	37,892	41,412	48,452	51,973	59,015	62,536	69,580	73,102	76,625	83,670	87,193	90,717	94,241			18,889	96,355
GVO-G0414	Outboard	Start	25,166	29,511	33,857	42,549	46,896	51,242	59,937	64,285	72,981	77,330	86,028	90,378	94,727	103,428	107,779	112,130	116,481	2.8	13.8	23,428	119,092
		Mid.	25,696	30,054	34,412	43,129	47,488	51,847	60,565	64,924	73,643	78,003	86,723	91,083	95,443	104,165	108,525	112,886	117,247			23,952	119,864
		End	25,166	29,511	33,857	42,549	46,896	51,242	59,937	64,285	72,981	77,330	86,028	90,378	94,727	103,428	107,779	112,130	116,481			23,428	119,092
	Inboard	Start	24,842	29,134	33,425	42,010	46,302	50,595	59,182	63,476	72,064	76,359	84,949	89,245	93,541	102,133	106,430	110,727	115,025			23,126	117,603
		Mid.	25,372	29,676	33,980	42,590	46,894	51,199	59,810	64,115	72,726	77,032	85,644	89,950	94,257	102,870	107,177	111,484	115,791			23,650	118,375
		End	24,842	29,134	33,425	42,010	46,302	50,595	59,182	63,476	72,064	76,359	84,949	89,245	93,541	102,133	106,430	110,727	115,025			23,126	117,603
GVO-G0416	Outboard	Start	33,411	39,151	44,890	56,370	62,111	67,852	79,335	85,077	96,562	102,305	113,792	119,536	125,280	136,770	Exceeds MOP	2.8	12.1	31,116	137,919		
		Mid.	34,010	39,764	45,518	57,027	62,781	68,536	80,045	85,800	97,311	103,067	114,579	120,335	126,091	137,604				31,709	138,756		
		End	33,411	39,151	44,890	56,370	62,111	67,852	79,335	85,077	96,562	102,305	113,792	119,536	125,280	136,770				31,116	137,919		
	Inboard	Start	33,088	38,773	44,459	55,831	61,518	67,205	78,580	84,268	95,645	101,334	112,714	118,404	124,094	135,476				30,814	136,614		
		Mid.	33,687	39,387	45,087	56,487	62,188	67,889	79,291	84,992	96,395	102,096	113,500	119,203	124,905	136,310				31,407	137,451		
		End	33,088	38,773	44,459	55,831	61,518	67,205	78,580	84,268	95,645	101,334	112,714	118,404	124,094	135,476				30,814	136,614		
GVO-G0420	Outboard	Start	53,350	62,452	71,555	89,761	98,865	107,969	126,178	Exceeds MOP										2.8	7.0	49,710	126,178
		Mid.	54,089	63,210	72,330	90,571	99,692	108,813	127,056		50,442	127,056											
		End	53,350	62,452	71,555	89,761	98,865	107,969	126,178		49,710	126,178											
	Inboard	Start	53,027	62,075	71,123	89,222	98,272	107,322	125,424		49,408	125,424											
		Mid.	53,766	62,832	71,899	90,032	99,099	108,166	126,301		50,140	126,301											
		End	53,027	62,075	71,123	89,222	98,272	107,322	125,424		49,408	125,424											
GVO-G0424	Outboard	Start	77,978	91,213	104,448	130,921	Exceeds MOP													2.8	5.1	72,684	133,568
		Mid.	78,813	92,068	105,323	131,834		73,511	134,485														
		End	77,978	91,213	104,448	130,921		72,684	133,568														
	Inboard	Start	77,654	90,835	104,017	130,382		72,382	133,018														
		Mid.	78,489	91,690	104,892	131,295		73,209	133,935														
		End	77,654	90,835	104,017	130,382		72,382	133,018														
GVO-G0428	Outboard	Start	109,819	Exceeds MOP																2.8	3.4	102,353	124,751
		Mid.	111,122		103,641	126,083																	
		End	109,819		102,353	124,751																	
	Inboard	Start	109,496		102,051	124,384																	
		Mid.	110,798		103,340	125,716																	
		End	109,496		102,051	124,384																	

Notes:
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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G0516	Outboard	Start	33,322	39,039	44,755	56,190	61,908	67,626	79,063	84,782	96,220	101,940	113,381	119,101	124,822	136,265	141,987	147,709	153,431	2.8	13.8	31,035	156,865
		Mid.	33,885	39,614	45,343	56,802	62,531	68,261	79,720	85,451	96,911	102,642	114,103	119,834	125,565	137,028	142,760	148,491	154,223			31,593	157,662
		End	33,322	39,039	44,755	56,190	61,908	67,626	79,063	84,782	96,220	101,940	113,381	119,101	124,822	136,265	141,987	147,709	153,431			31,035	156,865
	Inboard	Start	32,747	38,368	43,989	55,232	60,853	66,476	77,721	83,344	94,591	100,215	111,463	117,088	122,713	133,964	139,590	145,217	150,843			30,499	154,219
		Mid.	33,310	38,943	44,576	55,843	61,477	67,110	78,379	84,013	95,282	100,916	112,186	117,821	123,457	134,727	140,363	145,999	151,635			31,057	155,017
		End	32,747	38,368	43,989	55,232	60,853	66,476	77,721	83,344	94,591	100,215	111,463	117,088	122,713	133,964	139,590	145,217	150,843			30,499	154,219
GVO-G0520	Outboard	Start	53,261	62,341	71,420	89,581	98,662	107,743	125,907	134,989	153,155	162,239	180,407	189,491	198,576	216,747	Exceeds MOP				49,629	218,565	
		Mid.	53,964	63,059	72,155	90,346	99,442	108,539	126,732	135,828	154,023	163,120	181,315	190,413	199,511	217,708					50,326	219,528	
		End	53,261	62,341	71,420	89,581	98,662	107,743	125,907	134,989	153,155	162,239	180,407	189,491	198,576	216,747					49,629	218,565	
	Inboard	Start	52,686	61,670	70,653	88,622	97,607	106,593	124,565	133,551	151,526	160,513	178,490	187,478	196,467	214,447					49,093	216,245	
		Mid.	53,389	62,388	71,388	89,388	98,388	107,388	125,390	134,391	152,393	161,395	179,398	188,400	197,402	215,407					49,789	217,208	
		End	52,686	61,670	70,653	88,622	97,607	106,593	124,565	133,551	151,526	160,513	178,490	187,478	196,467	214,447					49,093	216,245	
GVO-G0524	Outboard	Start	77,888	91,101	104,314	130,741	143,955	157,169	183,600	196,816	223,248	236,465	Exceeds MOP							72,603	244,396		
		Mid.	78,688	91,918	105,148	131,609	144,840	158,071	184,534	197,766	224,230	237,463								73,396	245,402		
		End	77,888	91,101	104,314	130,741	143,955	157,169	183,600	196,816	223,248	236,465								72,603	244,396		
	Inboard	Start	77,313	90,430	103,547	129,782	142,900	156,019	182,258	195,378	221,619	234,740								72,067	242,613		
		Mid.	78,112	91,247	104,381	130,651	143,786	156,921	183,192	196,328	222,601	235,737								72,859	243,619		
		End	77,313	90,430	103,547	129,782	142,900	156,019	182,258	195,378	221,619	234,740								72,067	242,613		
GVO-G0528	Outboard	Start	109,730	128,372	147,015	184,304	202,949	221,595	Exceeds MOP												102,273	243,972	
		Mid.	110,996	129,673	148,350	185,704	204,382	223,061													103,526	245,475	
		End	109,730	128,372	147,015	184,304	202,949	221,595													102,273	243,972	
	Inboard	Start	109,155	127,701	146,248	183,345	201,895	220,445													101,736	242,706	
		Mid.	110,421	129,002	147,583	184,746	203,328	221,910													102,989	244,210	
		End	109,155	127,701	146,248	183,345	201,895	220,445													101,736	242,706	
GVO-G0532	Outboard	Start	143,875	168,258	192,641	Exceeds MOP															134,122	231,657	
		Mid.	145,321	169,743	194,165																135,552	233,242	
		End	143,875	168,258	192,641																134,122	231,657	
	Inboard	Start	143,300	167,587	191,874																133,585	230,736	
		Mid.	144,746	169,072	193,398																135,015	232,321	
		End	143,300	167,587	191,874																133,585	230,736	
GVO-G0536	Outboard	Start	182,621	213,511	Exceeds MOP																170,265	232,045	
		Mid.	184,246	215,180																	171,872	233,741	
		End	182,621	213,511																	170,265	232,045	
	Inboard	Start	182,046	212,840																	169,728	231,316	
		Mid.	183,671	214,509																	171,336	233,012	
		End	182,046	212,840																	169,728	231,316	

Notes:
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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G0720	Outboard	Start	52,893	61,933	70,973	89,055	98,096	107,138	125,223	134,266	152,354	161,399	179,490	188,536	197,582	215,676	224,724	233,772	242,821	2.8	13.8	49,278	248,250
		Mid.	53,681	62,740	71,800	89,919	98,978	108,038	126,159	135,220	153,342	162,404	180,527	189,589	198,652	216,777	225,840	234,903	243,967			50,058	249,405
		End	52,893	61,933	70,973	89,055	98,096	107,138	125,223	134,266	152,354	161,399	179,490	188,536	197,582	215,676	224,724	233,772	242,821			49,278	248,250
	Inboard	Start	52,166	61,084	70,003	87,842	96,762	105,682	123,525	132,447	150,292	159,216	177,064	185,988	194,913	212,765	221,691	230,618	239,546			48,598	244,902
		Mid.	52,954	61,891	70,829	88,706	97,644	106,583	124,461	133,400	151,280	160,220	178,101	187,042	195,983	213,866	222,807	231,749	240,692			49,379	246,057
		End	52,166	61,084	70,003	87,842	96,762	105,682	123,525	132,447	150,292	159,216	177,064	185,988	194,913	212,765	221,691	230,618	239,546			48,598	244,902
GVO-G0724	Outboard	Start	77,508	90,680	103,853	130,200	143,374	156,549	182,900	196,076	222,430	235,608	261,964	275,144	288,323	314,684	Exceeds MOP				72,239	325,229	
		Mid.	78,399	91,592	104,786	131,174	144,369	157,563	183,954	197,149	223,541	236,737	263,131	276,328	289,525	315,920					73,121	326,479	
		End	77,508	90,680	103,853	130,200	143,374	156,549	182,900	196,076	222,430	235,608	261,964	275,144	288,323	314,684					72,239	325,229	
	Inboard	Start	76,780	89,831	102,883	128,987	142,040	155,093	181,202	194,256	220,368	233,424	259,538	272,596	285,655	311,773					71,560	322,221	
		Mid.	77,671	90,743	103,815	129,961	143,034	156,108	182,256	195,330	221,479	234,554	260,705	273,780	286,856	313,009					72,442	323,470	
		End	76,780	89,831	102,883	128,987	142,040	155,093	181,202	194,256	220,368	233,424	259,538	272,596	285,655	311,773					71,560	322,221	
GVO-G0728	Outboard	Start	109,362	127,965	146,568	183,777	202,383	220,990	258,207	276,816	314,038	332,650	Exceeds MOP							101,922	343,818		
		Mid.	110,714	129,354	147,994	185,276	203,918	222,560	259,846	278,490	315,778	334,423								103,258	345,610		
		End	109,362	127,965	146,568	183,777	202,383	220,990	258,207	276,816	314,038	332,650								101,922	343,818		
	Inboard	Start	108,634	127,116	145,598	182,564	201,049	219,535	256,508	274,997	311,976	330,466								101,242	341,561		
		Mid.	109,986	128,505	147,024	184,063	202,584	221,105	258,148	276,670	313,716	332,239								102,579	343,354		
		End	108,634	127,116	145,598	182,564	201,049	219,535	256,508	274,997	311,976	330,466								101,242	341,561		
GVO-G0732	Outboard	Start	143,507	167,850	192,194	240,885	265,231	289,579	Exceeds MOP												133,770	333,408	
		Mid.	145,038	169,424	193,810	242,583	266,971	291,359													135,284	335,258	
		End	143,507	167,850	192,194	240,885	265,231	289,579													133,770	333,408	
	Inboard	Start	142,780	167,001	191,224	239,672	263,897	288,124													133,091	331,734	
		Mid.	144,310	168,574	192,839	241,370	265,636	289,903													134,605	333,584	
		End	142,780	167,001	191,224	239,672	263,897	288,124													133,091	331,734	
GVO-G0736	Outboard	Start	182,253	213,103	243,954	305,660	336,514	Exceeds MOP													169,913	336,514	
		Mid.	183,963	214,861	245,759	307,558	338,458														171,604	338,458	
		End	182,253	213,103	243,954	305,660	336,514														169,913	336,514	
	Inboard	Start	181,525	212,254	242,984	304,447	335,180														169,234	335,180	
		Mid.	183,235	214,012	244,789	306,345	337,123														170,925	337,123	
		End	181,525	212,254	242,984	304,447	335,180														169,234	335,180	
GVO-G07T28	Outboard	Start	217,997	255,080	292,166	Exceeds MOP															203,164	329,253	
		Mid.	220,700	257,858	295,018																205,836	332,178	
		End	217,997	255,080	292,166																203,164	329,253	
	Inboard	Start	217,269	254,231	291,195																202,484	328,161	
		Mid.	219,972	257,009	294,048																205,157	331,087	
		End	217,269	254,231	291,195																202,484	328,161	

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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G0824	Outboard	Start	77,253	90,386	103,520	129,789	142,924	156,060	182,332	195,469	221,745	234,884	261,163	274,303	287,443	313,726	326,868	340,011	353,154	2.8	13.8	72,000	361,040
		Mid.	78,154	91,309	104,464	130,774	143,929	157,085	183,398	196,554	222,868	236,025	262,340	275,499	288,657	314,974	328,133	341,292	354,452			72,893	362,348
		End	77,253	90,386	103,520	129,789	142,924	156,060	182,332	195,469	221,745	234,884	261,163	274,303	287,443	313,726	326,868	340,011	353,154			72,000	361,040
	Inboard	Start	76,166	89,118	102,070	127,977	140,931	153,885	179,795	192,751	218,665	231,622	257,538	270,497	283,457	309,377	322,338	335,299	348,261			70,985	356,039
		Mid.	77,067	90,040	103,014	128,962	141,936	154,911	180,861	193,836	219,787	232,763	258,716	271,693	284,670	310,625	323,603	336,581	349,559			71,878	357,346
		End	76,166	89,118	102,070	127,977	140,931	153,885	179,795	192,751	218,665	231,622	257,538	270,497	283,457	309,377	322,338	335,299	348,261			70,985	356,039
GVO-G0828	Outboard	Start	109,095	127,658	146,221	183,352	201,918	220,485	257,623	276,193	313,335	331,908	369,056	387,631	406,207	443,362	Exceeds MOP			2.8	12.1	101,670	447,078
		Mid.	110,463	129,064	147,665	184,869	203,471	222,074	259,282	277,886	315,096	333,701	370,914	389,521	408,128	445,345						103,023	449,066
		End	109,095	127,658	146,221	183,352	201,918	220,485	257,623	276,193	313,335	331,908	369,056	387,631	406,207	443,362						101,670	447,078
	Inboard	Start	108,008	126,389	144,772	181,539	199,925	218,311	255,086	273,474	310,255	328,646	365,431	383,826	402,221	439,013						100,655	442,693
		Mid.	109,376	127,795	146,215	183,057	201,478	219,900	256,745	275,168	312,015	330,440	367,290	385,715	404,142	440,995						102,008	444,681
		End	108,008	126,389	144,772	181,539	199,925	218,311	255,086	273,474	310,255	328,646	365,431	383,826	402,221	439,013						100,655	442,693
GVO-G0832	Outboard	Start	143,240	167,543	191,847	240,459	264,766	289,075	337,694	362,005	410,631	434,945	Exceeds MOP						2.8	9.7	133,519	468,987	
		Mid.	144,788	169,134	193,481	242,176	266,524	290,873	339,572	363,922	412,624	436,976									135,049	471,069	
		End	143,240	167,543	191,847	240,459	264,766	289,075	337,694	362,005	410,631	434,945									133,519	468,987	
	Inboard	Start	142,153	166,275	190,398	238,647	262,773	286,900	335,157	359,287	407,550	431,684									132,504	465,472	
		Mid.	143,700	167,865	192,031	240,363	264,530	288,698	337,035	361,204	409,543	433,714									134,034	467,553	
		End	142,153	166,275	190,398	238,647	262,773	286,900	335,157	359,287	407,550	431,684									132,504	465,472	
GVO-G0836	Outboard	Start	181,986	212,796	243,607	305,234	336,049	366,865	428,500	459,320	Exceeds MOP								2.8	7.6	169,662	465,484	
		Mid.	183,713	214,571	245,430	307,150	338,011	368,872	430,596	461,459											171,369	467,632	
		End	181,986	212,796	243,607	305,234	336,049	366,865	428,500	459,320											169,662	465,484	
	Inboard	Start	180,898	211,527	242,158	303,422	334,055	364,690	425,963	456,601											168,647	462,729	
		Mid.	182,625	213,302	243,980	305,338	336,017	366,697	428,059	458,741											170,354	464,877	
		End	180,898	211,527	242,158	303,422	334,055	364,690	425,963	456,601											168,647	462,729	
GVO-G0840	Outboard	Start	225,332	263,416	301,502	377,676	415,766	Exceeds MOP											2.8	5.9	210,098	446,238	
		Mid.	227,238	265,375	303,514	379,792	417,932														211,983	448,444	
		End	225,332	263,416	301,502	377,676	415,766														210,098	446,238	
	Inboard	Start	224,244	262,147	300,052	375,864	413,772														209,083	444,100	
		Mid.	226,151	264,107	302,064	377,979	415,938														210,968	446,306	
		End	224,244	262,147	300,052	375,864	413,772														209,083	444,100	
GVO-G08T32	Outboard	Start	285,393	333,818	382,245	Exceeds MOP													2.8	4.8	266,023	459,733	
		Mid.	288,488	336,999	385,511																269,084	463,133	
		End	285,393	333,818	382,245																266,023	459,733	
	Inboard	Start	284,305	332,549	380,795																265,008	457,993	
		Mid.	287,401	335,731	384,062																268,069	461,393	
		End	284,305	332,549	380,795																265,008	457,993	
GVO-G08T36	Outboard	Start	362,884	424,323	Exceeds MOP													2.8	3.8	338,309	461,188		
		Mid.	366,338	427,873																341,724	464,795		
		End	362,884	424,323																338,309	461,188		
	Inboard	Start	361,796	423,055																337,294	459,811		
		Mid.	365,250	426,605																340,709	463,418		
		End	361,796	423,055																337,294	459,811		

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5
			Pressure Thrust Output: Start/Mid./End (N)																				
GVO-G1028	Start	Outboard	108,455	126,921	145,387	182,323	200,793	219,263	256,206	274,680	311,628	330,104	367,058	385,537	404,016	440,977	459,459	477,942	496,426	2.8	13.8	101,069	507,517
	Mid.		109,856	128,360	146,865	183,876	202,382	220,888	257,903	276,410	313,428	331,937	368,957	387,467	405,978	443,002	461,514	480,027	498,540			102,454	509,649
	End		108,455	126,921	145,387	182,323	200,793	219,263	256,206	274,680	311,628	330,104	367,058	385,537	404,016	440,977	459,459	477,942	496,426			101,069	507,517
	Start	Inboard	106,936	125,149	143,363	179,792	198,009	216,226	252,663	270,883	307,326	325,548	361,996	380,222	398,448	434,903	453,132	471,362	489,593			99,651	500,532
	Mid.		108,337	126,588	144,840	181,345	199,598	217,851	254,359	272,614	309,125	327,381	363,895	382,152	400,410	436,928	455,187	473,447	491,707			101,037	502,663
	End		106,936	125,149	143,363	179,792	198,009	216,226	252,663	270,883	307,326	325,548	361,996	380,222	398,448	434,903	453,132	471,362	489,593			99,651	500,532
GVO-G1032	Start	Outboard	142,600	166,806	191,014	239,431	263,641	287,853	336,278	360,493	408,925	433,142	481,580	505,801	530,022	578,468	602,693	626,919	651,145	2.8	13.8	132,918	665,682
	Mid.		144,180	168,430	192,680	241,182	265,434	289,687	338,193	362,447	410,956	435,212	483,724	507,981	532,238	580,755	605,014	629,273	653,533			134,480	668,090
	End		142,600	166,806	191,014	239,431	263,641	287,853	336,278	360,493	408,925	433,142	481,580	505,801	530,022	578,468	602,693	626,919	651,145			132,918	665,682
	Start	Inboard	141,082	165,035	188,989	236,900	260,857	284,816	332,735	356,696	404,622	428,586	476,518	500,486	524,454	572,394	596,366	620,338	644,312			131,501	658,696
	Mid.		142,662	166,658	190,656	238,652	262,650	286,650	334,650	358,650	406,654	430,656	478,662	502,666	526,670	574,681	598,687	622,693	646,700			133,063	661,104
	End		141,082	165,035	188,989	236,900	260,857	284,816	332,735	356,696	404,622	428,586	476,518	500,486	524,454	572,394	596,366	620,338	644,312			131,501	658,696
GVO-G1036	Start	Outboard	181,346	212,059	242,774	304,206	334,924	365,643	427,085	457,807	519,255	549,981	611,437	642,166	672,897	734,361	2.8	12.4	169,061	758,948			
	Mid.		183,105	213,867	244,630	306,157	336,921	367,686	429,218	459,984	521,519	552,287	613,826	644,596	675,367	736,910			170,800	761,527			
	End		181,346	212,059	242,774	304,206	334,924	365,643	427,085	457,807	519,255	549,981	611,437	642,166	672,897	734,361			169,061	758,948			
	Start	Inboard	179,827	210,287	240,749	301,675	332,140	362,606	423,541	454,011	514,953	545,426	606,375	636,851	667,328	728,287			167,643	752,671			
	Mid.		181,587	212,096	242,605	303,626	334,137	364,649	425,674	456,188	517,217	547,732	608,764	639,281	669,798	730,835			169,383	755,251			
	End		179,827	210,287	240,749	301,675	332,140	362,606	423,541	454,011	514,953	545,426	606,375	636,851	667,328	728,287			167,643	752,671			
GVO-G1040	Start	Outboard	224,692	262,679	300,668	376,648	414,641	452,634	528,625	566,623	642,621	2.8	8.8	209,497	665,422								
	Mid.		226,631	264,672	302,713	378,799	416,842	454,886	530,977	569,023	645,117			211,414	667,946								
	End		224,692	262,679	300,668	376,648	414,641	452,634	528,625	566,623	642,621			209,497	665,422								
	Start	Inboard	223,173	260,907	298,643	374,117	411,857	449,597	525,082	562,826	638,319			208,080	660,967								
	Mid.		225,112	262,900	300,689	376,268	414,058	451,849	527,433	565,226	640,814			209,997	663,491								
	End		223,173	260,907	298,643	374,117	411,857	449,597	525,082	562,826	638,319			208,080	660,967								
GVO-G10T32	Start	Outboard	283,682	331,841	380,002	476,331	524,499	572,668	669,014	717,189	2.8	7.9	264,418	755,731									
	Mid.		286,842	335,088	383,336	479,834	528,085	576,336	672,843	721,097			267,544	759,702									
	End		283,682	331,841	380,002	476,331	524,499	572,668	669,014	717,189			264,418	755,731									
	Start	Inboard	282,163	330,069	377,978	473,800	521,715	569,631	665,470	713,393			263,001	751,732									
	Mid.		285,323	333,317	381,311	477,303	525,301	573,299	669,299	717,301			266,126	755,703									
	End		282,163	330,069	377,978	473,800	521,715	569,631	665,470	713,393			263,001	751,732									
GVO-G10T36	Start	Outboard	361,173	422,346	483,522	605,881	667,064	728,249	2.8	6.2	336,704	752,723											
	Mid.		364,692	425,963	487,235	609,783	671,058	732,335			340,184	756,846											
	End		361,173	422,346	483,522	605,881	667,064	728,249			336,704	752,723											
	Start	Inboard	359,654	420,575	481,498	603,350	664,280	725,212			335,287	749,585											
	Mid.		363,173	424,191	485,210	607,252	668,274	729,298			338,766	753,708											
	End		359,654	420,575	481,498	603,350	664,280	725,212			335,287	749,585											
GVO-G10T40	Start	Outboard	447,865	523,587	599,310	2.8	4.8	417,577	720,474														
	Mid.		451,743	527,572	603,402			421,411	724,733														
	End		447,865	523,587	599,310			417,577	720,474														
	Start	Inboard	446,347	521,815	597,286			416,160	718,044														
	Mid.		450,224	525,800	601,377			419,994	722,303														
	End		446,347	521,815	597,286			416,160	718,044														

Notes:
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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
			Pressure Thrust Output: Start/Mid./End (N)																					
GVO-G1340	Start	Outboard	223,901	261,767	299,635	375,373	413,244	451,117	526,865	564,741	640,498	678,378	754,142	792,026	829,911	905,685	943,574	981,464	1,019,356	2.8	208,755	13.8	1,042,091	
	Mid.		225,876	263,796	301,718	377,562	415,485	453,409	529,258	567,184	643,037	680,964	756,821	794,751	832,681	908,543	946,475	984,408	1,022,341				1,045,102	
	End		223,901	261,767	299,635	375,373	413,244	451,117	526,865	564,741	640,498	678,378	754,142	792,026	829,911	905,685	943,574	981,464	1,019,356				1,042,091	
	Start	Inboard	221,601	259,084	296,568	371,539	409,027	446,516	521,498	558,991	633,980	671,477	746,474	783,975	821,477	896,484	933,990	971,497	1,009,005				206,609	1,031,511
	Mid.		223,576	261,113	298,651	373,728	411,268	448,808	523,891	561,433	636,520	674,064	749,154	786,700	824,247	899,343	936,891	974,441	1,011,990				208,561	1,034,521
	End		221,601	259,084	296,568	371,539	409,027	446,516	521,498	558,991	633,980	671,477	746,474	783,975	821,477	896,484	933,990	971,497	1,009,005				206,609	1,031,511
GVO-G1344	Start	Outboard	271,825	317,731	363,638	455,457	501,368	547,281	639,110	685,027	776,866	822,787	914,634	960,559	1,006,486	1,098,344	Exceeds MOP	2.8	253,463	12.4	1,135,089			
	Mid.		273,990	319,956	365,923	457,858	503,827	549,796	641,737	687,708	779,653	825,627	917,576	963,552	1,009,528	1,101,483					255,604	1,138,266		
	End		271,825	317,731	363,638	455,457	501,368	547,281	639,110	685,027	776,866	822,787	914,634	960,559	1,006,486	1,098,344					253,463	1,135,089		
	Start	Inboard	269,525	315,047	360,571	451,623	497,151	542,680	633,743	679,277	770,348	815,886	906,966	952,508	998,051	1,089,142					251,316	1,125,580		
	Mid.		271,690	317,273	362,856	454,024	499,609	545,195	636,369	681,957	773,136	818,726	909,908	955,501	1,001,094	1,092,282					253,457	1,128,758		
	End		269,525	315,047	360,571	451,623	497,151	542,680	633,743	679,277	770,348	815,886	906,966	952,508	998,051	1,089,142					251,316	1,125,580		
GVO-G1348	Start	Outboard	324,370	379,083	433,798	543,231	597,951	652,671	762,117	816,842	926,298	981,027	1,090,492	Exceeds MOP	2.8	302,485	10.3	1,123,332						
	Mid.		326,716	381,494	436,273	545,833	600,615	655,397	764,963	819,748	929,319	984,106	1,093,681					304,805	1,126,555					
	End		324,370	379,083	433,798	543,231	597,951	652,671	762,117	816,842	926,298	981,027	1,090,492					302,485	1,123,332					
	Start	Inboard	322,070	376,400	430,731	539,398	593,734	648,071	756,750	811,092	919,780	974,127	1,082,824					300,339	1,115,435					
	Mid.		324,416	378,810	433,206	542,000	596,398	650,797	759,596	813,997	922,802	977,205	1,086,014					302,658	1,118,657					
	End		322,070	376,400	430,731	539,398	593,734	648,071	756,750	811,092	919,780	974,127	1,082,824					300,339	1,115,435					
GVO-G1352	Start	Outboard	381,516	445,803	510,091	638,674	702,968	767,263	895,858	960,159	1,088,764	1,153,070	Exceeds MOP	2.8	355,801	9.0	1,153,070							
	Mid.		384,042	448,399	512,757	641,476	705,837	770,199	898,925	963,289	1,092,019	1,156,386					358,299	1,156,386						
	End		381,516	445,803	510,091	638,674	702,968	767,263	895,858	960,159	1,088,764	1,153,070					355,801	1,153,070						
	Start	Inboard	379,216	443,119	507,025	634,840	698,751	762,662	890,491	954,408	1,082,247	1,146,169					353,655	1,146,169						
	Mid.		381,741	445,716	509,690	637,643	701,620	765,599	893,557	957,538	1,085,502	1,149,485					356,152	1,149,485						
	End		379,216	443,119	507,025	634,840	698,751	762,662	890,491	954,408	1,082,247	1,146,169					353,655	1,146,169						

Notes:
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Actuator Model	Stroke Direction Start/Mid./End		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)	
			3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13
Pressure Thrust Output: Start/Mid./End (N)																						
GVO-G13T40	Start	Outboard	445,503	520,851	596,203	746,912	822,271	897,633	1,048,363	1,123,732	Exceeds MOP								2.8	415,364	7.6	1,138,806
	Mid.		449,452	524,909	600,368	751,290	826,753	902,217	1,053,149	1,128,617		419,269	1,143,711									
	End		445,503	520,851	596,203	746,912	822,271	897,633	1,048,363	1,123,732		415,364	1,138,806									
	Start	Inboard	443,203	518,168	593,136	743,079	818,054	893,032	1,042,996	1,117,982		413,217	1,132,979									
	Mid.		447,152	522,226	597,301	747,456	822,536	897,617	1,047,782	1,122,866		417,122	1,137,884									
	End		443,203	518,168	593,136	743,079	818,054	893,032	1,042,996	1,117,982		413,217	1,132,979									
GVO-G13T44	Start	Outboard	541,350	632,778	724,209	907,079	998,518	1,089,961	Exceeds MOP										2.8	504,780	6.2	1,126,538
	Mid.		545,681	637,229	728,778	911,882	1,003,436	1,094,991		509,062	1,131,614											
	End		541,350	632,778	724,209	907,079	998,518	1,089,961		504,780	1,126,538											
	Start	Inboard	539,050	630,094	721,142	903,245	994,301	1,085,360		502,633	1,121,784											
	Mid.		543,380	634,545	725,711	908,048	999,219	1,090,391		506,915	1,126,860											
	End		539,050	630,094	721,142	903,245	994,301	1,085,360		502,633	1,121,784											
GVO-G13T48	Start	Outboard	646,440	755,483	864,529	1,082,629	Exceeds MOP											2.8	602,824	5.2	1,126,251	
	Mid.		651,131	760,304	869,479	1,087,833		607,462	1,131,505													
	End		646,440	755,483	864,529	1,082,629		602,824	1,126,251													
	Start	Inboard	644,140	752,799	861,462	1,078,796		600,677	1,122,264													
	Mid.		648,831	757,621	866,412	1,084,000		605,316	1,127,518													
	End		644,140	752,799	861,462	1,078,796		600,677	1,122,264													
GVO-G13T52	Start	Outboard	760,731	888,922	1,017,116	Exceeds MOP												2.8	709,456	4.5	1,145,313	
	Mid.		765,783	894,115	1,022,448		714,451	1,150,783														
	End		760,731	888,922	1,017,116		709,456	1,145,313														
	Start	Inboard	758,431	886,238	1,014,049		707,309	1,141,863														
	Mid.		763,483	891,431	1,019,381		712,304	1,147,332														
	End		758,431	886,238	1,014,049		707,309	1,141,863														

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5																	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																					
GVO-G0209-01R0	0	19,686																		Please consult factory	17,450	19,341	21,232	25,014	26,905	28,797	30,688	9.1	14,047	13.8	31,823									
	25	20,988																			16,224	18,115	20,007	23,790	25,682	27,574	29,466		12,819		30,602									
	51	22,602																				14,599	16,490	18,382	22,165	24,057	25,949		27,841		11,195	28,976								
	76	24,098																					12,799	14,688	16,576	20,354	22,243		24,133		26,022	9,400	27,156							
	102	25,674																						10,785	12,669	14,554	18,324		20,210		22,095	23,981	7,393	25,112						
GVO-G0209-01R1	0	15,916																		Please consult factory	9,878	11,768	15,548	17,439	21,220	23,111	25,002	28,784	30,675	32,566	34,458	6.9	9,499	13.8	35,593					
	25	16,655																			9,210	11,101	14,883	16,775	20,557	22,449	24,340	28,124	30,016	31,908	33,800		8,832		34,935					
	51	17,552																				8,303	10,194	13,976	15,867	19,649	21,541	23,432	27,215	29,107	30,999		32,891		7,925	34,026				
	76	18,332																					7,237	9,125	12,901	14,789	18,565	20,454	22,343	26,121	28,010		29,899		31,789	6,859	32,922			
	102	19,132																						6,023	7,906	11,673	13,557	17,326	19,211	21,095	24,865		26,751		28,636	30,522	5,646	31,654		
GVO-G0209-01R2	0	13,823																		Please consult factory	8,191	11,971	13,861	17,641	19,532	23,313	25,204	27,095	30,877	32,768	34,659	36,551	5.8	7,435	13.8	37,686				
	25	14,331																			7,753	11,535	13,426	17,208	19,099	22,882	24,773	26,665	30,448	32,340	34,232	36,124		6,997		37,259				
	51	14,933																				7,140	10,921	12,812	16,594	18,485	22,268	24,159	26,051	29,834	31,726	33,617		35,509		6,384	36,645			
	76	15,420																					6,374	10,149	12,037	15,813	17,701	21,478	23,366	25,255	29,033	30,922		32,811		34,701	5,619	35,834		
	102	15,902																						5,486	9,253	11,136	14,903	16,787	20,556	22,441	24,325	28,096		29,981		31,866	33,752	4,733	34,884	
GVO-G0209-01R3	0	12,087																		Please consult factory	8,037	9,927	13,706	15,597	19,377	21,268	25,049	26,940	28,831	32,613	34,504	36,395	38,287	5.1	6,525	13.8	39,422			
	25	12,530																			7,663	9,554	13,335	15,226	19,008	20,900	24,682	26,574	28,465	32,249	34,141	36,033	37,925		6,151		39,060			
	51	13,050																				7,133	9,023	12,804	14,695	18,477	20,368	24,151	26,042	27,933	31,717	33,608	35,500		37,392		5,620	38,527		
	76	13,455																					6,451	8,339	12,114	14,002	17,778	19,666	23,443	25,331	27,220	30,998	32,887		34,776		36,666	4,942	37,799	
	102	13,849																						5,657	7,540	11,306	13,190	16,957	18,841	22,610	24,494	26,379	30,149		32,035		33,920	35,806	4,151	36,937
GVO-G0209-01R4	0	10,470																		Please consult factory	7,765	9,654	11,544	15,324	17,214	20,995	22,885	26,667	28,557	30,448	34,230	36,122	38,013	39,904	4.1	4,363	13.8	41,039		
	25	10,806																			7,496	9,387	11,277	15,059	16,950	20,732	22,623	26,406	28,297	30,189	33,972	35,864	37,756	39,648		4,094		40,784		
	51	11,192																				7,100	8,991	10,881	14,663	16,553	20,335	22,226	26,009	27,900	29,792	33,575	35,467	37,359		39,251		3,698	40,386	
	76	11,462																					6,557	8,444	10,332	14,107	15,994	19,770	21,659	25,435	27,324	29,213	32,991	34,880		36,769		38,658	3,160	39,792
	102	11,710																						5,913	7,796	9,678	13,445	15,328	19,096	20,980	24,748	26,633	28,517	32,288		34,173		36,059	37,944	2,525

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G0209-01R5	0	8,196			Please consult factory	10,038	11,928	13,817	17,597	19,488	23,268	25,159	28,940	30,831	32,722	36,504	38,395	40,286	42,178	4.1	6,637	13.8	43,313		
	25	8,905				9,398	11,289	13,179	16,961	18,852	22,634	24,525	28,308	30,199	32,091	35,874	37,766	39,658	41,550					5,995	42,685
	51	9,763				8,530	10,420	12,311	16,092	17,983	21,765	23,656	27,438	29,330	31,221	35,004	36,896	38,788	40,680					5,127	41,815
	76	10,504				7,514	9,402	11,289	15,064	16,952	20,728	22,616	26,393	28,282	30,170	33,948	35,837	37,727	39,616					4,118	40,750
	102	11,263				6,360	8,243	10,125	13,892	15,775	19,543	21,427	25,195	27,080	28,965	32,735	34,620	36,506	38,391					2,972	39,523
GVO-G0209-01R6	0	5,968	4,708	6,598	8,487	12,266	14,156	16,046	19,826	21,716	25,496	27,387	31,168	33,059	34,950	38,732	40,623	42,514	44,406	3.0	4,708	13.8	45,541		
	25	6,504	4,238	6,128	8,018	11,799	13,690	15,580	19,362	21,253	25,035	26,926	30,709	32,600	34,492	38,275	40,167	42,059	43,951					4,238	45,086
	51	7,142	3,590	5,480	7,370	11,151	13,041	14,932	18,713	20,604	24,386	26,277	30,059	31,951	33,842	37,625	39,517	41,409	43,301					3,590	44,436
	76	7,664	2,808	4,694	6,581	10,355	12,242	14,130	17,905	19,793	23,569	25,457	29,233	31,122	33,011	36,789	38,678	40,567	42,457					2,808	43,590
	102	8,185	1,910	3,791	5,673	9,438	11,321	13,204	16,970	18,853	22,621	24,505	28,273	30,158	32,043	35,813	37,698	39,584	41,469					1,910	42,601
GVO-G0209-01R7	0	4,342	6,335	8,224	10,113	13,892	15,782	17,672	21,452	23,342	27,123	29,013	32,794	34,685	36,576	40,358	42,249	44,141	46,032	2.3	3,690	13.8	47,167		
	25	4,764	5,977	7,867	9,758	13,538	15,429	17,320	21,101	22,992	26,774	28,665	32,448	34,339	36,231	40,014	41,906	43,798	45,690					3,331	46,826
	51	5,259	5,473	7,363	9,253	13,034	14,924	16,814	20,596	22,487	26,268	28,160	31,942	33,833	35,725	39,508	41,400	43,292	45,184					2,827	46,319
	76	5,638	4,834	6,720	8,607	12,381	14,269	16,156	19,931	21,819	25,595	27,483	31,260	33,148	35,037	38,815	40,704	42,593	44,483					2,193	45,617
	102	6,004	4,091	5,973	7,855	11,620	13,502	15,385	19,151	21,035	24,802	26,686	30,455	32,339	34,224	37,994	39,880	41,765	43,651					1,457	44,782
GVO-G0209-01R8	0	3,136	7,540	9,429	11,319	15,098	16,988	18,878	22,657	24,548	28,328	30,219	34,000	35,891	37,782	41,564	43,455	45,346	47,238	1.7	2,629	13.8	48,373		
	25	3,468	7,273	9,163	11,054	14,834	16,725	18,615	22,397	24,288	28,070	29,961	33,744	35,635	37,527	41,310	43,202	45,094	46,986					2,359	48,122
	51	3,848	6,884	8,774	10,664	14,444	16,335	18,225	22,007	23,897	27,679	29,570	33,353	35,244	37,136	40,919	42,811	44,702	46,594					1,970	47,730
	76	4,112	6,359	8,246	10,133	13,907	15,794	17,681	21,457	23,344	27,120	29,008	32,785	34,674	36,563	40,340	42,230	44,119	46,008					1,455	47,142
	102	4,354	5,741	7,622	9,505	13,269	15,152	17,035	20,801	22,684	26,452	28,336	32,104	33,989	35,874	39,644	41,529	43,415	45,301					849	46,432

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																				
GVO-G0210-01R0	0	19,645								14,714	17,222	22,238	24,746	29,763	32,272	34,780	39,798	42,307	Exceeds MOP	6.9	12.8	14,212	43,813
	25	20,951								13,488	15,997	21,015	23,524	28,542	31,052	33,561	38,581	41,090				12,987	42,596
	51	22,564								11,863	14,372	19,389	21,898	26,916	29,426	31,935	36,954	39,464				11,361	40,970
	76	24,046								10,060	12,565	17,576	20,082	25,094	27,600	30,106	35,119	37,626				9,559	39,130
	102	25,600								8,041	10,541	15,542	18,043	23,046	25,548	28,049	33,054	35,556				7,541	37,058
GVO-G0210-01R1	0	15,875								10,961	13,468	18,484	20,991	26,008	28,516	33,533	36,041	41,058	Exceeds MOP	5.2	12.8	9,456	47,582
	25	16,618								10,296	12,805	17,822	20,330	25,348	27,857	32,876	35,385	40,394				8,791	46,930
	51	17,514								9,388	11,897	16,914	19,422	24,440	26,949	31,967	34,476	36,985				7,884	46,020
	76	18,279								8,312	10,817	15,826	18,332	23,343	25,848	30,860	33,366	35,872				6,809	44,896
	102	19,058								7,083	9,582	14,582	17,083	22,084	24,585	29,587	32,089	34,591				5,583	43,599
GVO-G0210-01R2	0	13,782								10,546	13,054	15,561	20,577	23,084	28,101	30,609	35,626	38,134	Exceeds MOP	4.4	12.8	7,538	49,675
	25	14,294								10,112	12,620	15,129	20,146	22,655	27,673	30,182	35,200	37,709				7,102	49,254
	51	14,896								9,499	12,007	14,515	19,532	22,041	27,058	29,567	34,585	39,604				6,489	48,639
	76	15,367								8,719	11,224	13,729	18,739	21,244	26,255	28,760	33,772	36,278				5,714	47,809
	102	15,828								7,813	10,313	12,812	17,812	20,313	25,314	27,815	32,817	35,319				4,814	46,829
GVO-G0210-01R3	0	12,046								7,268	12,282	14,790	17,297	22,313	24,820	29,837	32,345	37,362	Exceeds MOP	3.9	12.8	6,766	51,411
	25	12,493								6,897	11,913	14,421	16,930	21,947	24,455	29,473	31,982	37,001				6,395	51,055
	51	13,013								6,366	11,381	13,890	16,398	21,415	23,923	28,941	31,450	36,468				5,864	50,521
	76	13,402								5,676	10,684	13,189	15,694	20,704	23,209	28,220	30,725	35,737				5,175	49,774
	102	13,774								4,869	9,867	12,366	14,866	19,866	22,366	27,368	29,868	34,871				4,369	48,883
GVO-G0210-01R4	0	10,429								6,378	8,885	13,900	16,407	18,915	23,930	26,438	31,454	33,962	Exceeds MOP	3.3	12.8	5,376	53,029
	25	10,769								6,112	8,620	13,636	16,145	18,653	23,670	26,179	31,197	33,706				5,109	52,778
	51	11,154								5,716	8,224	13,240	15,748	18,256	23,273	25,782	30,799	33,308				4,713	52,380
	76	11,409								5,164	7,668	12,677	15,182	17,686	22,696	25,202	30,212	32,718				4,163	51,766
	102	11,636								4,508	7,007	12,005	14,505	17,004	22,004	24,505	29,506	32,007				3,509	51,021
GVO-G0210-01R5	0	8,156								8,652	11,159	16,173	18,680	21,188	26,203	28,711	33,727	36,236	Exceeds MOP	3.1	12.8	6,646	55,302
	25	8,868								8,014	10,522	15,538	18,046	20,555	25,572	28,081	33,098	35,608				6,008	54,680
	51	9,725								7,145	9,653	14,669	17,177	19,686	24,702	27,211	32,229	34,738				5,139	53,809
	76	10,452								6,122	8,626	13,635	16,139	18,644	23,654	26,159	31,170	33,676				4,119	52,724
	102	11,189								4,955	7,454	12,452	14,952	17,451	22,451	24,952	29,953	32,454				2,957	51,468
GVO-G0210-01R6	0	5,927	8,373	10,880	13,387	18,401	20,909	23,416	28,432	30,940	35,956	38,464	43,481	45,989	48,498	53,516	56,025	Exceeds MOP	2.3	12.8	4,863	57,531	
	25	6,466	7,907	10,415	12,923	17,939	20,448	22,956	27,973	30,482	35,500	38,009	43,027	45,537	48,046	53,065	55,575				4,396	57,081	
	51	7,104	7,259	9,766	12,274	17,290	19,798	22,307	27,323	29,832	34,850	37,358	42,377	44,886	47,395	52,414	54,924				3,748	56,430	
	76	7,611	6,458	8,962	11,466	16,475	18,980	21,485	26,494	29,000	34,011	36,516	41,528	44,034	46,540	51,554	54,060				2,953	55,564	
	102	8,111	5,535	8,034	10,532	15,531	18,030	20,530	25,530	28,030	33,031	35,532	40,535	43,036	45,538	50,542	53,045				2,037	54,546	
GVO-G0210-01R7	0	4,301	9,999	12,506	15,013	20,028	22,535	25,043	30,058	32,566	37,582	40,090	45,107	47,616	50,124	55,142	57,651	Exceeds MOP	1.7	12.8	3,482	59,157	
	25	4,727	9,646	12,154	14,662	19,679	22,187	24,695	29,712	32,221	37,239	39,748	44,766	47,276	49,785	54,805	57,314				3,127	58,820	
	51	5,221	9,141	11,649	14,157	19,173	21,681	24,189	29,206	31,715	36,732	39,241	44,260	46,769	49,278	54,297	56,807				2,622	58,313	
	76	5,585	8,485	10,989	13,493	18,501	21,006	23,511	28,521	31,026	36,037	38,542	43,554	46,060	48,567	53,580	56,087				1,975	57,591	
	102	5,929	7,716	10,215	12,714	17,712	20,211	22,711	27,711	30,211	35,213	37,713	42,716	45,218	47,719	52,724	55,226				1,221	56,728	

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)											
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5									
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																													
GVO-G0212-01R0	0	19,581				15,509	19,105	22,702	29,895	33,492	40,687	44,284									Please consult factory	Exceeds MOP	4.8	9.0	14,070	44,284						
	25	20,893				14,287	17,885	21,482	28,678	32,276	39,472	43,070																	12,848	43,070		
	51	22,506				12,661	16,259	19,856	27,051	30,649	37,845	41,443																		11,223	41,443	
	76	23,964				10,842	14,435	18,028	25,215	28,809	35,997	39,592																			9,405	39,592
	102	25,484				8,800	12,387	15,974	23,149	26,737	33,914	37,503																			7,365	37,503
GVO-G0212-01R1	0	15,812			12,086	19,278	22,875	26,471	33,665	37,262	44,456	48,053									Please consult factory	Exceeds MOP	3.7	9.0	9,928	48,053						
	25	16,560			11,426	18,621	22,218	25,816	33,011	36,609	43,805	47,404																		9,268	47,404	
	51	17,455			10,518	17,712	21,309	24,906	32,102	35,700	42,896	46,494																			8,359	46,494
	76	18,197			9,423	16,609	20,202	23,795	30,982	34,576	41,764	45,358																			7,267	45,358
	102	18,943			8,168	15,341	18,928	22,515	29,690	33,278	40,455	44,044																			6,016	44,044
GVO-G0212-01R2	0	13,719	6,987	10,583	14,179	21,371	24,968	28,564	35,758	39,355	46,549	50,146									Please consult factory	Exceeds MOP	3.0	9.0	6,987	50,146						
	25	14,236	6,556	10,153	13,750	20,945	24,542	28,140	35,335	38,933	46,130	49,728																			6,556	49,728
	51	14,837	5,942	9,539	13,136	20,330	23,927	27,525	34,720	38,318	45,514	49,112																			5,942	49,112
	76	15,285	5,150	8,743	12,335	19,521	23,114	26,707	33,894	37,488	44,676	48,270																			5,150	48,270
	102	15,713	4,226	7,812	11,398	18,571	22,158	25,745	32,920	36,508	43,685	47,274																			4,226	47,274
GVO-G0212-01R3	0	11,983	8,723	12,319	15,915	23,107	26,704	30,300	37,494	41,091	48,285	51,882									Please consult factory	Exceeds MOP	2.7	9.0	6,566	51,882						
	25	12,435	8,357	11,954	15,551	22,745	26,343	29,940	37,136	40,734	47,930	51,529																			6,199	51,529
	51	12,954	7,825	11,422	15,019	22,213	25,810	29,408	36,603	40,201	47,397	50,995																			5,667	50,995
	76	13,320	7,115	10,707	14,300	21,486	25,079	28,672	35,859	39,453	46,641	50,235																			4,960	50,235
	102	13,659	6,279	9,865	13,451	20,625	24,212	27,799	34,974	38,562	45,739	49,328																			4,128	49,328
GVO-G0212-01R4	0	10,365	10,341	13,937	17,533	24,725	28,321	31,918	39,111	42,708	49,903	53,500									Please consult factory	Exceeds MOP	2.3	9.0	5,307	53,500						
	25	10,711	10,081	13,677	17,275	24,469	28,067	31,664	38,860	42,458	49,654	53,252																			5,045	53,252
	51	11,096	9,683	13,280	16,877	24,071	27,669	31,266	38,461	42,059	49,255	52,853																			4,648	52,853
	76	11,327	9,108	12,700	16,293	23,478	27,071	30,665	37,852	41,446	48,634	52,228																			4,079	52,228
	102	11,520	8,418	12,004	15,590	22,763	26,350	29,937	37,112	40,700	47,877	51,466																			3,398	51,466
GVO-G0212-01R5	0	8,092	12,614	16,210	19,806	26,998	30,595	34,191	41,385	44,982	52,176	55,773									Please consult factory	Exceeds MOP	2.1	9.0	6,142	55,773						
	25	8,810	11,982	15,579	19,176	26,371	29,968	33,566	40,761	44,359	51,556	55,154																			5,508	55,154
	51	9,666	11,113	14,710	18,306	25,501	29,098	32,695	39,891	43,488	50,684	54,283																			4,639	54,283
	76	10,370	10,065	13,658	17,250	24,436	28,029	31,622	38,809	42,403	49,591	53,186																			3,600	53,186
	102	11,073	8,865	12,451	16,037	23,210	26,797	30,384	37,559	41,147	48,324	51,913																			2,411	51,913
GVO-G0212-01R6	0	5,864	14,842	18,438	22,034	29,226	32,823	36,419	43,613	47,210	54,404	58,002									Please consult factory	Exceeds MOP	1.6	9.0	4,775	58,002						
	25	6,409	14,383	17,980	21,577	28,772	32,369	35,967	43,163	46,760	53,957	57,555																			4,313	57,555
	51	7,045	13,734	17,331	20,927	28,122	31,719	35,316	42,512	46,109	53,305	56,904																			3,663	56,904
	76	7,529	12,906	16,498	20,091	27,277	30,870	34,463	41,650	45,244	52,432	56,026																			2,848	56,026
	102	7,995	11,943	15,529	19,115	26,288	29,875	33,462	40,638	44,226	51,402	54,991																			1,904	54,991

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																									
GVO-G0214-01R0	0	19,531		Please consult factory	14,488	23,236	27,610	31,985	40,734	Exceeds MOP										3.9	13,613	7.2	42,484		
	25	20,848			13,270	22,021	26,396	30,772	39,523															12,395	41,274
	51	22,459			11,644	20,394	24,769	29,145	37,896															10,769	39,646
	76	23,899			9,809	18,550	22,920	27,291	36,033															8,935	37,781
	102	25,393			7,745	16,471	20,835	25,199	33,927															6,873	35,673
GVO-G0214-01R1	0	15,761	9,510	13,884	18,257	27,006	31,380	35,754	44,504	Exceeds MOP										3.0	9,510	7.2	46,253		
	25	16,514	8,854	13,228	17,603	26,354	30,729	35,105	43,857														8,854	45,607	
	51	17,409	7,945	12,319	16,694	25,444	29,820	34,195	42,946														7,945	44,697	
	76	18,132	6,836	11,206	15,576	24,316	28,687	33,057	41,799														6,836	43,548	
	102	18,851	5,562	9,924	14,287	23,013	27,376	31,740	40,468														5,562	42,214	
GVO-G0214-01R2	0	13,668	11,603	15,977	20,350	29,099	33,473	37,847	46,597	Exceeds MOP										2.5	7,230	7.2	48,346		
	25	14,190	11,178	15,553	19,928	28,678	33,054	37,429	46,181														6,803	47,931	
	51	14,790	10,563	14,938	19,313	28,063	32,438	36,813	45,565														6,188	47,315	
	76	15,220	9,749	14,118	18,488	27,228	31,599	35,969	44,711														5,379	46,460	
	102	15,621	8,792	13,154	17,517	26,243	30,606	34,970	43,698														4,430	45,444	
GVO-G0214-01R3	0	11,932	13,339	17,713	22,086	30,834	35,209	39,583	48,333	Exceeds MOP										2.2	6,342	7.2	50,082		
	25	12,389	12,978	17,353	21,728	30,479	34,854	39,230	47,982														5,979	49,732	
	51	12,908	12,446	16,821	21,195	29,945	34,321	38,696	47,448														5,447	49,198	
	76	13,255	11,713	16,083	20,453	29,193	33,564	37,934	46,676														4,723	48,425	
	102	13,567	10,845	15,208	19,570	28,296	32,660	37,024	45,752														3,866	47,498	
GVO-G0214-01R4	0	10,315	14,957	19,330	23,704	32,452	36,826	41,201	49,950	Exceeds MOP										1.9	5,335	7.2	51,700		
	25	10,666	14,702	19,077	23,452	32,202	36,578	40,954	49,705														5,078	51,456	
	51	11,049	14,304	18,679	23,054	31,804	36,179	40,555	49,306														4,680	51,056	
	76	11,263	13,706	18,076	22,446	31,186	35,557	39,927	48,669														4,094	50,418	
	102	11,429	12,984	17,346	21,709	30,435	34,798	39,162	47,891														3,388	49,636	
GVO-G0214-01R5	0	8,041	17,230	21,604	25,977	34,725	39,100	43,474	52,223	Exceeds MOP										1.8	6,734	7.2	53,973		
	25	8,764	16,604	20,979	25,354	34,104	38,480	42,855	51,607														6,105	53,357	
	51	9,620	15,733	20,108	24,483	33,233	37,608	41,984	50,735														5,235	52,486	
	76	10,305	14,664	19,033	23,403	32,144	36,514	40,885	49,627														4,178	51,375	
	102	10,982	13,431	17,793	22,156	30,882	35,245	39,609	48,338														2,963	50,083	

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G0216-01R0	0	19,466	14,085	19,861	25,636	37,188	42,964	Exceeds MOP													3.0	14,085		42,964	
	25	20,788	12,872	18,649	24,426	35,980	41,758																12,872		41,758
	51	22,399	11,245	17,021	22,798	34,352	40,130																11,245	5.5	40,130
	76	23,815	9,392	15,163	20,934	32,477	38,249																9,392		38,249
	102	25,274	7,302	13,064	18,827	30,354	36,117																7,302		36,117
GVO-G0216-01R1	0	15,696	17,855	23,630	29,406	40,957	46,733	Exceeds MOP													2.2	8,615		46,733	
	25	16,455	17,205	22,982	28,759	40,313	46,091																7,963		46,091
	51	17,349	16,295	22,072	27,849	39,403	45,180																7,053	5.5	45,180
	76	18,048	15,159	20,930	26,701	38,243	44,015																5,926		44,015
	102	18,733	13,843	19,606	25,368	36,895	42,659																4,624		42,659
GVO-G0216-01R2	0	13,603	19,948	25,723	31,499	43,050	48,826	Exceeds MOP													1.9	7,243		48,826	
	25	14,131	19,530	25,306	31,083	42,638	48,415																6,821		48,415
	51	14,730	18,914	24,690	30,467	42,021	47,798																6,206	5.5	47,798
	76	15,136	18,071	23,842	29,613	41,156	46,927																5,376		46,927
	102	15,503	17,073	22,836	28,598	40,125	45,889																4,397		45,889
GVO-G0216-01R3	0	11,867	21,684	27,459	33,235	44,786	50,562	Exceeds MOP													1.7	6,669		50,562	
	25	12,330	21,330	27,107	32,884	44,438	50,216																6,311		50,216
	51	12,847	20,797	26,573	32,350	43,904	49,681																5,778	5.5	49,681
	76	13,171	20,036	25,807	31,578	43,121	48,892																5,033		48,892
	102	13,449	19,127	24,889	30,652	42,179	47,943																4,146		47,943
GVO-G0209-02R1	0	22,880																			9.7	13,197		28,710	
	25	23,971																				12,107		27,619	
	51	25,066																				10,935	13.8	26,442	
	76	26,178																				9,515		25,000	
	102	27,352																				7,976		23,434	
GVO-G0209-02R2	0	20,085																			8.5	11,453		31,505	
	25	20,948																				10,590		30,642	
	51	21,810																				9,655	13.8	29,699	
	76	22,664																				8,499		28,514	
	102	23,563																				7,243		27,223	
GVO-G0209-02R3	0	17,992																			7.6	10,142		33,598	
	25	18,775																				9,360		32,815	
	51	19,553																				8,508	13.8	31,955	
	76	20,317																				7,448		30,860	
	102	21,119																				6,296		29,667	
GVO-G0209-02R4	0	15,834																			6.8	9,275		35,756	
	25	16,601																				8,508		34,989	
	51	17,364																				7,674	13.8	34,145	
	76	18,110																				6,636		33,068	
	102	18,893																				5,508		31,893	

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0210-02R1	0	22,843								Please consult factory	14,105	19,123	21,632	26,650	29,160	31,669	36,688	39,198	Exceeds MOP	7.4	13,603	12.8	40,704			
	25	23,934									13,015	18,033	20,542	25,560	28,069	30,579	35,598	38,108			12,513		39,614			
	51	25,026									11,841	16,857	19,366	24,382	26,891	29,400	34,418	36,927			11,340		38,432			
	76	26,122									10,412	15,421	17,926	22,937	25,442	27,948	32,959	35,465			9,911		36,969			
	102	27,278									8,863	13,864	16,365	21,368	23,869	26,371	31,375	33,878			8,363		35,380			
GVO-G0210-02R2	0	20,048								Please consult factory	14,391	16,900	21,918	24,427	29,445	31,955	34,464	39,484	41,993	Exceeds MOP	6.3	10,879	12.8	43,499		
	25	20,911									13,528	16,037	21,055	23,564	28,582	31,092	33,601	38,621	10,016			42,636				
	51	21,769									12,590	15,098	20,114	22,622	27,639	30,148	32,657	37,674	9,079			41,689				
	76	22,608									11,422	13,926	18,935	21,440	26,451	28,956	31,462	36,473	7,916			40,483				
	102	23,489									10,151	12,652	17,653	20,154	25,156	27,658	30,160	35,164	6,651			39,168				
GVO-G0210-02R3	0	17,955								Please consult factory	11,467	16,485	18,993	24,011	26,520	31,539	34,048	36,558	41,577	44,087	Exceeds MOP	5.7	9,962	12.8	45,593	
	25	18,738									10,685	15,702	18,210	23,228	25,737	30,756	33,265	35,775	40,794	9,180			44,810			
	51	19,513									9,831	14,846	17,354	22,370	24,879	29,895	32,404	34,913	39,931	8,326			43,945			
	76	20,261									8,760	13,769	16,273	21,282	23,787	28,798	31,303	33,809	38,820	7,258			42,830			
	102	21,045									7,595	12,595	15,095	20,097	22,598	27,600	30,102	32,604	37,608	6,095			41,612			
GVO-G0210-02R4	0	15,797								Please consult factory	11,117	13,625	18,643	21,151	26,169	28,678	33,697	36,206	38,715	43,735	46,245	Exceeds MOP	5.1	9,110	12.8	47,751
	25	16,564									10,350	12,858	17,875	20,384	25,402	27,911	32,929	35,439	37,948	42,967	45,477					
	51	17,323									9,513	12,021	17,036	19,544	24,560	27,068	32,085	34,594	37,102	42,120	44,629					
	76	18,054									8,464	10,968	15,976	18,480	23,490	25,994	31,005	33,510	36,016	41,027	43,533					
	102	18,819									7,322	9,821	14,821	17,322	22,323	24,824	29,826	32,328	34,830	39,834	42,337					
GVO-G0212-02R1	0	22,786								Please consult factory	15,992	19,590	26,786	30,384	37,580	41,178	Exceeds MOP	5.1	13,114	9.0	41,178					
	25	23,876									14,902	18,500	25,695	29,293	36,490	40,088			12,024		40,088					
	51	24,962									13,725	17,321	24,515	28,112	35,306	38,903			10,847		38,903					
	76	26,035									12,278	15,870	23,055	26,648	33,835	37,428			9,404		37,428					
	102	27,162									10,708	14,296	21,471	25,059	32,236	35,824			7,839		35,824					
GVO-G0212-02R2	0	19,990								Please consult factory	15,190	18,788	22,385	29,581	33,179	40,375	43,973	Exceeds MOP	4.5	11,593	9.0	43,973				
	25	20,853									14,327	17,925	21,522	28,718	32,316	39,512	43,110			10,730		43,110				
	51	21,705									13,385	16,981	20,578	27,771	31,368	38,563	42,160			9,789		42,160				
	76	22,521									12,200	15,792	19,384	26,569	30,162	37,349	40,942			8,608		40,942				
	102	23,373									10,910	14,497	18,084	25,259	28,847	36,024	39,613			7,323		39,613				
GVO-G0212-02R3	0	17,897								Please consult factory	10,089	17,283	20,881	24,478	31,674	35,272	42,468	46,067	Exceeds MOP	4.0	10,089	9.0	46,067			
	25	18,680									9,306	16,501	20,098	23,696	30,891	34,489	41,685	45,284			9,306		45,284			
	51	19,449									8,449	15,641	19,237	22,834	30,028	33,624	40,819	44,416			8,449		44,416			
	76	20,174									7,363	14,547	18,139	21,731	28,916	32,509	39,695	43,289			7,363		43,289			
	102	20,930									6,181	13,354	16,941	20,528	27,703	31,291	38,468	42,057			6,181		42,057			
GVO-G0212-02R4	0	15,739								Please consult factory	12,247	19,441	23,039	26,636	33,832	37,430	44,626	48,225	Exceeds MOP	3.6	9,369	9.0	48,225			
	25	16,507									11,479	18,674	22,271	25,869	33,065	36,663	43,859	47,457			8,602		47,457			
	51	17,259									10,638	17,831	21,427	25,024	32,217	35,814	43,008	46,606			7,762		46,606			
	76	17,967									9,570	16,754	20,346	23,938	31,124	34,716	41,903	45,496			6,697		45,496			
	102	18,704									8,407	15,580	19,167	22,754	29,929	33,517	40,694	44,283			5,538		44,283			

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0214-02R1	0	22,740				20,129	24,504	28,880	37,632	Exceeds MOP										4.1	12,253	7.2	39,382			
	25	23,830			Please consult factory	19,039	23,414	27,790	36,541															11,163	38,292	
	51	24,912				17,856	22,230	26,604	35,354																9,982	37,104
	76	25,966				16,388	20,757	25,127	33,867																8,524	35,615
	102	27,071				14,793	19,157	23,521	32,249																6,940	33,995
GVO-G0214-02R2	0	19,945			Please consult factory	14,173	22,924	27,299	31,675	Exceeds MOP										3.7	11,548	7.2	42,177			
	25	20,808				13,310	22,061	26,436	30,812		39,564													10,685	41,314	
	51	21,655				12,364	21,112	25,487	29,861		38,611													9,740	40,361	
	76	22,452				11,164	19,902	24,271	28,641		37,381													8,543	39,129	
	102	23,282				9,856	18,582	22,946	27,309		36,038													7,238	37,784	
GVO-G0214-02R3	0	17,851			Please consult factory	11,892	16,267	25,017	29,393	Exceeds MOP										3.3	10,142	7.2	44,270			
	25	18,634				11,109	15,484	24,234	28,610		32,985	41,737												9,359	43,488	
	51	19,399				10,247	14,620	23,369	27,743		32,117	40,867												8,497	42,617	
	76	20,105				9,142	13,511	22,249	26,618		30,988	39,728												7,395	41,476	
	102	20,838				7,937	12,300	21,026	25,389		29,753	38,482												6,192	40,228	
GVO-G0214-02R4	0	15,693	9,675	14,049	18,424	27,175	31,551	35,926	44,678	Exceeds MOP									3.0	9,675	7.2	46,428				
	25	16,461	8,907	13,282	17,657	26,408	30,783	35,159	43,911													8,907	45,661			
	51	17,209	8,063	12,436	16,810	25,558	29,932	34,307	43,056													8,063	44,806			
	76	17,897	6,981	11,349	15,718	24,456	28,826	33,195	41,935													6,981	43,683			
	102	18,612	5,801	10,163	14,526	23,252	27,616	31,979	40,708													5,801	42,454			
GVO-G0216-02R1	0	22,680			Please consult factory	16,757	22,534	34,088	39,865	Exceeds MOP										3.2	13,290	5.5	39,865			
	25	23,771				15,666	21,443	32,998	38,775															12,200	38,775	
	51	24,846				14,480	20,255	31,807	37,583															11,015	37,583	
	76	25,876				12,998	18,768	30,308	36,078															9,536	36,078	
	102	26,952				11,386	17,149	28,675	34,439															7,929	34,439	
GVO-G0216-02R2	0	19,885	13,775	19,552	25,329	36,883	42,661	Exceeds MOP											2.8	11,464	5.5	42,661				
	25	20,748	12,912	18,689	24,466	36,020	41,798															10,601	41,798			
	51	21,589	11,961	17,737	23,512	35,064	40,840															9,651	40,840			
	76	22,362	10,742	16,512	22,282	33,822	39,592															8,435	39,592			
	102	23,164	9,412	15,175	20,937	32,464	38,228															7,107	38,228			
GVO-G0216-02R3	0	17,792	15,868	21,645	27,422	38,976	44,754	Exceeds MOP											2.5	10,092	5.5	44,754				
	25	18,575	15,085	20,862	26,639	38,193	43,971															9,309	43,971			
	51	19,333	14,218	19,993	25,768	37,320	43,096															8,442	43,096			
	76	20,015	13,089	18,859	24,628	36,169	41,939															7,320	41,939			
	102	20,720	11,856	17,619	23,381	34,908	40,672															6,094	40,672			
GVO-G0216-02R4	0	15,634	18,026	23,803	29,580	41,134	46,912	Exceeds MOP											2.2	8,784	5.5	46,912				
	25	16,401	17,259	23,036	28,813	40,367	46,144															8,016	46,144			
	51	17,144	16,407	22,182	27,958	39,510	45,286															7,167	45,286			
	76	17,808	15,297	21,066	26,836	38,376	44,146															6,066	44,146			
	102	18,494	14,082	19,845	25,607	37,134	42,898															4,863	42,898			

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5																		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																						
GVO-G0314-03R1	0	28,657																		Please consult factory	30,439	34,782	43,468	47,811	Exceeds MOP											6.1	22,623	9.3	50,417		
	51	31,309																	28,586		32,937	41,640	45,992	20,754		48,603															
	102	33,874																	26,156		30,509	39,214	43,568	18,322		46,179															
	152	36,545																	23,239		27,589	36,290	40,640	15,410		43,251															
	203	39,285																	19,679		24,020	32,703	37,046	11,866		39,651															
GVO-G0314-03R2	0	24,936																	Please consult factory	21,134	25,476	34,160	38,503	47,189	51,532	Exceeds MOP											5.3	19,398	9.3	54,138	
	51	27,295																19,547		23,898	32,600	36,951	45,654	50,006	17,807		52,617														
	102	29,543																17,430		21,782	30,487	34,840	43,545	47,899	15,689		50,510														
	152	31,863																14,872		19,221	27,921	32,271	40,971	45,322	13,132		47,932														
	203	34,214																11,729		16,069	24,750	29,091	37,775	42,117	9,993		44,722														
GVO-G0314-03R3	0	21,732																	Please consult factory	19,997	24,338	28,680	37,364	41,707	50,393	54,736	Exceeds MOP											4.7	17,392	9.3	57,342
	51	23,840																18,652		23,002	27,353	36,055	40,406	49,109	53,460	16,041		56,072													
	102	25,817																16,804		21,157	25,509	34,214	38,566	47,272	51,625	14,193		54,237													
	152	27,837																14,549		18,899	23,248	31,947	36,297	44,998	49,349	11,940		51,959													
	203	29,854																11,749		16,089	20,429	29,111	33,452	42,135	46,477	9,145		49,083													
GVO-G0314-03R4	0	18,979																	Please consult factory	22,750	27,091	31,433	40,117	44,460	53,146	57,489	Exceeds MOP											4.1	14,936	9.3	60,095
	51	20,870																21,621		25,972	30,323	39,024	43,376	52,078	56,430	13,791		59,041													
	102	22,613																20,009		24,361	28,713	37,418	41,770	50,476	54,829	12,175		57,441													
	152	24,374																18,012		22,362	26,711	35,411	39,761	48,461	52,812	10,184		55,422													
	203	26,103																15,500		19,840	24,180	32,862	37,203	45,886	50,228	7,689		52,834													
GVO-G0316-03R1	0	28,546																	Please consult factory	26,964	32,706	38,448	49,934	Exceeds MOP											4.6	22,370	7.2	52,231			
	51	31,242																25,133		30,885	36,637	48,143	20,531		50,444																
	102	33,815																22,707		28,461	34,215	45,724	18,103		48,026																
	152	36,472																19,783		25,534	31,285	42,787	15,182		45,088																
	203	39,167																16,200		21,940	27,681	39,163	11,608		41,460																
GVO-G0316-03R2	0	24,825																	Please consult factory	19,202	30,685	36,427	42,169	53,654	Exceeds MOP											4.0	19,202	7.2	55,952		
	51	27,228																17,642		29,146	34,899	40,651	52,157	17,642		54,458															
	102	29,484																15,530		27,038	32,792	38,546	50,055	15,530		52,357															
	152	31,790																12,963		24,464	30,215	35,966	47,469	12,963		49,770															
	203	34,096																9,791		21,271	27,011	32,752	44,234	9,791		46,531															
GVO-G0316-03R3	0	21,621																	Please consult factory	16,664	22,405	33,888	39,630	45,373	56,858	Exceeds MOP											3.5	16,664	7.2	59,155	
	51	23,773																15,346		21,097	32,601	38,354	44,106	55,612	15,346		57,913														
	102	25,757																13,503		19,256	30,764	36,518	42,272	53,781	13,503		56,083														
	152	27,764																11,240		16,990	28,491	34,242	39,993	51,496	11,240		53,796														
	203	29,735																8,413		14,152	25,632	31,372	37,112	48,595	8,413		50,891														
GVO-G0316-03R4	0	18,868																	Please consult factory	19,417	25,158	36,641	42,383	48,126	59,611	Exceeds MOP											3.1	14,825	7.2	61,909	
	51	20,803																18,315		24,067	35,571	41,323	47,076	58,581	13,714		60,883														
	102	22,553																16,707		22,460	33,968	39,722	45,476	56,985	12,104		59,287														
	152	24,301																14,703		20,453	31,954	37,705	43,456	54,959	10,103		57,260														
	203	25,984																12,164		17,903	29,382	35,123	40,863	52,346	7,573		54,642														

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0320-03R1	0	28,324	24,046	33,166	42,285	Exceeds MOP															2.9	22,223	4.5	51,405		
	51	31,109	22,277	31,410	40,543																			20,451	49,676	
	102	33,697	19,862	28,997	38,132																			18,035	47,267	
	152	36,327	16,919	26,050	35,181																				15,093	44,312
	203	38,931	13,272	22,389	31,507																				11,449	40,624
GVO-G0320-03R2	0	24,604	27,767	36,886	46,006	Exceeds MOP															2.6	20,472	4.5	55,126		
	51	27,095	26,291	35,424	44,557																			18,985	53,690	
	102	29,366	24,193	33,328	42,463																			16,885	51,598	
	152	31,645	21,601	30,731	39,862																				14,296	48,993
	203	33,860	18,343	27,460	36,578																				11,050	45,695
GVO-G0320-03R3	0	21,400	30,971	40,090	49,210	Exceeds MOP															2.2	16,381	4.5	58,330		
	51	23,640	29,746	38,879	48,012																			15,135	57,145	
	102	25,639	27,919	37,054	46,189																			13,304	55,325	
	152	27,618	25,627	34,758	43,889																				11,019	53,020
	203	29,499	22,704	31,821	40,938																				8,118	50,056
GVO-G0320-03R4	0	18,647	33,724	42,843	51,963	Exceeds MOP															1.9	13,664	4.5	61,083		
	51	20,670	32,716	41,848	50,981																			12,625	60,114	
	102	22,435	31,123	40,258	49,393																			11,028	58,529	
	152	24,155	29,090	38,221	47,352																				9,004	56,483
	203	25,748	26,455	35,572	44,689																				6,399	53,807

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)										
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5								
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																												
GVO-G0412-04R2	0	38,437																			Please consult factory	37,765	44,843	48,382	51,922	55,462	11.0	13.8	37,765	57,586	
	64	43,083																					33,936	41,029	44,575	48,122			51,668	33,936	53,796
	127	47,845																					29,358	36,453	40,001	43,549			47,098	29,358	49,227
	191	53,049																					23,937	31,029	34,575	38,121			41,667	23,937	43,795
	254	58,625																					17,534	24,611	28,150	31,690			35,229	17,534	37,353
GVO-G0412-04R3	0	32,420																			Please consult factory	36,704	40,243	43,781	47,319	50,857	9.2	13.8	31,043	63,603	
	64	36,368																				33,560	37,105	40,651	44,196	47,744			27,887	60,511	
	127	40,374																				29,735	33,282	36,830	40,378	43,925			24,059	56,698	
	191	44,724																				25,171	28,716	32,262	35,809	39,354			19,498	52,120	
	254	49,348																				19,734	23,272	26,810	30,357	33,888			14,074	46,630	
GVO-G0412-04R4	0	27,255																			Please consult factory	31,256	34,793	38,330	41,867	45,404	7.7	13.8	25,596	68,768	
	64	30,449																				28,842	32,388	35,935	39,482	43,029			23,170	66,430	
	127	33,638																				25,829	29,376	32,923	36,470	40,017			20,154	63,434	
	191	37,067																				22,192	25,737	29,284	32,831	36,378			16,521	59,777	
	254	40,664																				17,805	21,343	24,880	28,427	31,956			12,146	55,314	
GVO-G0414-04R1	0	45,643																			Please consult factory	43,149	47,465	51,781	56,097	60,413	10.3	13.8	41,423	71,638	
	64	50,527																				39,171	43,495	47,811	52,127	56,443			37,441	67,712	
	127	55,518																				34,384	38,710	43,036	47,362	51,688			32,654	62,937	
	191	60,960																				28,701	33,027	37,353	41,679	46,005			26,971	57,240	
	254	66,777																				21,968	26,283	30,598	34,914	39,230			20,242	50,454	
GVO-G0414-04R2	0	38,347																			Please consult factory	37,500	46,129	54,758	63,387	72,016	9.0	13.8	37,500	78,934	
	64	43,029																				33,699	42,346	50,993	59,642	68,291			33,699	75,211	
	127	47,800																				29,126	37,777	46,429	55,081	63,733			29,126	70,656	
	191	52,993																				23,698	32,344	40,991	49,639	58,287			23,698	65,207	
	254	58,534																				17,267	25,896	34,526	43,155	51,784			17,267	58,697	
GVO-G0414-04R3	0	32,331																			Please consult factory	39,202	43,516	47,830	52,144	56,458	7.6	13.8	31,436	84,950	
	64	36,314																				36,090	40,414	44,738	49,062	53,386			28,309	81,925	
	127	40,328																				32,273	36,598	40,922	45,246	49,570			24,488	78,128	
	191	44,668																				27,700	32,023	36,347	40,671	44,995			19,920	73,532	
	254	49,257																				22,230	26,544	30,868	35,192	39,516			14,465	67,974	
GVO-G0414-04R4	0	27,166																			Please consult factory	31,425	35,739	40,053	44,367	48,681	6.3	13.8	25,386	90,115	
	64	30,395																				29,041	33,364	37,688	42,012	46,336			22,989	87,844	
	127	33,592																				26,035	30,359	34,683	39,007	43,331			19,980	84,864	
	191	37,011																				22,390	26,712	31,036	35,360	39,684			16,339	81,189	
	254	40,573																				17,973	22,287	26,611	30,935	35,259			11,936	76,658	

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5													
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																	
GVO-G0416-04R1	0	45,528																		Please consult factory	49,580	55,296	66,727	72,443	78,160	89,594	Exceeds MOP	7.8	12.1	41,580	90,737					
	64	50,458																			45,636	51,362	62,812	68,538	74,264	85,716				37,622	86,862					
	127	55,460																			40,857	46,585	58,040	63,768	69,496	80,953				32,839	82,098					
	191	60,889																			35,165	40,890	52,340	58,065	63,791	75,242				27,151	76,388					
	254	66,660																			28,397	34,112	45,542	51,258	56,974	68,407				20,397	69,550					
GVO-G0416-04R2	0	38,232																		Please consult factory	39,732	45,447	56,876	62,591	74,023	79,739	85,455	96,889	Exceeds MOP	6.8	12.1	37,447	98,033			
	64	42,960																	35,961		41,685	53,135	58,860	70,311	76,037	81,763	93,215	33,671				94,360				
	127	47,741																	31,395		37,122	48,576	54,304	65,759	71,487	77,215	88,671	29,105				89,817				
	191	52,922																	25,959		31,683	43,132	48,857	60,307	66,032	71,758	83,209	23,669				84,354				
	254	58,416																	19,498		25,212	36,640	42,355	53,786	59,501	65,217	76,650	17,213				77,794				
GVO-G0416-04R3	0	32,216																		Please consult factory	34,321	45,749	51,463	62,892	68,608	80,039	85,755	91,472	102,906	Exceeds MOP	5.7	12.1	30,893	104,049		
	64	36,245																	31,227		42,676	48,400	59,850	65,575	77,026	82,752	88,478	99,930	27,793				101,075			
	127	40,269																	27,414		38,867	44,594	56,048	61,775	73,231	78,959	84,687	96,143	23,978				97,289			
	191	44,597																	22,837		34,284	40,008	51,457	57,182	68,632	74,357	80,083	91,534	19,402				92,679			
	254	49,139																	17,349		28,775	34,489	45,917	51,632	63,062	68,778	74,494	85,927	13,921				87,070			
GVO-G0416-04R4	0	27,050																		Please consult factory	28,061	33,773	39,487	50,914	56,628	68,058	73,773	85,204	90,920	96,637	108,071	Exceeds MOP	4.8	12.1	25,775	109,215
	64	30,326																	25,699		31,423	37,146	48,595	54,319	65,769	71,494	82,945	88,671	94,397	105,849	23,409				106,994	
	127	33,533																	22,697		28,424	34,150	45,603	51,330	62,784	68,511	79,967	85,695	91,423	102,879	20,407				104,025	
	191	36,940																	19,047		24,770	30,493	41,941	47,665	59,114	64,839	76,289	82,014	87,739	99,191	16,757				100,336	
	254	40,456																	14,608		20,320	26,033	37,459	43,173	54,601	60,316	71,746	77,462	83,178	94,611	12,323				95,754	
GVO-G0420-04R1	0	45,296																		Please consult factory	43,131	52,222	61,314	79,498	Exceeds MOP	4.9	7.0	41,313	79,498							
	64	50,319																	39,234		48,339	57,444	75,655	37,413				75,655								
	127	55,341																	34,466		43,574	52,682	70,898	32,645				70,898								
	191	60,746																	28,761		37,865	46,970	65,179	26,940				65,179								
	254	66,423																	21,945		31,035	40,126	58,309	20,127				58,309								
GVO-G0420-04R2	0	38,000																		Please consult factory	50,426	59,517	68,609	86,794	Exceeds MOP	4.1	7.0	34,063	86,794							
	64	42,820																	46,733		55,838	64,943	83,153	30,345				83,153								
	127	47,622																	42,185		51,293	60,401	78,617	25,791				78,617								
	191	52,779																	36,728		45,832	54,936	73,146	20,341				73,146								
	254	58,179																	30,188		39,279	48,370	66,553	13,826				66,553								
GVO-G0420-04R3	0	31,984																		Please consult factory	38,261	56,443	65,534	74,626	92,810	Exceeds MOP	3.6	7.0	30,989	92,810						
	64	36,105																	35,239		53,448	62,553	71,658	89,868	27,956				89,868							
	127	40,150																	31,442		49,657	58,765	67,872	86,089	24,156				86,089							
	191	44,454																	26,845		45,053	54,157	63,262	81,471	19,563				81,471							
	254	48,903																	21,285		39,465	48,555	57,646	75,830	14,014				75,830							
GVO-G0420-04R4	0	26,818	25,247	34,337	43,427	61,608	70,699	79,791	97,975	Please consult factory	Exceeds MOP	3.0	7.0	25,247	97,975																					
	64	30,186	22,951	32,054	41,158	59,367	68,472	77,577	95,787					22,951	95,787																					
	127	33,414	19,964	29,071	38,178	56,393	65,501	74,609	92,825					19,964	92,825																					
	191	36,797	16,296	25,399	34,502	52,710	61,814	70,918	89,128					16,296	89,128																					
	254	40,219	11,791	20,880	29,969	48,149	57,239	66,330	84,513					11,791	84,513																					

Notes:

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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0424-04R1	0	45,128	Please consult factory	44,753	57,995	84,480	Exceeds MOP														3.4	42,105	5.1	87,129		
	64	50,218		40,892	54,149	80,664																	38,241		83,316	
	127	55,255		36,132	49,393	75,915																		33,480		78,567
	191	60,643		30,417	43,674	70,188																		27,766		72,839
	254	66,252		23,565	36,806	63,290																		20,917		65,938
GVO-G0424-04R2	0	37,833	38,808	52,049	65,291	91,775	Exceeds MOP														3.0	38,808	5.1	94,424		
	64	42,720	35,134	48,391	61,648	88,163																35,134		90,815		
	127	47,537	30,591	43,851	57,111	83,633																30,591		86,286		
	191	52,676	25,128	38,384	51,641	78,155																25,128		80,806		
	254	58,008	18,568	31,809	45,050	71,533																	18,568		74,182	
GVO-G0424-04R3	0	31,816	44,824	58,065	71,307	97,792	Exceeds MOP														2.5	31,583	5.1	100,440		
	64	36,005	41,849	55,106	68,363	94,878																28,592		97,530		
	127	40,065	38,062	51,323	64,583	91,105																24,802		93,757		
	191	44,351	33,453	46,709	59,966	86,480																20,197		89,131		
	254	48,732	27,845	41,086	54,326	80,810																	14,605		83,458	
GVO-G0424-04R4	0	26,651	49,989	63,230	76,472	102,957	Exceeds MOP														2.1	26,156	5.1	105,606		
	64	30,086	47,768	61,025	74,282	100,797																23,906		103,449		
	127	33,329	44,798	58,059	71,319	97,841																20,930		100,493		
	191	36,694	41,110	54,366	67,623	94,137																17,250		96,788		
	254	40,048	36,529	49,769	63,010	89,494																	12,697		92,142	
GVO-G0428-04R1	0	44,412	63,517	Exceeds MOP																	2.3	37,344	3.4	78,474		
	64	49,788	60,007																			33,793		74,987		
	127	54,889	55,326																			29,103		70,311		
	191	60,200	49,518																			23,306		64,496		
	254	65,521	42,311																			16,140		57,266		
GVO-G0428-04R2	0	37,116	70,812	Exceeds MOP																	2.1	37,161	3.4	85,769		
	64	42,289	67,506																			33,803		82,485		
	127	47,171	63,045																			29,330		78,029		
	191	52,234	57,485																			23,784		72,463		
	254	57,277	50,554																			16,906		65,510		
GVO-G0428-04R3	0	31,100	76,829	Exceeds MOP																	1.7	28,223	3.4	91,786		
	64	35,574	74,220																			25,539		89,200		
	127	39,699	70,516																			21,818		85,501		
	191	43,909	65,810																			17,131		80,788		
	254	48,001	59,831																			11,229		74,786		

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5																	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																					
GVO-G0516-05R2	0	60,409																			79,186	84,840	90,495	12.3	76,925	13.8	93,888													
	76	70,717																			69,701	75,362	81,022								84,419									
	152	81,905																			58,601	64,262	69,923								73,320									
	229	93,839																			46,346	52,005	57,664								61,059									
	305	107,065																			32,180	37,831	43,483								46,875									
GVO-G0516-05R3	0	50,861																						9.9	59,337	13.8	103,436													
	76	58,666																			60,467	66,120	71,773					83,080	88,734	94,389	100,043	52,321	96,470							
	152	67,059																			53,453	59,112	64,772					76,092	81,753	87,413	93,074	44,011	88,166							
	229	75,972																			45,143	50,804	56,464					67,786	73,447	79,108	84,770	34,791	78,927							
	305	85,793																			35,923	41,581	47,239					58,555	64,214	69,872	75,531	24,069	68,147							
GVO-G0516-05R4	0	43,018																						8.3	49,091	13.8	111,278													
	76	49,438																			51,352	57,004	68,309					73,962	79,616	90,923	96,577	102,231	107,885	43,438	105,698					
	152	56,284																			45,702	51,361	62,680					68,340	74,000	85,320	90,980	96,641	102,302	36,674	98,941					
	229	63,525																			38,938	44,598	55,918					61,578	67,239	78,561	84,222	89,883	95,544	29,134	91,374					
	305	71,461																			31,397	37,055	48,370					54,027	59,685	71,002	76,660	82,319	87,978	20,322	82,478					
GVO-G0520-05R1	0	71,220																						8.6	81,993	12.1	145,223													
	76	81,776																					89,218					107,283	116,316	125,349	143,416			72,401	135,693					
	152	93,162																					79,634					97,717	106,758	115,800	133,884			61,118	124,416					
	229	105,271																					68,351					86,436	95,478	104,521	122,607			48,633	111,907					
	305	118,640																					55,864					73,942	82,981	92,020	110,099			34,163	97,368					
GVO-G0520-05R2	0	60,205																						7.7	76,751	12.1	156,239													
	76	70,590																					91,202					100,234	118,298	127,331	136,364	154,432			67,313	146,878				
	152	81,787																					81,779					90,820	108,902	117,944	126,985	145,070			56,218	135,791				
	229	93,691																					70,685					79,727	97,811	106,854	115,896	133,982			43,945	123,488				
	305	106,828																					58,406					67,444	85,522	94,561	103,600	121,680			29,725	109,179				
GVO-G0520-05R3	0	50,657																						6.2	59,207	12.1	165,787													
	76	58,539																					44,169					53,197	71,254	80,284	89,313	107,373			52,244	158,929				
	152	66,940																					73,656					82,687	100,750	109,782	127,847	136,879	145,913	163,980			34,940	150,637		
	229	75,823																					66,708					75,749	93,830	102,871	120,953	129,995	139,037	157,121			34,700	141,355		
	305	85,556																					58,406					67,448	85,531	94,573	112,657	121,700	130,743	148,828			23,917	130,452		
GVO-G0520-05R4	0	42,814																						5.2	48,989	12.1	173,629													
	76	49,311																					49,160					58,197	76,273	85,312	103,389	112,429	121,468	139,547			43,392	168,157		
	152	56,166																					38,359					47,386	65,441	74,469	92,527	101,556	110,585	128,646			36,634	161,412		
	229	63,377																					54,407					63,437	81,498	90,529	108,592	117,624	135,689	144,722	153,755	171,822			29,073	153,802
	305	71,225																					48,816					57,856	75,936	84,976	103,058	112,099	130,181	139,223	148,265	166,349			20,197	144,783

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0524-05R1	0	71,073						84,710	111,075	124,259	150,627	163,811	Exceeds MOP							5.9	82,073	9.3	171,722			
	76	81,684						75,139	101,526	114,720	141,108	154,303									72,501		162,220			
	152	93,076						63,858	90,247	103,442	129,833	143,028									61,219		150,946			
	229	105,164						51,365	77,746	90,937	117,320	130,511									48,727		138,427			
	305	118,469						36,871	63,228	76,407	102,766	115,946									34,236		123,854			
GVO-G0524-05R2	0	60,058						82,543	95,725	122,091	135,274	161,642	174,827	Exceeds MOP							5.3	77,270	9.3	182,737		
	76	70,499						73,132	86,325	112,712	125,906	152,294	165,488									67,854		173,405		
	152	81,701						62,039	75,233	101,623	114,818	141,208	154,404									56,761		162,321		
	229	93,584						49,756	62,946	89,327	102,518	128,900	142,092									44,480		150,007		
	305	106,657						35,505	48,683	75,040	88,219	114,578	127,758									30,234		135,666		
GVO-G0524-05R3	0	50,509						78,909	92,091	105,273	131,639	144,822	171,190	184,375	Exceeds MOP							4.1	55,182	9.3	192,286	
	76	58,447						71,990	85,183	98,376	124,763	137,957	164,345	177,540									48,243		185,457	
	152	66,855						63,691	76,885	90,079	116,469	129,664	156,054	169,250									39,942		177,167	
	229	75,716						54,433	67,623	80,813	107,194	120,385	146,768	159,959									30,692		167,874	
	305	85,385						43,600	56,777	69,955	96,312	109,491	135,850	149,030									19,882		156,938	
GVO-G0524-05R4	0	42,667						60,388	86,751	99,933	113,116	139,481	152,665	179,033	192,217	Exceeds MOP							3.6	49,844	9.3	200,128
	76	49,219						54,832	81,218	94,411	107,604	133,991	147,185	173,573	186,768									44,279		194,684
	152	56,080						48,078	74,466	87,660	100,854	127,243	140,438	166,829	180,025									37,523		187,942
	229	63,269						40,501	66,880	80,070	93,260	119,641	132,832	159,214	172,406									29,950		180,321
	305	71,054						31,578	57,931	71,109	84,286	110,643	123,822	150,181	163,361									21,037		171,270
GVO-G0528-05R1	0	70,443						112,298	130,940	149,583	Exceeds MOP											4.1	78,744	6.6	171,955	
	76	81,293						103,054	121,717	140,381													69,461		162,778	
	152	92,710						91,808	110,473	129,139													58,210		151,539	
	229	104,705						79,188	97,845	116,503													45,606		138,893	
	305	117,738						64,321	82,954	101,588													30,784		123,950	
GVO-G0528-05R2	0	59,428						86,032	123,314	141,956	160,599	Exceeds MOP											3.7	74,848	6.6	182,971
	76	70,107						76,914	114,239	132,903	151,567												65,717	173,964		
	152	81,335						65,853	103,183	121,848	140,514												54,654	162,914		
	229	93,125						53,455	90,768	109,426	128,083												42,262	150,474		
	305	105,926						38,869	76,133	94,766	113,400												27,691	135,761		
GVO-G0528-05R3	0	49,880	58,301	76,940	95,580	132,862	151,504	170,147	Exceeds MOP														3.0	58,301	6.6	192,519
	76	58,056	51,642	70,303	88,965	126,291	144,954	163,618															51,642	186,015		
	152	66,489	43,371	62,035	80,699	118,029	136,695	155,361															43,371	177,760		
	229	75,257	34,012	52,667	71,323	108,636	127,293	145,951															34,012	168,341		
	305	84,654	22,881	41,511	60,141	97,405	116,038	134,672															22,881	157,033		
GVO-G0528-05R4	0	42,037	66,143	84,782	103,422	140,704	159,346	177,989	Exceeds MOP														2.6	51,232	6.6	200,361
	76	48,828	60,869	79,531	98,193	135,519	154,182	172,846															45,940	195,243		
	152	55,714	54,145	72,809	91,474	128,804	147,469	166,135															39,214	188,535		
	229	62,811	46,458	65,114	83,769	121,083	139,740	158,398															31,534	180,788		
	305	70,322	37,212	55,842	74,473	111,736	130,369	149,003															22,309	171,365		

Notes:
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Product Data Sheet

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Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G0532-05R1	0	70,188	Please consult factory	96,493	120,900	Exceeds MOP															3.2	81,848	4.8	159,954
	76	81,134		87,304	111,737		72,644	150,831																
	152	92,562		76,063	100,499		61,402	139,597																
	229	104,520		63,422	87,848		48,767	126,930																
	305	117,442		48,492	72,889		33,854	111,926																
GVO-G0532-05R2	0	59,173	83,101	107,508	131,916	Exceeds MOP															2.8	73,339	4.8	170,970
	76	69,949	74,056	98,489	122,922		64,284	162,016																
	152	81,187	63,003	87,438	111,874		53,229	150,972																
	229	92,939	50,577	75,002	99,428		40,807	138,511																
	305	105,630	35,908	60,304	84,701		26,150	123,738																
GVO-G0532-05R3	0	49,625	92,649	117,056	141,464	Exceeds MOP															2.3	58,481	4.8	180,518
	76	57,897	86,108	110,540	134,973		51,903	174,067																
	152	66,341	77,849	102,285	126,720		43,641	165,818																
	229	75,072	68,444	92,870	117,296		34,250	156,378																
	305	84,358	57,180	81,576	105,973		23,027	145,010																
GVO-G0532-05R4	0	41,783	100,492	124,899	149,306	Exceeds MOP															1.9	46,799	4.8	188,360
	76	48,670	95,336	119,768	144,201		41,586	183,295																
	152	55,566	88,624	113,059	137,495		34,868	176,593																
	229	62,625	80,891	105,317	129,743		27,158	168,825																
	305	70,027	71,511	95,907	120,304		17,843	159,341																
GVO-G0536-05R1	0	69,934	111,056	142,001	Exceeds MOP																2.5	80,112	3.8	160,568
	76	80,976	101,958	132,932		70,985	151,517																	
	152	92,414	90,728	121,705		59,751	140,291																	
	229	104,334	78,051	109,016		47,086	127,596																	
	305	117,146	63,016	93,949		32,085	112,509																	
GVO-G0536-05R2	0	58,918	122,071	153,016	Exceeds MOP																2.3	78,750	3.8	171,583
	76	69,790	113,144	144,118		69,782	162,702																	
	152	81,039	102,103	133,080		58,736	151,666																	
	229	92,754	89,631	120,597		46,281	139,177																	
	305	105,335	74,828	105,760		31,524	124,320																	
GVO-G0536-05R3	0	49,370	131,620	162,564	Exceeds MOP																1.8	57,356	3.8	181,132
	76	57,739	125,195	156,169		50,861	174,754																	
	152	66,193	116,949	147,926		42,607	166,512																	
	229	74,886	107,499	138,464		33,184	157,044																	
	305	84,062	96,100	127,033		21,867	145,593																	

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5		
Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																									
GVO-G0720-07R3	0	76,533																		10.1	101,830	13.8	168,184		
	102	90,226																						89,463	155,906
	203	105,131																						74,896	141,361
	305	121,667																						58,004	124,445
	406	139,440																						38,876	105,227
GVO-G0720-07R4	0	64,943																		8.5	84,733	13.8	179,773		
	102	76,348																						74,614	169,783
	203	88,688																						62,601	157,804
	305	102,327																						48,616	143,784
	406	116,922																						32,709	127,745
GVO-G0724-07R1	0	103,369																		9.5	142,755	12.4	218,838		
	102	122,458																						125,146	201,308
	203	143,354																						104,627	180,809
	305	166,612																						80,971	157,132
	406	191,712																						54,359	130,440
GVO-G0724-07R2	0	91,780																		8.4	125,489	12.4	230,427		
	102	108,581																						110,137	215,185
	203	126,911																						92,176	197,252
	305	147,272																						71,425	176,472
	406	169,195																						48,023	152,958
GVO-G0724-07R3	0	76,355																		7.0	104,194	12.4	245,853		
	102	90,117																						91,838	233,648
	203	105,041																						77,273	219,122
	305	121,557																						60,378	202,187
	406	139,259																						41,240	182,893
GVO-G0724-07R4	0	64,765																		5.9	86,934	12.4	257,442		
	102	76,240																						76,832	247,526
	203	88,598																						64,825	235,566
	305	102,218																						50,835	221,526
	406	116,741																						34,909	205,411

Notes:
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Product Data Sheet

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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5														
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																		
GVO-G0728-07R1	0	102,657							152,841	171,414	208,561	227,136	Please consult factory																6.7	141,699	9.3	238,281					
	102	122,026							135,614	154,213	191,412	210,012																									
	203	142,993							115,193	133,799	171,011	189,618																									
	305	166,175							91,435	110,033	147,231	165,831																									
	406	190,991							64,433	83,004	120,150	138,724																									
GVO-G0728-07R2	0	91,068							127,289	164,431	183,003	220,150	238,725	Please consult factory																		5.9	123,575	9.3	249,871		
	102	108,148							112,296	149,492	168,091	205,290	223,890																								
	203	126,550							94,427	131,636	150,242	187,454	206,061																								
	305	146,836							73,579	110,774	129,372	166,571	185,170																								
	406	168,473							49,811	86,951	105,522	142,667	161,241																								
GVO-G0728-07R3	0	75,643							105,576	124,144	142,714	179,856	198,428	235,576	254,150	Please consult factory																		4.9	101,862	9.3	265,296
	102	89,685							93,566	112,162	130,759	167,955	186,554	223,753	242,353																						
	203	104,680							79,089	97,693	116,297	153,506	172,112	209,324	227,931																						
	305	121,121							62,101	80,697	99,294	136,489	155,087	192,286	210,885																						
	406	138,537							42,610	61,177	79,746	116,886	135,458	172,603	191,177																						
GVO-G0728-07R4	0	64,053							117,165	135,734	154,304	191,446	210,018	247,165	265,740	Please consult factory																		4.1	83,743	9.3	276,885
	102	75,807							107,443	126,040	144,637	181,833	200,431	237,630	256,231																						
	203	88,236							95,532	114,136	132,740	169,950	188,555	225,767	244,374																						
	305	101,782							81,440	100,036	118,633	155,828	174,426	211,625	230,225																						
	406	116,020							65,127	83,695	102,264	139,404	157,975	195,121	213,695																						
GVO-G0732-07R1	0	102,366							160,267	184,603	Please consult factory																					5.1	140,798	6.9	228,411		
	102	121,848							143,117	167,485																											
	203	142,845							122,715	147,091																											
	305	165,996							98,936	123,303																											
	406	190,695							71,855	96,191																											
GVO-G0732-07R2	0	90,776							147,520	171,856	196,193	Please consult factory																					4.6	128,053	6.9	240,001	
	102	107,971							132,627	156,994	181,362																										
	203	126,402							114,783	139,158	163,534																										
	305	146,657							93,908	118,275	142,642																										
	406	168,177							70,039	94,373	118,709																										
GVO-G0732-07R3	0	75,351							114,277	162,946	187,281	211,618	Please consult factory																				3.7	99,678	6.9	255,426	
	102	89,508							102,358	151,090	175,457	199,825																									
	203	104,532							87,904	136,653	161,028	185,404																									
	305	120,942							70,892	119,623	143,990	168,357																									
	406	138,242							51,308	99,974	124,308	148,644																									
GVO-G0732-07R4	0	63,762							101,534	125,867	174,535	198,871	223,207	Please consult factory																			3.2	86,935	6.9	267,016	
	102	75,630							91,870	116,235	164,968	189,335	213,703																								
	203	88,088							79,974	104,347	153,096	177,472	201,847																								
	305	101,603							65,866	90,231	138,963	163,329	187,697																								
	406	115,724							49,494	73,826	122,492	146,826	171,162																								

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0736-07R1	0	102,074			Please consult factory	201,003	231,876	Exceeds MOP													4.1	145,435	5.5	231,876		
	102	121,671				183,977	214,885																		128,344	214,885
	203	142,697				163,606	194,523																		107,957	194,523
	305	165,818				139,794	170,702																		84,162	170,702
	406	190,399				112,587	143,459																		57,022	143,459
GVO-G0736-07R2	0	90,485			Please consult factory	150,851	212,593	243,465	Exceeds MOP												3.6	126,155	5.5	243,465		
	102	107,794				136,040	197,854	228,762																	111,315	228,762
	203	126,254				118,217	180,050	210,967																	93,485	210,967
	305	146,478				97,320	159,133	190,041																	72,596	190,041
	406	167,881				73,366	135,105	165,977																	48,671	165,977
GVO-G0736-07R3	0	75,059	104,538	135,406	166,276	228,018	258,890	Exceeds MOP												3.0	104,538	5.5	258,890			
	102	89,331	92,692	123,597	154,503	216,317	247,225																92,692	247,225		
	203	104,384	78,257	109,172	140,087	201,920	232,837																78,257	232,837		
	305	120,763	61,225	92,130	123,035	184,848	215,756																61,225	215,756		
	406	137,946	41,566	72,433	103,301	165,041	195,912																41,566	195,912		
GVO-G0736-07R4	0	63,470	116,128	146,996	177,865	239,607	270,480	Exceeds MOP												2.5	85,261	5.5	270,480			
	102	75,453	106,570	137,475	168,381	230,195	261,103																75,665	261,103		
	203	87,940	94,700	125,615	156,531	218,363	249,280																63,786	249,280		
	305	101,424	80,564	111,469	142,375	204,188	235,095																49,660	235,095		
	406	115,428	64,084	94,951	125,819	187,559	218,430																33,218	218,430		
GVO-G07128-07R1	0	100,446			Please consult factory	150,588	187,720	Exceeds MOP													3.4	143,162	4.5	224,854		
	102	120,682				134,245	171,435																	126,807	208,626	
	203	141,871				114,049	151,254																	106,609	188,460	
	305	164,820				90,053	127,242																	82,615	164,432	
	406	188,749				62,148	99,279																	54,722	136,411	
GVO-G07128-07R2	0	88,857	125,047	162,177	199,310	Exceeds MOP														3.0	125,047	4.5	236,444			
	102	106,805	110,934	148,123	185,313																		110,934	222,504		
	203	125,428	93,289	130,493	167,697																		93,289	204,903		
	305	145,481	72,204	109,392	146,581																		72,204	183,772		
	406	166,232	47,537	84,666	121,796																		47,537	158,929		
GVO-G07128-07R3	0	73,432	140,472	177,602	214,735	Exceeds MOP														2.5	103,343	4.5	251,869			
	102	88,342	129,397	166,586	203,776																		92,209	240,967		
	203	103,558	115,159	152,363	189,567																		77,956	226,773		
	305	119,766	97,919	135,107	172,296																		60,732	209,487		
	406	136,296	77,473	114,601	151,732																		40,346	188,864		
GVO-G07128-07R4	0	61,842	152,061	189,192	226,324	Exceeds MOP														2.1	85,231	4.5	263,458			
	102	74,464	143,274	180,463	217,653																		76,337	254,845		
	203	87,114	131,602	168,806	206,011																		64,637	243,216		
	305	100,426	117,258	154,447	191,636																		50,322	228,826		
	406	113,778	99,991	137,119	174,250																		33,164	211,382		

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)									
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5						
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																										
GVO-G0824-08R1	0	151,488																		Please consult factory	158,105	171,127	184,150	197,173	11.9	155,500	13.8	204,987	
	114	170,321																				140,708	153,742	166,776				179,811	138,101
	229	190,870																				120,380	133,416	146,452				159,489	117,773
	343	212,893																				97,867	110,899	123,932				136,964	95,261
	457	236,949																				72,282	85,301	98,321				111,341	69,678
GVO-G0824-08R2	0	128,675																		Please consult factory	128,833	141,854	154,875	180,918	9.7	121,021	13.8	227,800	
	114	142,309																			116,586	129,619	142,652	168,720				108,766	
	229	157,039																			102,069	115,104	128,140	154,211				94,248	
	343	172,746																			85,889	98,920	111,951	138,014				78,071	
	457	189,796																			67,362	80,379	93,397	119,434				59,552	
GVO-G0824-08R3	0	109,263																		Please consult factory	109,187	122,206	148,246	161,266	8.2	101,376	13.8	247,212	
	114	120,873																			98,924	111,956	138,022	151,055				91,105	
	229	133,338																			86,666	99,701	125,770	138,805				78,846	
	343	146,587																			72,957	85,987	112,048	125,079				65,140	
	457	160,911																			57,199	70,215	96,248	109,265				49,390	
GVO-G0828-08R1	0	150,822																		Please consult factory	159,080	177,560	214,522	233,005	8.4	155,384	12.1	292,154	
	114	169,915																			142,048	160,551	197,560	216,065				138,347	
	229	190,504																			121,776	140,283	177,299	195,808				118,075	
	343	212,438																			99,139	117,638	154,639	173,139				95,440	
	457	236,218																			73,164	91,638	128,589	147,066				69,470	
GVO-G0828-08R2	0	128,009																		Please consult factory	126,457	144,935	181,893	200,373	6.8	119,066	12.1	314,967	
	114	141,903																			114,553	133,055	170,060	188,564				107,152	
	229	156,673																			100,089	118,595	155,608	174,115				92,687	
	343	172,292																			83,792	102,289	139,286	157,785				76,393	
	457	189,065																			64,899	83,371	120,317	138,791				57,511	
GVO-G0828-08R3	0	108,597																		Please consult factory	108,917	145,869	164,347	201,305	5.8	101,526	12.1	334,380	
	114	120,467																			98,986	135,989	154,491	191,496				91,586	
	229	132,972																			86,779	123,790	142,296	179,309				79,378	
	343	146,133																			72,957	109,951	128,448	165,445				65,559	
	457	160,179																			56,845	93,785	112,257	149,202				49,457	

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0832-08R1	0	150,553							Please consult factory	184,115	208,361	256,855	281,103	Exceeds MOP							6.4	155,022	9.7	315,053		
	114	169,751						167,167		191,440	239,989	264,264	138,039		298,250											
	229	190,356						146,908		171,186	219,743	244,022	117,776		278,013											
	343	212,255						124,243		148,511	197,049	221,319	95,122		255,299											
	457	235,922						98,179		122,418	170,898	195,140	69,094		229,080											
GVO-G0832-08R2	0	127,740						Please consult factory	134,197	158,440	206,928	231,174	279,668	303,916	Exceeds MOP							5.2	119,652	9.7	337,866	
	114	141,739							122,363	146,634	195,179	219,453	268,001	292,276		107,800	326,262									
	229	156,525							107,910	132,186	180,740	205,017	253,574	277,853		93,344	311,845									
	343	172,108							91,588	115,855	164,389	188,658	237,196	261,466		77,029	295,445									
	457	188,770							72,621	96,857	145,331	169,570	218,050	242,292		58,081	276,232									
GVO-G0832-08R3	0	108,328						Please consult factory	129,367	153,609	177,852	226,341	250,586	299,080	323,329	Exceeds MOP							4.4	100,278	9.7	357,278
	114	120,302							119,528	143,799	168,070	216,615	240,889	289,437	313,712		90,403	347,698								
	229	132,824							107,335	131,611	155,887	204,441	228,718	277,275	301,554		78,205	335,546								
	343	145,949							93,482	117,747	142,014	190,548	214,817	263,355	287,625		64,364	321,604								
	457	159,884							77,273	101,507	125,743	174,217	198,456	246,936	271,178		48,193	305,118								
GVO-G0836-08R1	0	150,284						Please consult factory	152,244	183,024	213,805	275,369	306,153	Exceeds MOP							5.0	152,244	7.6	312,310		
	114	169,587							135,323	166,136	196,949	258,576	289,391		135,323	295,554										
	229	190,208							115,069	145,886	176,704	238,342	269,161		115,069	275,325										
	343	212,071							92,394	123,200	154,007	215,623	246,432		92,394	252,594										
	457	235,626							66,301	97,073	127,845	189,394	220,170		66,301	226,325										
GVO-G0836-08R2	0	127,471						Please consult factory	175,057	205,837	236,618	298,182	328,966	Exceeds MOP							4.1	119,656	7.6	335,123		
	114	141,574							163,336	194,148	224,961	286,589	317,404		107,875	323,567										
	229	156,377							148,900	179,718	210,536	272,173	302,993		93,430	309,157										
	343	171,924							132,541	163,347	194,154	255,770	286,579		77,091	292,741										
	457	188,474							113,453	144,225	174,997	236,546	267,322		58,068	273,477										
GVO-G0836-08R3	0	108,058						Please consult factory	102,137	132,913	194,470	225,249	256,030	317,595	348,378	Exceeds MOP							3.4	95,981	7.6	354,535
	114	120,138							92,339	123,149	184,772	215,584	246,397	308,025	338,840		86,177	345,003								
	229	132,676							80,152	110,968	172,601	203,419	234,237	295,874	326,694		73,989	332,858								
	343	145,765							66,285	97,089	158,700	189,506	220,313	281,929	312,738		60,124	318,900								
	457	159,588							50,032	80,800	142,339	173,111	203,883	265,432	296,208		43,878	302,363								

Notes:
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Product Data Sheet

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Bettis GVO-G Series

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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G0840-08R1	0	150,014			Please consult factory	225,049	263,136	Exceeds MOP													4.1	156,494	5.9	293,607			
	114	169,423				208,270	246,393																	139,649	276,893		
	229	190,060				188,037	226,166																		119,406	256,670	
	343	211,887				165,314	203,431																		96,705	233,925	
	457	235,330				139,070	177,148																			70,531	207,612
GVO-G0840-08R2	0	127,202		133,605	171,690	247,862	285,949	Exceeds MOP													3.3	118,372	5.9	316,420			
	114	141,410	Please consult factory	121,915	160,037	236,282	274,406																	106,667	304,906		
	229	156,229		107,484	145,612	221,869	259,998																		92,233	290,502	
	343	171,740		91,114	129,229	205,460	243,578																			75,868	274,072
	457	188,178		71,994	110,069	186,222	224,300																			56,764	254,764
GVO-G0840-08R3	0	107,789		114,935	153,018	191,102	267,274	305,362	Exceeds MOP														2.8	99,702	5.9	335,833	
	114	119,974	105,230	143,351	181,473	257,718	295,842																	89,982		326,342	
	229	132,528	93,058	131,185	169,313	245,570	283,699																			77,808	314,203
	343	145,581	79,159	117,273	155,388	231,619	269,737																			63,914	300,231
	457	159,292	62,806	100,880	138,954	215,108	253,186																			47,577	283,650

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G08T32-08R1	0	148,111	Please consult factory	181,613	230,089	Exceeds MOP														3.2	152,528	4.8	307,655		
	114	168,262		165,640	214,178																		136,518	291,840	
	229	189,014		145,532	194,079																			116,404	271,756
	343	210,588		122,534	171,060																			93,419	248,704
	457	233,240		95,430	143,891																			66,355	221,432
GVO-G08T32-08R2	0	125,298	155,951	204,425	252,902	Exceeds MOP														2.6	117,173	4.8	330,467		
	114	140,250	145,117	193,653	242,191																106,288		319,853		
	229	155,182	130,817	179,363	227,910																91,981		305,588		
	343	170,441	114,156	162,680	211,207																75,337		288,851		
	457	186,088	94,124	142,582	191,043																		55,358	268,584	
GVO-G08T32-08R3	0	105,886	175,364	223,838	272,314	Exceeds MOP														2.2	97,809	4.8	349,880		
	114	118,813	166,553	215,089	263,627																88,897		341,289		
	229	131,481	154,518	203,064	251,611																76,847		329,289		
	343	144,282	140,315	188,839	237,365																62,678		315,010		
	457	157,202	123,009	171,468	219,929																		45,480	297,470	
GVO-G08T36-08R1	0	147,573	211,043	272,592	Exceeds MOP															2.6	161,805	3.8	309,522		
	114	167,934	195,264	256,883																	145,970		293,854		
	229	188,718	175,186	236,815																	125,883		273,793		
	343	210,220	152,122	213,727																	102,838		250,691		
	457	232,649	124,812	186,343																			75,588	223,263	
GVO-G08T36-08R2	0	124,760	233,856	295,405	Exceeds MOP															2.1	123,073	3.8	332,335		
	114	139,921	223,277	284,895																	112,367		321,867		
	229	154,886	209,017	270,646																	98,088		307,624		
	343	170,073	192,268	253,873																	81,382		290,837		
	457	185,496	171,964	233,495																			61,213	270,415	
GVO-G08T36-08R3	0	105,348	253,268	314,817	Exceeds MOP															1.7	93,251	3.8	351,748		
	114	118,485	244,713	306,331																	84,511		343,303		
	229	131,185	232,718	294,347																	72,488		331,325		
	343	143,914	218,427	280,032																	58,260		316,996		
	457	156,611	200,850	262,381																			40,879	299,301	

Notes:
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Product Data Sheet

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Bettis GVO-G Series

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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)															
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5												
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																
GVO-G1028-10R2	0	190,761																		Please consult factory	262,482	280,798	299,114	12.1	247,831	13.8	310,105								
	152	223,657																			231,999	250,337	268,675					217,329							
	305	258,460																			197,607	215,949	234,291					182,934							
	457	296,500																			158,823	177,158	195,493					144,155							
	610	338,179																			114,666	132,977	151,290					100,017							
GVO-G1028-10R3	0	158,925																		Please consult factory	239,377	276,003	294,318	312,634	330,950	11.0	207,966	13.8	310,657						
	152	192,679																	207,966		244,640	262,977	281,315	299,654	172,634										
	305	228,410																	172,634		209,316	227,657	245,999	264,341	132,846										
	457	267,476																	132,846		169,513	187,847	206,182	224,517	87,619										
	610	310,295																	87,619		124,239	142,550	160,861	179,174	87,619										
GVO-G1028-10R4	0	133,978																		Please consult factory	191,080	227,700	246,011	264,323	300,950	319,265	337,581	355,897	8.8	183,756	13.8	366,887			
	152	159,586																	167,719		204,388	222,724	241,059	277,733	296,070	314,408	332,747	160,385							
	305	186,501																	141,185		177,863	196,203	214,543	251,224	269,566	287,907	306,250	133,850							
	457	215,822																	111,171		147,834	166,166	184,499	221,166	239,500	257,835	276,170	103,839							
	610	247,812																	76,875		113,487	131,794	150,102	186,721	205,032	223,344	241,657	69,553							
GVO-G1032-10R1	0	226,366																		Please consult factory	346,427	370,510	394,595	418,681	11.4	317,528	13.8	433,132							
	152	269,562																	305,929		330,038	354,148	378,259	276,999											
	305	315,407																	260,542		284,656	308,770	332,885	231,606											
	457	365,600																	209,517		233,623	257,730	281,837	180,591											
	610	420,710																	151,638		175,717	199,797	223,879	122,744											
GVO-G1032-10R2	0	190,483																		Please consult factory	285,985	310,065	334,145	382,310	406,393	430,478	454,563	9.2	247,459	13.8	469,015				
	152	223,491																	255,568		279,675	303,783	352,000	376,110	400,220	424,330	216,998								
	305	258,312																	221,188		245,299	269,412	317,638	341,752	365,866	389,981	182,610								
	457	296,318																	182,383		206,486	230,590	278,800	302,906	327,012	351,119	143,819								
	610	337,883																	138,157		162,232	186,309	234,464	258,543	282,624	306,705	99,639								
GVO-G1032-10R3	0	158,647																		Please consult factory	245,587	269,664	317,821	341,900	365,981	414,145	438,229	462,314	486,399	8.3	235,957	13.8	500,851		
	152	192,513																	214,229		238,334	286,546	310,654	334,761	382,978	407,088	431,198	455,308	204,587						
	305	228,262																	178,906		203,016	251,238	275,350	299,462	347,688	371,802	395,916	420,031	169,262						
	457	267,294																	139,101		163,202	211,407	235,510	259,614	307,824	331,930	356,036	380,143	129,461						
	610	309,999																	93,822		117,894	166,041	190,116	214,193	262,348	286,428	310,508	334,589	84,193						
GVO-G1032-10R4	0	133,700																		Please consult factory	198,309	222,383	270,534	294,611	342,768	366,847	390,928	439,092	463,176	487,261	511,346	6.7	183,865	13.8	525,798
	152	159,419																	175,009		199,113	247,322	271,427	319,640	343,747	367,855	416,072	440,181	464,291	488,402	160,548				
	305	186,353																	148,487		172,595	220,814	244,924	293,146	317,258	341,370	389,596	413,710	437,824	461,939	134,022				
	457	215,640																	118,454		142,553	190,754	214,856	263,060	287,164	311,268	359,477	383,583	407,690	431,797	103,994				
	610	247,516																	84,094		108,163	156,304	180,377	228,524	252,599	276,675	324,831	348,910	372,991	397,072	69,653				

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)									
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5						
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																										
GVO-G1036-10R1	0	226,089									Please consult factory	319,340	380,573	411,191	441,811	503,053	Exceeds MOP				8.9	313,217		527,551					
	152	269,395										278,857	340,152	370,801	401,451	462,752		272,727				487,273							
	305	315,259										233,472	294,779	325,433	356,087	417,398		227,342				441,924							
	457	365,418										182,443	243,730	274,375	305,020	366,313		176,314				390,831							
	610	420,414										124,548	185,771	216,385	246,999	308,231		118,426				332,726							
GVO-G1036-10R2	0	190,206									Please consult factory	263,380	324,607	355,223	416,456	447,074	477,694	538,936	Exceeds MOP				7.2	245,013		563,434			
	152	223,324										232,989	294,281	324,928	386,224	416,872	447,522	508,823		214,602		533,344							
	305	258,164										198,612	259,915	290,568	351,874	382,528	413,183	474,494		180,222		499,019							
	457	296,136										159,800	221,083	251,725	313,013	343,657	374,303	435,596		141,415		460,114							
	610	337,588										115,548	176,765	207,375	268,598	299,211	329,825	391,058		97,184		415,552							
GVO-G1036-10R3	0	158,370									Please consult factory	264,604	295,216	356,443	387,058	448,292	478,910	509,530	570,772	Exceeds MOP				6.6	240,115		595,270		
	152	192,346										233,322	263,967	325,259	355,906	417,202	447,851	478,500	539,801		208,806		564,322						
	305	228,114										198,012	228,662	289,965	320,618	381,924	412,578	443,233	504,544		173,492		529,069						
	457	267,111										158,184	188,824	250,107	280,750	342,037	372,681	403,327	464,620		133,672		489,138						
	610	309,704										112,826	143,432	204,649	235,259	296,482	327,095	357,710	418,942		88,342		443,436						
GVO-G1036-10R4	0	133,423									Please consult factory	197,722	228,331	289,551	320,163	381,390	412,005	473,239	503,857	534,476	595,719	Exceeds MOP				5.3	185,479		620,217
	152	159,252										174,484	205,127	266,415	297,060	358,352	388,999	450,295	480,944	511,594	572,895		162,227		597,416				
	305	186,205										147,972	178,621	239,920	270,571	331,874	362,526	423,833	454,487	485,142	546,453		135,712		570,978				
	457	215,458										117,920	148,558	209,837	240,477	301,760	332,403	393,690	424,335	454,980	516,273		105,665		540,791				
	610	247,221										83,496	114,099	175,309	205,915	267,132	297,741	358,965	389,578	420,192	481,425		71,255		505,919				
GVO-G1040-10R1	0	225,811									Please consult factory	336,830	412,674									Exceeds MOP				7.2	314,078		435,428
	152	269,228										296,418	372,333										273,644		395,108				
	305	315,111										251,045	326,973										228,268		349,752				
	457	365,236										199,994	275,900										177,223		298,672				
	610	420,118										142,027	217,859										119,278		240,609				
GVO-G1040-10R2	0	189,928									Please consult factory	258,957	334,793	372,713	448,557							Exceeds MOP				5.8	243,790		471,311
	152	223,157										228,621	304,532	342,489	418,404								213,439		441,180				
	305	258,016										194,254	270,178	308,141	384,069								179,070		406,847				
	457	295,954										155,424	231,325	269,277	345,182								140,245		367,955				
	610	337,292										111,115	186,939	224,853	300,685								95,951		323,436				
GVO-G1040-10R3	0	158,092									Please consult factory	252,876	290,792	366,629	404,549	480,392						Exceeds MOP				5.3	237,710		503,147
	152	192,179										221,645	259,599	335,510	373,467	449,382							206,463		472,158				
	305	227,966										186,343	224,304	300,228	338,191	414,119							171,159		436,897				
	457	266,929										146,499	184,449	260,349	298,301	374,207							131,320		396,979				
	610	309,408										101,089	138,999	214,823	252,737	328,569							85,925		351,320				
GVO-G1040-10R4	0	133,146									Please consult factory	239,907	277,823	315,739	391,576	429,496	505,339					Exceeds MOP				4.1	171,663		528,093
	152	159,085										216,784	254,738	292,693	368,604	406,560	482,476						148,469		505,251				
	305	186,057										190,292	228,252	266,213	342,137	380,100	456,027						121,965		478,806				
	457	215,276										160,204	198,153	236,102	312,003	349,954	425,860						91,899		448,632				
	610	246,925										125,663	163,572	201,482	277,306	315,220	391,052						57,430		413,803				

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G10T32-10R1	0	223,904							343,826	440,116	488,264	Exceeds MOP									5.7	314,940	7.9	526,784	
	152	268,081							304,365	400,776	448,983													275,443	487,550
	305	314,094							259,154	355,586	403,803													230,226	442,378
	457	363,984							207,810	304,204	352,403													178,893	390,963
	610	418,085							148,866	245,136	293,274													119,986	331,786
GVO-G10T32-10R2	0	188,021							283,426	331,567	379,709	Exceeds MOP									4.6	244,916	7.9	562,666	
	152	222,010							254,030	302,232	350,436													215,469	533,621
	305	256,998							219,823	268,036	316,250													181,253	499,473
	457	294,701							180,703	228,897	277,092													142,149	460,246
	610	335,259							135,430	183,560	231,692													96,928	414,612
GVO-G10T32-10R3	0	156,185							315,262	363,402	411,544	Exceeds MOP									4.1	228,615	7.9	594,502	
	152	191,032							285,008	333,211	381,414													198,246	564,599
	305	226,948							249,873	298,086	346,300													163,091	529,524
	457	265,677							209,727	257,921	306,117													122,981	489,270
	610	307,375							163,314	211,444	259,576													76,685	442,496
GVO-G10T32-10R4	0	131,238	Please consult factory	195,800	243,934	340,209	388,349	436,491	532,781	580,929	Exceeds MOP										3.4	186,173	7.9	619,449	
	152	157,938		173,500	221,700	318,101	366,304	414,508	510,919	559,126														163,861	597,693
	305	185,039		147,148	195,358	291,781	339,994	388,209	484,640	532,857														137,506	571,432
	457	214,024		116,806	164,997	261,381	309,575	357,770	454,164	502,363														107,168	540,923
	610	244,892		81,419	129,543	225,797	273,927	322,059	418,329	466,467														71,795	504,979
GVO-G10T36-10R1	0	223,349							377,726	438,941	500,158	Exceeds MOP									4.5	316,513	6.2	524,646	
	152	267,748							338,440	399,725	461,011													277,157	485,526
	305	313,798							293,259	354,556	415,854													231,964	440,374
	457	363,620							241,861	303,136	364,413													180,587	388,924
	610	417,494							182,737	243,940	305,146													121,535	329,629
GVO-G10T36-10R2	0	187,466							291,185	413,609	474,824	Exceeds MOP									3.6	242,218	6.2	560,529	
	152	221,676	Please consult factory	261,946	384,511	445,796	507,082																	212,921	531,597
	305	256,702		227,765	350,355	411,652	472,950																	178,730	497,469
	457	294,337		188,597	311,143	372,419	433,695																	139,580	458,206
	610	334,668		143,162	265,563	326,767	387,973																	94,205	412,456
GVO-G10T36-10R3	0	155,630		Please consult factory	261,812	323,020	445,444	506,660	567,877				Exceeds MOP									3.3	237,329	6.2	592,364
	152	190,698	231,643		292,924	415,490	476,774	538,061															207,131		562,575
	305	226,652	196,522		257,815	380,405	441,702	503,000															172,005		527,519
	457	265,313	156,350		217,621	340,168	401,443	462,720															131,842		487,231
	610	306,784	109,850		171,047	293,447	354,651	415,857															85,372		440,340
GVO-G10T36-10R4	0	130,683	225,552	286,759	347,967	470,391	531,606	592,824				Exceeds MOP									2.6	176,588	6.2	617,311	
	152	157,605	203,456	264,736	326,017	448,583	509,868	571,154														154,434		595,669	
	305	184,743	177,138	238,430	299,724	422,314	483,610	544,908														128,105		569,428	
	457	213,660	146,734	208,004	269,275	391,821	453,096	514,373														97,719		538,884	
	610	244,301	111,138	172,333	233,529	355,930	417,134	478,340														62,184		502,823	

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G10T40-10R1	0	222,794			371,658	Please consult factory	Exceeds MOP													3.6	310,999	4.8	492,981	
	152	267,414			332,515																		271,792	453,963
	305	313,501			287,359																		226,625	408,828
	457	363,256			235,916																		175,202	357,347
	610	416,903			176,645																		115,997	297,947
GVO-G10T40-10R2	0	186,911	255,897	331,718	407,541	Exceeds MOP													2.9	240,733	4.8	528,863		
	152	221,343	226,781	302,683	378,586															211,601		500,034		
	305	256,406	192,622	268,537	344,454															177,439		465,924		
	457	293,973	153,416	229,306	305,199															138,238		426,629		
	610	334,076	107,854	183,662	259,472															92,693		380,774		
GVO-G10T40-10R3	0	155,075	287,732	363,553	439,377	Exceeds MOP													2.6	227,077	4.8	560,699		
	152	190,365	257,759	333,661	409,564															197,039		531,013		
	305	226,356	222,672	298,587	374,504															161,940		495,974		
	457	264,949	182,440	258,331	334,223															121,729		455,654		
	610	306,192	135,738	211,546	287,356															75,094		408,658		
GVO-G10T40-10R4	0	130,128	312,679	388,500	464,324	Exceeds MOP													2.1	176,207	4.8	585,646		
	152	157,271	290,853	366,755	442,658															154,233		564,106		
	305	184,447	264,580	340,496	416,413															127,936		537,882		
	457	213,296	234,093	309,984	385,876															97,494		507,307		
	610	243,709	198,221	274,028	349,839															61,773		471,140		

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G1348-13R1	0	363,582																		Please consult factory	612,154	721,365	Exceeds MOP	8.6	10.3	568,471	754,130
	191	443,356																	535,828		645,115	492,114				677,902	
	381	531,216																	448,434		557,732	404,716				590,522	
	572	625,709																	352,722		461,993	309,015				494,775	
	762	731,410																	243,213		352,400	199,541				385,157	
GVO-G1348-13R2	0	316,990																	Please consult factory	494,940	604,143	Exceeds MOP	7.4	10.3	484,020	800,722	
	191	385,251																430,008		539,291	419,080				736,008		
	381	460,242																355,467		464,761	344,538				661,496		
	572	540,797																273,735		383,000	262,809				579,687		
	762	630,768																180,087		289,264	169,170				485,799		
GVO-G1348-13R3	0	261,107																	Please consult factory	496,224	550,823	Exceeds MOP	6.2	10.3	408,867	856,605	
	191	318,953																441,666		496,306	354,244				802,306		
	381	382,302																378,761		433,407	291,330				739,436		
	572	450,248																309,653		364,284	222,245				670,236		
	762	525,990																230,280		284,866	142,945				590,577		
GVO-G1348-13R4	0	214,515																	Please consult factory	324,432	379,026	Exceeds MOP	5.0	10.3	324,432	903,197	
	191	260,848																281,220		335,856	281,220				860,411		
	381	311,328																231,161		340,447	231,161				810,410		
	572	365,336																176,050		230,677	176,050				755,148		
	762	425,348																112,592		167,172	112,592				691,219		
GVO-G1352-13R1	0	363,318																	Please consult factory	592,359	720,800	Exceeds MOP	7.4	9.0	579,515	785,023	
	191	443,194																516,068		644,595	503,215				708,860		
	381	531,067																428,679		557,218	415,825				621,489		
	572	625,524																332,955		461,463	320,104				525,719		
	762	731,113																223,406		351,820	210,565				416,029		
GVO-G1352-13R2	0	316,725																	Please consult factory	574,732	638,951	Exceeds MOP	6.3	9.0	484,829	831,615	
	191	385,088																509,911		574,173	419,945				766,965		
	381	460,093																435,385		499,653	345,411				692,463		
	572	540,612																353,614		417,867	263,662				610,631		
	762	630,471																259,844		324,048	169,961				516,671		
GVO-G1352-13R3	0	260,843																	Please consult factory	437,969	502,183	Exceeds MOP	5.3	9.0	412,283	887,498	
	191	318,790																383,427		447,687	357,724				833,264		
	381	382,153																320,525		384,791	294,819				770,403		
	572	450,064																251,411		315,660	225,711				701,180		
	762	525,692																172,019		236,219	146,340				621,450		
GVO-G1352-13R4	0	214,250																	Please consult factory	420,348	484,561	Exceeds MOP	4.1	9.0	304,769	934,090	
	191	260,685																377,274		441,533	261,610				891,369		
	381	311,179																327,234		391,499	211,559				841,377		
	572	365,151																272,074		336,323	156,429				786,092		
	762	425,050																208,464		272,661	92,912				722,091		

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G13T40-13R1	0	361,209							681,716	757,061	Please consult factory										Exceeds MOP	6.3	7.6	576,237	772,130	
	191	441,897							606,563	681,976		500,988	697,059													
	381	529,880							519,328	594,750		413,740	609,835													
	572	624,051							423,202	498,599		317,647	513,679													
	762	728,742							312,396	387,719		206,948	402,784													
GVO-G13T40-13R2	0	314,617					502,287	577,625	728,308	803,653	Please consult factory										Exceeds MOP	5.4	7.6	487,220	818,722	
	191	383,792					438,439	513,847	664,669	740,081		423,357	755,164													
	381	458,906					364,044	439,462	590,302	665,724		348,961	680,809													
	572	539,139					281,929	357,323	508,114	583,512		266,851	598,591													
	762	628,100					187,085	262,400	413,038	488,361		172,022	503,426													
GVO-G13T40-13R3	0	258,734					482,834	558,170	633,508	784,191	859,536	Please consult factory									Exceeds MOP	4.5	7.6	407,501	874,605	
	191	317,494					429,329	504,737	580,145	730,967	806,379		353,924	821,462												
	381	380,966					366,567	441,984	517,402	668,242	743,664		291,151	758,749												
	572	448,590					297,086	372,478	447,871	598,662	674,060		221,696	689,140												
	762	523,322					216,551	291,863	367,178	517,816	593,139		141,240	608,204												
GVO-G13T40-13R4	0	212,142					378,762	529,426	604,762	680,100	830,783	906,128	Please consult factory									Exceeds MOP	3.7	7.6	333,564	921,197
	191	259,389					336,625	487,435	562,842	638,250	789,072	864,485		291,383	879,567											
	381	309,992					286,711	437,541	512,958	588,376	739,216	814,638		241,463	829,723											
	572	363,678					231,220	381,999	457,390	532,783	683,574	758,972		185,988	774,052											
	762	422,680					166,575	317,192	392,505	467,820	618,458	693,781		121,392	708,846											
GVO-G13T44-13R1	0	360,652					632,832	724,325												Please consult factory	Exceeds MOP	5.2	6.2	577,937	760,923	
	191	441,555					557,770	649,341											502,828					685,970		
	381	529,567					470,547	562,128											415,598					598,761		
	572	623,662					374,388	465,942											319,456					502,564		
	762	728,116					263,483	354,951											208,603					391,539		
GVO-G13T44-13R2	0	314,060					587,933	679,424	770,917	Please consult factory										Exceeds MOP	4.5	6.2	496,445	807,515		
	191	383,450					524,305	615,875	707,446		432,737	744,075														
	381	458,593					449,941	541,521	633,102		358,362	669,735														
	572	538,749					367,748	459,300	550,854		276,197	587,476														
	762	627,474					272,659	364,125	455,593		181,197	492,181														
GVO-G13T44-13R3	0	258,177					460,842	643,816	735,307	826,800	Please consult factory									Exceeds MOP	3.7	6.2	405,952	863,398		
	191	317,152					407,469	590,603	682,173	773,744		352,530	810,373													
	381	380,653					344,724	527,880	619,461	711,042		289,778	747,675													
	572	448,201					275,197	458,296	549,849	641,403		220,269	678,025													
	762	522,696					194,515	377,438	468,903	560,371		139,641	596,959													
GVO-G13T44-13R4	0	211,585	324,470	415,951	507,434	690,408	781,899	873,392	Please consult factory											Exceeds MOP	3.0	6.2	324,470	909,990		
	191	259,046	282,446	374,009	465,574	648,709	740,278	831,849		282,446	868,478															
	381	309,679	232,548	324,122	415,698	598,854	690,435	782,016		232,548	818,649															
	572	363,289	177,017	268,562	360,109	543,209	634,761	726,315		177,017	762,937															
	762	422,054	112,246	203,700	295,157	478,080	569,545	661,013		112,246	697,601															

Notes:
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Actuator Model (Fail Down)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5														
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																		
GVO-G13T48-13R1	0	360,123				717,770	Exceeds MOP														4.1	521,239	5.2	761,445													
	191	441,230			Please consult factory	642,905																			446,217	686,614											
	381	529,269				555,709																				359,000	599,422										
	572	623,292				459,480																					262,827	503,182									
	762	727,521				348,357																						151,877	392,021								
GVO-G13T48-13R2	0	313,531			545,995	764,362	Exceeds MOP														3.7	480,487	5.2	808,037													
	191	383,125			482,469	701,010																			416,907	744,719											
	381	458,295			408,118	626,683																				342,549	670,397										
	572	538,380			325,889	544,393																					260,339	588,094									
	762	626,880			230,688	448,999																						165,197	492,663								
GVO-G13T48-13R3	0	257,648			492,698	601,878	820,245	Exceeds MOP													3.1	405,356	5.2	863,920													
	191	316,827	Please consult factory	439,498	548,767	767,308																					352,085	811,017									
	381	380,355		376,777	486,057	704,623																						289,354	748,336								
	572	447,831		307,189	416,438	634,941																							219,791	678,643							
	762	522,101		226,316	335,467	553,778																								138,997	597,442						
GVO-G13T48-13R4	0	211,056	430,113	539,290	648,470	866,837	Exceeds MOP														2.6	342,774	5.2	910,512													
	191	258,721	388,337	497,604	606,872	825,413																						300,925	869,123								
	381	309,381	338,473	447,751	557,032	775,597																								251,051	819,310						
	572	362,919	282,854	392,101	501,350	719,853																									195,458	763,555					
	762	421,459	217,810	326,958	436,109	654,420																									130,494	698,083					
GVO-G13T52-13R1	0	359,595			652,761	Exceeds MOP															3.7	575,711	4.5	781,180													
	191	440,905	Please consult factory	577,984																									500,877	706,498							
	381	528,971		490,800																										413,685	619,326						
	572	622,922		394,540																												317,445	523,033				
	762	726,927		283,320																												206,289	411,709				
GVO-G13T52-13R2	0	313,003			570,937	699,353	Exceeds MOP														3.2	493,889	4.5	827,773													
	191	382,799	Please consult factory	507,577	636,089																										430,471	764,603					
	381	457,997		433,249	561,774																											356,135	690,300				
	572	538,010		350,961	479,452																												273,868	607,946			
	762	626,285		255,577	383,962																												178,547	512,351			
GVO-G13T52-13R3	0	257,120	498,407	626,820	755,236	Exceeds MOP															2.6	395,678	4.5	883,656													
	191	316,501	445,365	573,875	702,387																											342,558	830,901				
	381	380,058	382,665	511,189	639,713																												279,848	768,240			
	572	447,462	313,021	441,510	570,001																													210,231	698,494		
	762	521,507	231,973	360,355	488,741																													129,270	617,129		
GVO-G13T52-13R4	0	210,528	544,999	673,412	801,828	Exceeds MOP															2.1	313,862	4.5	930,248													
	191	258,396	503,470	631,981	760,493																													272,157	889,006		
	381	309,084	453,639	582,163	710,688																														222,302	839,214	
	572	362,549	397,933	526,422	654,913																															166,658	783,406
	762	420,865	332,615	460,997	589,383																															101,536	717,771

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G0209-01R0	0	19,686																		9.1	14,486	13.8	32,488		
	25	20,988																						13,258	31,266
	51	22,602																						11,633	29,641
	76	24,098																						9,838	27,821
	102	25,674																						7,831	25,777
GVO-G0209-01R1	0	15,916																		6.9	9,832	13.8	36,257		
	25	16,655																						9,165	35,600
	51	17,552																						8,257	34,691
	76	18,332																						7,192	33,587
	102	19,132																						5,978	32,319
GVO-G0209-01R2	0	13,823																		5.8	7,714	13.8	38,350		
	25	14,331																						7,276	37,924
	51	14,933																						6,663	37,309
	76	15,420																						5,898	36,499
	102	15,902																						5,013	35,549
GVO-G0209-01R3	0	12,087																		5.1	6,771	13.8	40,086		
	25	12,530																						6,397	39,725
	51	13,050																						5,866	39,192
	76	13,455																						5,187	38,464
	102	13,849																						4,397	37,602
GVO-G0209-01R4	0	10,470																		4.1	4,561	13.8	41,704		
	25	10,806																						4,291	41,448
	51	11,192																						3,895	41,051
	76	11,462																						3,358	40,457
	102	11,710																						2,722	39,741

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																				
GVO-G0209-01R5	0	8,196			Please consult factory	10,279	12,193	14,106	17,935	19,849	23,678	25,592	29,422	31,336	33,251	37,082	38,997	40,912	42,828	4.1	6,834	13.8	43,977
	25	8,905				9,639	11,554	13,468	17,298	19,213	23,043	24,958	28,789	30,705	32,621	36,452	38,368	40,284	42,200		6,193		43,350
	51	9,763				8,771	10,685	12,600	16,429	18,344	22,174	24,089	27,920	29,835	31,751	35,582	37,498	39,414	41,330		5,325		42,480
	76	10,504				7,755	9,667	11,578	15,401	17,313	21,137	23,050	26,875	28,787	30,700	34,526	36,439	38,353	40,266		4,315		41,415
	102	11,263				6,601	8,508	10,415	14,229	16,136	19,952	21,860	25,677	27,586	29,494	33,313	35,222	37,132	39,042		3,169		40,188
GVO-G0209-01R6	0	5,968	4,853	6,766	8,680	12,507	14,421	16,335	20,163	22,077	25,906	27,820	31,650	33,565	35,480	39,310	41,225	43,141	45,056	3.0	4,853	13.8	46,206
	25	6,504	4,383	6,297	8,211	12,040	13,955	15,869	19,699	21,614	25,444	27,360	31,190	33,106	35,022	38,853	40,769	42,685	44,601		4,383		45,751
	51	7,142	3,735	5,649	7,563	11,392	13,306	15,221	19,050	20,965	24,795	26,710	30,541	32,456	34,372	38,203	40,119	42,035	43,951		3,735		45,101
	76	7,664	2,952	4,863	6,774	10,596	12,507	14,419	18,242	20,154	23,978	25,890	29,715	31,628	33,541	37,367	39,280	41,193	43,107		2,952		44,255
	102	8,185	2,054	3,960	5,866	9,679	11,586	13,493	17,307	19,215	23,030	24,938	28,755	30,664	32,573	36,391	38,300	40,210	42,120		2,054		43,266
GVO-G0209-01R7	0	4,342	6,479	8,393	10,306	14,133	16,047	17,961	21,789	23,703	27,532	29,447	33,276	35,191	37,106	40,936	42,852	44,767	46,683	2.3	3,801	13.8	47,832
	25	4,764	6,122	8,036	9,950	13,779	15,694	17,609	21,438	23,353	27,184	29,099	32,930	34,845	36,761	40,593	42,509	44,425	46,341		3,442		47,490
	51	5,259	5,618	7,532	9,446	13,274	15,189	17,104	20,933	22,848	26,678	28,593	32,424	34,339	36,255	40,086	42,002	43,918	45,834		2,938		46,984
	76	5,638	4,978	6,889	8,800	12,622	14,533	16,445	20,268	22,180	26,004	27,917	31,741	33,654	35,567	39,393	41,306	43,220	45,133		2,303		46,281
	102	6,004	4,236	6,141	8,048	11,860	13,767	15,674	19,489	21,396	25,212	27,120	30,937	32,845	34,754	38,572	40,482	42,391	44,301		1,567		45,447
GVO-G0209-01R8	0	3,136	7,685	9,598	11,512	15,339	17,253	19,167	22,995	24,909	28,738	30,652	34,482	36,397	38,312	42,142	44,057	45,973	47,888	1.7	2,710	13.8	49,037
	25	3,468	7,418	9,332	11,246	15,075	16,990	18,904	22,734	24,649	28,479	30,395	34,226	36,141	38,057	41,888	43,804	45,720	47,637		2,441		48,786
	51	3,848	7,028	8,942	10,857	14,685	16,600	18,514	22,344	24,259	28,089	30,004	33,834	35,750	37,666	41,497	43,413	45,329	47,245		2,052		48,394
	76	4,112	6,504	8,415	10,325	14,148	16,059	17,970	21,794	23,706	27,530	29,442	33,267	35,180	37,092	40,919	42,832	44,745	46,659		1,536		47,807
	102	4,354	5,885	7,791	9,697	13,510	15,417	17,324	21,138	23,046	26,861	28,769	32,586	34,495	36,404	40,222	42,131	44,041	45,951		931		47,097

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																			
GVO-G0210-01R0	0	19,645								15,051	17,583	22,647	25,179	30,244	32,777	35,310	40,376	42,909	Exceeds MOP	6.9	14,544	44,429
	25	20,951								13,825	16,358	21,424	23,957	29,023	31,557	34,090	39,158	41,692			13,319	43,212
	51	22,564								12,200	14,733	19,798	22,331	27,398	29,931	32,464	37,532	40,065			11,693	41,586
	76	24,046								10,397	12,926	17,985	20,515	25,575	28,105	30,635	35,696	38,227			9,891	39,746
	102	25,600								8,378	10,902	15,951	18,476	23,527	26,053	28,579	33,631	36,158			7,873	37,674
GVO-G0210-01R1	0	15,875					11,225	13,757	18,820	21,352	26,417	28,949	34,014	36,546	39,079	44,145	46,678	Exceeds MOP	5.2	7,706	48,198	
	25	16,618					10,561	13,093	18,159	20,691	25,757	28,290	33,357	35,890	38,424	43,491	46,025			9,041	47,546	
	51	17,514					9,653	12,185	17,250	19,783	24,849	27,382	32,448	34,981	37,515	42,582	45,116			8,134	46,636	
	76	18,279					8,576	11,105	16,163	18,693	23,752	26,281	31,341	33,871	36,402	41,463	43,994			7,059	45,512	
	102	19,058					7,347	9,871	14,919	17,443	22,493	25,018	30,068	32,594	35,120	40,172	42,699			5,833	44,215	
GVO-G0210-01R2	0	13,782					10,787	13,318	15,850	20,913	23,445	28,510	31,042	36,107	38,639	41,172	46,238	48,771	Exceeds MOP	4.4	7,749	50,291
	25	14,294					10,353	12,885	15,418	20,483	23,016	28,082	30,615	35,681	38,215	40,748	45,816	48,350			7,314	49,870
	51	14,896					9,739	12,271	14,804	19,869	22,401	27,467	30,000	35,066	37,600	40,133	45,200	47,734			6,701	49,254
	76	15,367					8,960	11,489	14,017	19,075	21,605	26,664	29,193	34,253	36,784	39,314	44,375	46,906			5,926	48,424
	102	15,828					8,054	10,577	13,101	18,149	20,673	25,723	28,248	33,298	35,824	38,350	43,402	45,929			5,026	47,445
GVO-G0210-01R3	0	12,046				7,460	12,523	15,054	17,586	22,649	25,181	30,246	32,778	37,843	40,375	42,908	47,974	50,507	Exceeds MOP	3.9	6,954	52,027
	25	12,493				7,089	12,153	14,686	17,218	22,283	24,816	29,882	32,415	37,482	40,015	42,549	47,616	50,150			6,583	51,671
	51	13,013				6,558	11,622	14,154	16,687	21,752	24,284	29,350	31,883	36,949	39,483	42,016	47,083	49,617			6,052	51,137
	76	13,402				5,868	10,925	13,453	15,982	21,040	23,570	28,629	31,158	36,218	38,748	41,279	46,340	48,871			5,362	50,389
	102	13,774				5,061	10,108	12,631	15,155	20,203	22,727	27,777	30,302	35,352	37,878	40,404	45,456	47,983			4,557	49,499
GVO-G0210-01R4	0	10,429	6,547	9,078	14,140	16,672	19,204	24,267	26,799	31,863	34,396	39,460	41,993	44,526	49,592	52,125	Exceeds MOP	3.3	5,534	53,645		
	25	10,769	6,281	8,813	13,877	16,409	18,942	24,007	26,540	31,606	34,139	39,205	41,739	44,272	49,340	51,874			5,268	53,394		
	51	11,154	5,884	8,416	13,480	16,013	18,545	23,610	26,143	31,208	33,741	38,808	41,341	43,874	48,941	51,475			4,872	52,996		
	76	11,409	5,333	7,861	12,918	15,446	17,975	23,033	25,562	30,621	33,151	38,211	40,741	43,272	48,333	50,864			4,321	52,382		
	102	11,636	4,677	7,200	12,246	14,769	17,293	22,341	24,865	29,915	32,440	37,491	40,016	42,542	47,595	50,121			3,668	51,637		
GVO-G0210-01R5	0	8,156	8,820	11,351	16,414	18,945	21,477	26,540	29,072	34,136	36,669	41,734	44,266	46,799	51,865	54,398	Exceeds MOP	3.1	6,795	55,918		
	25	8,868	8,182	10,714	15,779	18,311	20,843	25,909	28,442	33,507	36,041	41,107	43,641	46,174	51,242	53,775			6,157	55,296		
	51	9,725	7,314	9,846	14,910	17,442	19,974	25,039	27,572	32,638	35,171	40,237	42,770	45,304	50,371	52,905			5,288	54,425		
	76	10,452	6,290	8,818	13,875	16,404	18,933	23,991	26,520	31,579	34,109	39,169	41,699	44,229	49,290	51,821			4,268	53,340		
	102	11,189	5,124	7,647	12,693	15,216	17,740	22,788	25,313	30,362	32,887	37,938	40,463	42,989	48,042	50,568			3,106	52,084		
GVO-G0210-01R6	0	5,927	8,517	11,048	13,579	18,642	21,173	23,705	28,768	31,300	36,363	38,897	43,962	46,495	49,027	54,093	56,628	Exceeds MOP	2.3	4,974	58,146	
	25	6,466	8,052	10,583	13,115	18,180	20,712	23,245	28,310	30,843	35,909	38,442	43,508	46,042	48,575	53,643	56,177			4,507	57,697	
	51	7,104	7,403	9,935	12,467	17,531	20,063	22,595	27,660	30,193	35,259	37,792	42,858	45,391	47,925	52,992	55,526			3,859	57,046	
	76	7,611	6,603	9,131	11,659	16,716	19,244	21,773	26,831	29,361	34,420	36,949	42,009	44,539	47,070	52,131	54,662			3,064	56,180	
	102	8,111	5,679	8,202	10,725	15,771	18,295	20,818	25,866	28,391	33,440	35,965	41,016	43,541	46,067	51,120	53,646			2,148	55,162	
GVO-G0210-01R7	0	4,301	10,144	12,675	15,206	20,268	22,800	25,331	30,395	32,927	37,991	40,523	45,588	48,121	50,654	55,720	58,253	Exceeds MOP	1.7	3,564	59,773	
	25	4,727	9,791	12,323	14,855	19,919	22,451	24,984	30,049	32,582	37,648	40,181	45,247	47,781	50,314	55,382	57,916			3,208	59,436	
	51	5,221	9,286	11,818	14,349	19,413	21,946	24,478	29,543	32,076	37,141	39,674	44,741	47,274	49,807	54,875	57,408			2,704	58,929	
	76	5,585	8,629	11,157	13,685	18,742	21,271	23,799	28,858	31,387	36,446	38,975	44,035	46,566	49,096	54,157	56,688			2,057	58,207	
	102	5,929	7,861	10,383	12,906	17,953	20,476	23,000	28,048	30,572	35,621	38,146	43,197	45,723	48,249	53,301	55,828			1,303	57,344	

Notes:
All Published Thrusts are Guaranteed Minimum Values.

MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G0212-01R0	0	19,581				15,750	19,370	22,991	30,232	33,853	41,096	44,717	Exceeds MOP								4.8	14,301	9.0	44,717			
	25	20,893			Please consult factory	14,528	18,150	21,771	29,015	32,637	39,882	43,504											13,079		43,504		
	51	22,506				12,902	16,524	20,145	27,389	31,010	38,255	41,877												11,454		41,877	
	76	23,964				11,083	14,700	18,317	25,553	29,171	36,407	40,025													9,636		40,025
	102	25,484				9,040	12,651	16,263	23,486	27,098	34,323	37,936													7,596		37,936
GVO-G0212-01R1	0	15,812				Please consult factory	12,279	19,519	23,140	26,760	34,002	37,623	44,866	Exceeds MOP									3.7	10,107	9.0	48,487	
	25	16,560			11,619		18,861	22,483	26,105	33,348	36,970	44,215	47,837											9,446		47,837	
	51	17,455			10,710		17,953	21,574	25,196	32,439	36,061	43,305	46,927											8,538		46,927	
	76	18,197			9,616		16,849	20,467	24,084	31,319	34,937	42,173	45,792												7,446		45,792
	102	18,943			8,360		15,582	19,193	22,804	30,028	33,640	40,865	44,477												6,194		44,477
GVO-G0212-01R2	0	13,719	7,132	10,752	14,372	21,612	25,233	28,853	36,095	39,716	46,959	50,580	Exceeds MOP									3.0	7,132	9.0	50,580		
	25	14,236	6,701	10,322	13,943	21,186	24,807	28,429	35,673	39,295	46,539	50,162											6,701		50,162		
	51	14,837	6,087	9,708	13,329	20,571	24,192	27,814	35,057	38,679	45,924	49,546											6,087		49,546		
	76	15,285	5,295	8,911	12,528	19,762	23,379	26,996	34,231	37,849	45,086	48,704												5,295		48,704	
	102	15,713	4,370	7,980	11,590	18,812	22,423	26,034	33,258	36,870	44,095	47,707												4,370		47,707	
GVO-G0212-01R3	0	11,983	8,868	12,488	16,108	23,348	26,969	30,589	37,831	41,452	48,695	52,316	Exceeds MOP									2.7	6,696	9.0	52,316		
	25	12,435	8,501	12,122	15,744	22,986	26,608	30,230	37,473	41,095	48,340	51,962											6,329		51,962		
	51	12,954	7,970	11,591	15,211	22,454	26,075	29,697	36,940	40,562	47,806	51,429											5,797		51,429		
	76	13,320	7,260	10,876	14,493	21,726	25,344	28,961	36,196	39,814	47,050	50,669												5,090		50,669	
	102	13,659	6,424	10,034	13,644	20,866	24,477	28,088	35,311	38,923	46,148	49,761												4,258		49,761	
GVO-G0212-01R4	0	10,365	10,485	14,105	17,725	24,966	28,586	32,207	39,449	43,070	50,312	53,934	Exceeds MOP									2.3	5,418	9.0	53,934		
	25	10,711	10,225	13,846	17,467	24,710	28,331	31,953	39,197	42,819	50,063	53,686											5,156		53,686		
	51	11,096	9,828	13,449	17,070	24,312	27,934	31,555	38,798	42,420	49,665	53,287											4,759		53,287		
	76	11,327	9,252	12,869	16,485	23,719	27,336	30,954	38,189	41,807	49,043	52,662											4,190		52,662		
	102	11,520	8,562	12,172	15,783	23,004	26,615	30,226	37,450	41,062	48,287	51,900											3,509		51,900		
GVO-G0212-01R5	0	8,092	12,759	16,378	19,999	27,239	30,860	34,480	41,722	45,343	52,585	56,207	Exceeds MOP									2.1	6,243	9.0	56,207		
	25	8,810	12,127	15,748	19,369	26,612	30,233	33,855	41,099	44,721	51,965	55,588											5,609		55,588		
	51	9,666	11,257	14,878	18,499	25,741	29,363	32,984	40,228	43,850	51,094	54,716											4,740		54,716		
	76	10,370	10,210	13,826	17,443	24,677	28,294	31,911	39,147	42,764	50,001	53,619											3,701		53,619		
	102	11,073	9,009	12,619	16,230	23,451	27,062	30,673	37,897	41,509	48,734	52,347											2,512		52,347		
GVO-G0212-01R6	0	5,864	14,987	18,607	22,227	29,467	33,088	36,708	43,950	47,571	54,814	58,435	Exceeds MOP									1.6	4,852	9.0	58,435		
	25	6,409	14,528	18,149	21,770	29,013	32,634	36,256	43,500	47,122	54,366	57,989											4,390		57,989		
	51	7,045	13,878	17,499	21,120	28,362	31,984	35,605	42,849	46,471	53,715	57,337											3,741		57,337		
	76	7,529	13,051	16,667	20,284	27,517	31,135	34,752	41,987	45,605	52,841	56,460											2,926		56,460		
	102	7,995	12,087	15,697	19,308	26,529	30,140	33,751	40,975	44,587	51,812	55,425											1,981		55,425		

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0214-01R0	0	19,531				14,681	23,477	27,875	32,274	41,071	Exceeds MOP										3.9	13,801	7.2	42,831		
	25	20,848		Please consult factory	13,463	22,261	26,661	31,061	39,861																12,583	41,621
	51	22,459			11,836	20,635	25,034	29,434	38,233																10,957	39,993
	76	23,899			10,002	18,791	23,185	27,580	36,370																9,123	38,128
	102	25,393			7,938	16,712	21,100	25,488	34,264																7,061	36,020
GVO-G0214-01R1	0	15,761	9,655	14,052	18,450	27,246	31,645	36,043	44,841	Exceeds MOP											3.0	9,655	7.2	46,600		
	25	16,514	8,998	13,397	17,796	26,595	30,994	35,394	44,194															8,998	45,954	
	51	17,409	8,089	12,488	16,887	25,685	30,084	34,484	43,284															8,089	45,044	
	76	18,132	6,981	11,375	15,769	24,557	28,952	33,346	42,137															6,981	43,895	
	102	18,851	5,706	10,093	14,479	23,254	27,641	32,029	40,806															5,706	42,561	
GVO-G0214-01R2	0	13,668	11,748	16,145	20,543	29,339	33,738	38,136	46,934	Exceeds MOP											2.5	7,350	7.2	48,693		
	25	14,190	11,322	15,721	20,120	28,919	33,319	37,718	46,518															6,924	48,278	
	51	14,790	10,708	15,106	19,505	28,304	32,703	37,102	45,902															6,309	47,662	
	76	15,220	9,893	14,287	18,681	27,469	31,864	36,259	45,049															5,500	46,807	
	102	15,621	8,936	13,323	17,709	26,484	30,871	35,259	44,036															4,550	45,791	
GVO-G0214-01R3	0	11,932	13,484	17,881	22,279	31,075	35,474	39,872	48,670	Exceeds MOP											2.2	6,448	7.2	50,429		
	25	12,389	13,123	17,522	21,921	30,720	35,119	39,519	48,319															6,085	50,079	
	51	12,908	12,590	16,989	21,388	30,186	34,586	38,985	47,785															5,553	49,545	
	76	13,255	11,858	16,252	20,646	29,434	33,829	38,223	47,014															4,829	48,772	
	102	13,567	10,990	15,376	19,763	28,537	32,925	37,313	46,089															3,972	47,845	
GVO-G0214-01R4	0	10,315	15,101	19,499	23,897	32,693	37,091	41,490	50,287	Exceeds MOP											1.9	5,427	7.2	52,047		
	25	10,666	14,847	19,246	23,645	32,443	36,843	41,243	50,042															5,169	51,803	
	51	11,049	14,449	18,847	23,246	32,045	36,444	40,844	49,643															4,772	51,403	
	76	11,263	13,851	18,245	22,638	31,427	35,821	40,216	49,006															4,185	50,765	
	102	11,429	13,128	17,515	21,901	30,676	35,063	39,451	48,228															3,479	49,983	
GVO-G0214-01R5	0	8,041	17,374	21,772	26,170	34,966	39,365	43,763	52,561	Exceeds MOP											1.8	6,821	7.2	54,320		
	25	8,764	16,748	21,147	25,546	34,345	38,745	43,144	51,944															6,191	53,704	
	51	9,620	15,878	20,277	24,676	33,474	37,873	42,273	51,072															5,321	52,832	
	76	10,305	14,808	19,202	23,596	32,384	36,779	41,174	49,964															4,264	51,722	
	102	10,982	13,575	17,962	22,348	31,123	35,510	39,898	48,675															3,049	50,430	

Notes:

All Published Thrusts are Guaranteed Minimum Values.

MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																									
GVO-G0216-01R0	0	19,466	14,230	20,029	25,829	37,428	43,228	Exceeds MOP													3.0	14,230	5.5	43,228	
	25	20,788	13,016	18,817	24,618	36,221	42,022																	13,016	42,022
	51	22,399	11,389	17,190	22,991	34,593	40,394																	11,389	40,394
	76	23,815	9,537	15,332	21,127	32,718	38,513																	9,537	38,513
	102	25,274	7,446	13,233	19,019	30,594	36,382																	7,446	36,382
GVO-G0216-01R1	0	15,696	17,999	23,798	29,598	41,198	46,998	Exceeds MOP													2.2	8,720	5.5	46,998	
	25	16,455	17,350	23,150	28,951	40,554	46,356																	8,069	46,356
	51	17,349	16,440	22,240	28,041	39,643	45,445																	7,159	45,445
	76	18,048	15,303	21,098	26,893	38,484	44,280																	6,032	44,280
	102	18,733	13,987	19,774	25,561	37,136	42,923																	4,730	42,923
GVO-G0216-01R2	0	13,603	20,092	25,891	31,691	43,291	49,091	Exceeds MOP													1.9	7,334	5.5	49,091	
	25	14,131	19,674	25,475	31,276	42,878	48,680																	6,913	48,680
	51	14,730	19,058	24,859	30,659	42,262	48,063																	6,297	48,063
	76	15,136	18,215	24,010	29,805	41,396	47,192																	5,467	47,192
	102	15,503	17,218	23,004	28,791	40,366	46,153																	4,488	46,153
GVO-G0216-01R3	0	11,867	21,828	27,627	33,427	45,027	50,827	Exceeds MOP													1.7	6,750	5.5	50,827	
	25	12,330	21,475	27,275	33,076	44,679	50,481																	6,393	50,481
	51	12,847	20,941	26,741	32,542	44,144	49,946																	5,860	49,946
	76	13,171	20,180	25,975	31,770	43,361	49,157																	5,115	49,157
	102	13,449	19,271	25,058	30,845	42,419	48,207																	4,228	48,207
GVO-G0209-02R1	0	22,880																			9.7	13,664	13.8	29,374	
	25	23,971																				12,574		28,284	
	51	25,066																				11,403		27,107	
	76	26,178																				9,982		25,664	
	102	27,352																				8,443		24,099	
GVO-G0209-02R2	0	20,085																			8.5	11,863	13.8	32,170	
	25	20,948																				11,000		31,306	
	51	21,810																				10,064		30,364	
	76	22,664																				8,908		29,178	
	102	23,563																				7,652		27,888	
GVO-G0209-02R3	0	17,992																			7.6	10,509	13.8	34,263	
	25	18,775																				9,726		33,480	
	51	19,553																				8,875		32,620	
	76	20,317																				7,814		31,525	
	102	21,119																				6,662		30,331	
GVO-G0209-02R4	0	15,834																			6.8	9,603	13.8	36,421	
	25	16,601																				8,835		35,653	
	51	17,364																				8,001		34,810	
	76	18,110																				6,964		33,733	
	102	18,893																				5,836		32,558	

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G0210-02R1	0	22,843								14,466	19,532	22,065	27,131	29,665	32,198	37,266	39,800	Exceeds MOP	7.4	12.8	13,959	41,320			
	25	23,934								13,376	18,442	20,975	26,041	28,575	31,108	36,176	38,710				12,869	40,230			
	51	25,026								12,202	17,266	19,799	24,864	27,396	29,929	34,995	37,528				11,696	39,048			
	76	26,122								10,773	15,830	18,359	23,418	25,947	28,477	33,537	36,067				10,267	37,585			
	102	27,278								9,224	14,273	16,798	21,849	24,375	26,900	31,953	34,479				8,719	35,995			
GVO-G0210-02R2	0	20,048								14,728	17,261	22,327	24,860	29,927	32,460	34,994	40,061	42,595	Exceeds MOP	6.3	12.8	11,182	44,115		
	25	20,911								13,865	16,398	21,464	23,997	29,064	31,597	34,131	39,198	41,732				10,319	43,252		
	51	21,769								12,927	15,459	20,523	23,055	28,120	30,653	33,186	38,252	40,785				9,382	42,305		
	76	22,608								11,759	14,287	19,344	21,873	26,932	29,461	31,991	37,051	39,581				8,219	41,099		
	102	23,489								10,488	13,012	18,062	20,587	25,638	28,163	30,689	35,742	38,268				6,954	39,784		
GVO-G0210-02R3	0	17,955								11,756	16,821	19,354	24,420	26,953	32,020	34,553	37,087	42,154	44,688	Exceeds MOP	5.7	12.8	10,237	46,208	
	25	18,738								10,973	16,038	18,571	23,637	26,170	31,237	33,770	36,304	41,371	43,905				9,454	45,426	
	51	19,513								10,120	15,183	17,715	22,779	25,312	30,377	32,909	35,442	40,508	43,041				8,601	44,561	
	76	20,261								9,049	14,105	16,634	21,691	24,220	29,279	31,808	34,338	39,397	41,928				7,532	43,446	
	102	21,045								7,884	12,932	15,456	20,506	23,031	28,081	30,607	33,133	38,185	40,712				6,370	42,228	
GVO-G0210-02R4	0	15,797								11,382	13,914	18,979	21,512	26,578	29,111	34,178	36,711	39,245	44,312	46,846	Exceeds MOP	5.1	12.8	9,356	48,366
	25	16,564								10,614	13,147	18,212	20,745	25,811	28,344	33,410	35,944	38,477	43,545	46,079				8,588	47,599
	51	17,323								9,778	12,309	17,373	19,905	24,969	27,501	32,566	35,099	37,632	42,697	45,231				7,752	46,751
	76	18,054								8,728	11,256	16,313	18,841	23,899	26,427	31,486	34,015	36,545	41,605	44,135				6,706	45,653
	102	18,819								7,586	10,110	15,158	17,682	22,732	25,257	30,307	32,833	35,359	40,411	42,938				5,568	44,454
GVO-G0212-02R1	0	22,786								16,257	19,879	27,123	30,745	37,989	41,612	Exceeds MOP	5.1	9.0	13,360	41,612					
	25	23,876								15,167	18,789	26,033	29,655	36,899	40,522				12,270	40,522					
	51	24,962								13,989	17,610	24,852	28,473	35,715	39,337				11,093	39,337					
	76	26,035								12,543	16,159	23,393	27,010	34,244	37,862				9,650	37,862					
	102	27,162								10,973	14,585	21,808	25,420	32,645	36,258				8,084	36,258					
GVO-G0212-02R2	0	19,990								15,431	19,053	22,674	29,918	33,540	40,785	44,407	Exceeds MOP	4.5	9.0	11,810	44,407				
	25	20,853								14,568	18,190	21,811	29,055	32,677	39,922	43,544				10,947	43,544				
	51	21,705								13,626	17,246	20,867	28,109	31,730	38,972	42,594				10,005	42,594				
	76	22,521								12,441	16,057	19,673	26,907	30,524	37,758	41,376				8,825	41,376				
	102	23,373								11,151	14,762	18,373	25,597	29,209	36,434	40,047				7,540	40,047				
GVO-G0212-02R3	0	17,897								17,524	21,146	24,768	32,011	35,633	42,878	46,500	Exceeds MOP	4.0	9.0	10,282	46,500				
	25	18,680								9,499	16,741	20,363	23,985	31,228	34,850	42,095				45,717	9,499	45,717			
	51	19,449								8,641	15,882	19,502	23,123	30,365	33,986	41,228				44,850	8,641	44,850			
	76	20,174								7,556	14,788	18,404	22,020	29,254	32,870	40,105				43,723	7,556	43,723			
	102	20,930								6,373	13,595	17,206	20,817	28,040	31,653	38,878				42,490	6,373	42,490			
GVO-G0212-02R4	0	15,739								12,440	19,682	23,304	26,925	34,169	37,791	45,036	48,658	Exceeds MOP	3.6	9.0	9,543	48,658			
	25	16,507								11,672	18,915	22,536	26,158	33,402	37,024	44,268	47,891				8,775	47,891			
	51	17,259								10,831	18,072	21,692	25,313	32,554	36,175	43,418	47,039				7,935	47,039			
	76	17,967								9,763	16,995	20,611	24,227	31,461	35,078	42,312	45,930				6,871	45,930			
	102	18,704								8,599	15,821	19,432	23,043	30,267	33,879	41,104	44,716				5,711	44,716			

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0214-02R1	0	22,740				20,369	24,769	29,169	37,968	Exceeds MOP										4.1	12,450	7.2	39,728			
	25	23,830			Please consult factory	19,279	23,679	28,078	36,878															11,360	38,638	
	51	24,912				18,096	22,495	26,893	35,691																10,180	37,450
	76	25,966				16,629	21,022	25,416	34,204																8,721	35,961
	102	27,071				15,034	19,422	23,809	32,586																7,137	34,342
GVO-G0214-02R2	0	19,945			14,366	23,164	27,564	31,964	40,764	Exceeds MOP										3.7	11,726	7.2	42,524			
	25	20,808			Please consult factory	13,503	22,301	26,701	31,101		39,901														10,863	41,661
	51	21,655				12,557	21,353	25,751	30,150		38,947														9,918	40,707
	76	22,452				11,356	20,143	24,536	28,930		37,718														8,721	39,475
	102	23,282				10,048	18,823	23,210	27,598		36,375														7,416	38,130
GVO-G0214-02R3	0	17,851			12,060	16,459	25,258	29,657	34,057	Exceeds MOP										3.3	10,300	7.2	44,617			
	25	18,634			Please consult factory	11,277	15,676	24,475	28,874		33,274	42,074													9,517	43,834
	51	19,399				10,415	14,813	23,609	28,007		32,406	41,204													8,656	42,963
	76	20,105				9,311	13,703	22,490	26,883		31,277	40,065													7,554	41,822
	102	20,838				8,106	12,492	21,266	25,654		30,042	38,819													6,351	40,574
GVO-G0214-02R4	0	15,693	9,819	14,218	18,617	27,416	31,815	36,215	45,015	Exceeds MOP										3.0	9,819	7.2	46,775			
	25	16,461	9,052	13,450	17,850	26,648	31,048	35,448	44,247															9,052	46,007	
	51	17,209	8,207	12,605	17,003	25,799	30,197	34,596	43,393															8,207	45,153	
	76	17,897	7,125	11,518	15,911	24,697	29,090	33,484	42,272															7,125	44,029	
	102	18,612	5,945	10,332	14,718	23,493	27,880	32,268	41,045															5,945	42,800	
GVO-G0216-02R1	0	22,680			16,925	22,726	34,329	40,130	Exceeds MOP											3.2	13,444	5.5	40,130			
	25	23,771			Please consult factory	15,835	21,636	33,238		39,040															12,354	39,040
	51	24,846				14,648	20,448	32,048		37,848															11,169	37,848
	76	25,876				13,166	18,960	30,548		36,343															9,690	36,343
	102	26,952				11,554	17,341	28,916		34,704															8,082	34,704
GVO-G0216-02R2	0	19,885	13,919	19,720	25,521	37,124	42,925	Exceeds MOP												2.8	11,599	5.5	42,925			
	25	20,748	13,056	18,857	24,658	36,261	42,062																	10,736	42,062	
	51	21,589	12,106	17,905	23,705	35,304	41,105																	9,786	41,105	
	76	22,362	10,887	16,680	22,474	34,062	39,857																	8,569	39,857	
	102	23,164	9,557	15,343	21,130	32,705	38,493																	7,242	38,493	
GVO-G0216-02R3	0	17,792	16,013	21,813	27,614	39,217	45,018	Exceeds MOP												2.5	10,212	5.5	45,018			
	25	18,575	15,230	21,030	26,831	38,434	44,236																	9,429	44,236	
	51	19,333	14,362	20,161	25,961	37,561	43,361																	8,563	43,361	
	76	20,015	13,234	19,027	24,821	36,409	42,204																	7,440	42,204	
	102	20,720	12,000	17,787	23,574	35,148	40,936																	6,214	40,936	
GVO-G0216-02R4	0	15,634	18,170	23,971	29,772	41,375	47,176	Exceeds MOP												2.2	8,889	5.5	47,176			
	25	16,401	17,403	23,204	29,005	40,608	46,409																	8,122	46,409	
	51	17,144	16,551	22,351	28,150	39,750	45,550																	7,273	45,550	
	76	17,808	15,441	21,234	27,028	38,616	44,411																	6,172	44,411	
	102	18,494	14,227	20,013	25,800	37,375	43,162																	4,969	43,162	

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)											
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5								
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																												
GVO-G0310-03R1	0	28,851																		Please consult factory	25,191	30,225	32,742	35,260	37,778	10.7	23,680	13.8	39,289		
	51	31,425																			23,274	28,320	30,843	33,366	35,890					21,761	37,404
	102	33,978																			20,834	25,882	28,406	30,930	33,454					19,320	34,969
	152	36,673																			17,936	22,980	25,503	28,025	30,548					16,423	32,061
	203	39,492																			14,441	19,473	21,990	24,507	27,024					12,931	28,534
GVO-G0310-03R2	0	25,130																		Please consult factory	23,878	26,394	28,911	33,946	36,463	9.3	20,355	13.8	41,010		
	51	27,411																	22,243		24,766	27,288	32,334	34,857	18,712					41,418	
	102	29,647																	20,118		22,641	25,165	30,213	32,737	16,585					39,300	
	152	31,991																	17,574		20,096	22,618	27,662	30,184	14,044					36,743	
	203	34,421																	14,480		16,996	19,512	24,544	27,061	10,959					33,605	
GVO-G0310-03R3	0	21,927																		Please consult factory	19,533	22,049	27,082	29,598	32,115	8.1	17,520	13.8	46,214		
	51	23,957																	18,131		20,653	25,698	28,220	30,743	16,113					44,873	
	102	25,920																	16,274		18,797	23,844	26,368	28,891	14,256					43,026	
	152	27,964																	14,037		16,558	21,601	24,123	26,645	12,020					40,770	
	203	30,061																	11,295		13,810	18,841	21,356	23,872	9,283					37,966	
GVO-G0310-03R4	0	19,173																		Please consult factory	17,254	22,286	24,802	29,835	32,351	7.2	15,745	13.8	48,967		
	51	20,987																	16,057		21,101	23,623	28,668	31,190	14,543					47,842	
	102	22,716																	14,432		19,478	22,001	27,048	29,572	12,918					46,230	
	152	24,501																	12,457		17,500	20,021	25,064	27,586	10,945					44,233	
	203	26,310																	10,016		15,046	17,561	22,592	25,107	8,508					41,717	
GVO-G0312-03R1	0	28,743																		Please consult factory	23,783	30,991	34,595	41,804	45,408	Exceeds MOP	7.4	11.7	54,061		
	51	31,360																	21,887		29,109	32,720	39,943	43,555	21,164					52,224	
	102	33,920																	19,449		26,674	30,287	37,512	41,125	18,727					49,797	
	152	36,601																	16,546		23,766	27,376	34,598	38,208	15,824					46,875	
	203	39,377																	13,030		20,235	23,838	31,045	34,648	12,310					43,298	
GVO-G0312-03R2	0	25,022																		Please consult factory	23,901	27,504	34,711	38,316	45,524	Exceeds MOP	6.5	11.7	57,782		
	51	27,346																	22,290		25,901	33,123	36,734	43,957	18,679					56,238	
	102	29,589																	20,168		23,781	31,005	34,618	41,843	16,556					54,128	
	152	31,920																	17,618		21,227	28,448	32,058	39,279	14,008					51,557	
	203	34,306																	14,499		18,101	25,306	28,909	36,116	10,897					48,369	
GVO-G0312-03R3	0	21,818																		Please consult factory	19,898	27,104	30,708	37,915	41,519	Exceeds MOP	5.7	11.7	60,986		
	51	23,891																	18,523		25,745	29,355	36,578	40,189	16,357					59,693	
	102	25,862																	16,671		23,895	27,507	34,732	38,344	14,504					57,855	
	152	27,893																	14,425		21,644	25,254	32,474	36,085	12,259					55,583	
	203	29,945																	11,656		18,860	22,462	29,667	33,270	9,495					52,730	
GVO-G0312-03R4	0	19,065																		Please consult factory	15,447	19,049	22,652	29,858	33,461	Exceeds MOP	5.0	11.7	63,739		
	51	20,922																	14,272		17,882	21,493	28,714	32,325	14,272					62,663	
	102	22,658																	12,651		16,263	19,875	27,099	30,711	12,651					61,059	
	152	24,430																	10,670		14,279	17,888	25,107	28,717	10,670					59,046	
	203	26,194																	8,205		11,806	15,407	22,611	26,213	8,205					56,481	

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)													
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5										
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																														
GVO-G0314-03R1	0	28,657							30,966	35,346	44,107	48,488	Please consult factory														Exceeds MOP	6.1	9.3	23,082	51,117		
	51	31,309							29,112	33,501	42,279	46,668																			21,213	49,302	
	102	33,874							26,682	31,073	39,854	44,244																			18,780	46,879	
	152	36,545							23,766	28,153	36,929	41,317																			15,868	43,950	
	203	39,285							20,206	24,584	33,343	37,722																			12,325	40,350	
GVO-G0314-03R2	0	24,936						21,548	25,927	34,687	39,067	47,828	52,209	Please consult factory															Exceeds MOP	5.3	9.3	19,796	54,838
	51	27,295					19,961	24,349	33,126	37,515	46,293	50,682															18,206	53,316					
	102	29,543					17,844	22,233	31,013	35,404	44,185	48,575															16,088	51,210					
	152	31,863					15,285	19,672	28,447	32,835	41,610	45,999															13,531	48,632					
	203	34,214					12,142	16,520	25,277	29,655	38,414	42,794															10,391	45,421					
GVO-G0314-03R3	0	21,732					20,373	24,752	29,131	37,890	42,271	51,032	55,413	Please consult factory															Exceeds MOP	4.7	9.3	17,745	58,042
	51	23,840				19,028	23,416	27,804	36,581	40,970	49,748	54,137															16,395	56,771					
	102	25,817				17,180	21,570	25,960	34,740	39,130	47,911	52,302															14,547	54,936					
	152	27,837				14,925	19,312	23,699	32,474	36,861	45,637	50,025															12,293	52,658					
	203	29,854				12,125	16,503	20,881	29,637	34,016	42,774	47,154															9,499	49,782					
GVO-G0314-03R4	0	18,979					23,126	27,505	31,884	40,644	45,024	53,785	58,166	Please consult factory															Exceeds MOP	4.1	9.3	15,244	60,795
	51	20,870				21,997	26,385	30,774	39,551	43,940	52,718	57,107															14,099	59,741					
	102	22,613				20,385	24,774	29,164	37,944	42,334	51,115	55,506															12,484	58,140					
	152	24,374				18,388	22,775	27,162	35,937	40,325	49,100	53,488															10,493	56,121					
	203	26,103				15,876	20,254	24,632	33,388	37,767	46,525	50,905															7,997	53,533					
GVO-G0316-03R1	0	28,546					27,340	33,119	38,899	50,460	Exceeds MOP																4.6	7.2	22,716	52,772			
	51	31,242				25,509	31,298	37,089	48,669																				20,877	50,986			
	102	33,815				23,083	28,874	34,666	46,250																				18,449	48,567			
	152	36,472				20,159	25,947	31,736	43,314																				15,528	45,630			
	203	39,167				16,576	22,354	28,132	39,689																				11,954	42,001			
GVO-G0316-03R2	0	24,825					19,502	31,061	36,840	42,620	54,181	Exceeds MOP															4.0	7.2	19,502	56,493			
	51	27,228				17,943	29,523	35,312	41,102	52,683																17,943			54,999				
	102	29,484				15,831	27,414	33,205	38,997	50,581																15,831			52,898				
	152	31,790				13,264	24,840	30,629	36,417	47,995																			13,264	50,311			
	203	34,096				10,092	21,647	27,425	33,203	44,761																			10,092	47,072			
GVO-G0316-03R3	0	21,621					16,928	22,706	34,264	40,044	45,824	57,385	Please consult factory															Exceeds MOP	3.5	7.2	16,928	59,697	
	51	23,773				15,609	21,398	32,977	38,767	44,557	56,138															15,609	58,454						
	102	25,757				13,766	19,557	31,140	36,932	42,724	54,308															13,766	56,625						
	152	27,764				11,503	17,291	28,867	34,656	40,444	52,022															11,503	54,338						
	203	29,735				8,676	14,453	26,008	31,785	37,564	49,121															8,676	51,433						
GVO-G0316-03R4	0	18,868					19,681	25,459	37,018	42,797	48,577	60,138	Please consult factory															Exceeds MOP	3.1	7.2	15,058	62,450	
	51	20,803				18,579	24,368	35,947	41,737	47,527	59,108															13,947	61,424						
	102	22,553				16,970	22,761	34,344	40,136	45,928	57,512															12,337	59,829						
	152	24,301				14,966	20,754	32,330	38,119	43,907	55,485															10,336	57,801						
	203	25,984				12,427	18,204	29,759	35,536	41,315	52,872															7,806	55,184						

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G0320-03R1	0	28,324	24,272	33,429	42,586	Exceeds MOP															2.9	22,441	4.5	51,743
	51	31,109	22,503	31,673	40,844																	20,669		50,014
	102	33,697	20,088	29,260	38,433																	18,253		47,606
	152	36,327	17,145	26,313	35,481																	15,311		44,650
	203	38,931	13,498	22,652	31,807																	11,667		40,963
GVO-G0320-03R2	0	24,604	27,993	37,150	46,307	Exceeds MOP															2.6	20,668	4.5	55,464
	51	27,095	26,517	35,687	44,858															19,181		54,028		
	102	29,366	24,419	33,591	42,764															17,081		51,937		
	152	31,645	21,826	30,994	40,163																	14,492		49,332
	203	33,860	18,569	27,724	36,878																	11,246		46,034
GVO-G0320-03R3	0	21,400	31,197	40,353	49,511	Exceeds MOP															2.2	16,547	4.5	58,668
	51	23,640	29,972	39,142	48,312															15,300		57,483		
	102	25,639	28,145	37,318	46,490															13,470		55,663		
	152	27,618	25,853	35,021	44,190																	11,184		53,359
	203	29,499	22,930	32,084	41,239																	8,283		50,394
GVO-G0320-03R4	0	18,647	33,950	43,107	52,264	Exceeds MOP															1.9	13,807	4.5	61,421
	51	20,670	32,942	42,112	51,282															12,768		60,453		
	102	22,435	31,349	40,522	49,694															11,170		58,867		
	152	24,155	29,316	38,484	47,653																	9,147		56,822
	203	25,748	26,681	35,835	44,990																	6,542		54,145

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)															
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5												
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																
GVO-G0412-04R2	0	38,437																		Please consult factory	38,956	46,143	49,736	53,330	56,924	11.0	13.8	38,956	59,081						
	64	43,083																			35,128	42,328	45,929	49,530	53,130			35,128	55,291						
	127	47,845																			30,549	37,753	41,355	44,957	48,560			30,549	50,721						
	191	53,049																			25,128	32,328	35,928	39,529	43,129			25,128	45,290						
	254	58,625																			18,725	25,911	29,504	33,098	36,691			18,725	38,848						
GVO-G0412-04R3	0	32,420																		Please consult factory	37,787	41,380	44,973	52,159	55,753	59,346	62,941	9.2	13.8	32,040	65,097				
	64	36,368																	34,643		38,242	41,843	49,043	52,644	56,244	59,845	28,883			62,006					
	127	40,374																	30,818		34,419	38,021	45,225	48,827	52,429	56,031	25,055			58,193					
	191	44,724																	26,254		29,853	33,453	40,653	44,253	47,854	51,454	20,495			53,615					
	254	49,348																	20,817		24,409	28,002	35,187	38,781	42,374	45,968	15,070			48,124					
GVO-G0412-04R4	0	27,255																		Please consult factory	32,176	35,768	42,952	46,545	50,138	57,324	60,918	64,512	68,106	7.7	13.8	26,430	70,262		
	64	30,449																	29,763		33,362	40,562	44,162	47,762	54,962	58,563	62,163	65,764	24,004			67,925			
	127	33,638																	26,750		30,351	37,554	41,155	44,757	51,961	55,563	59,165	62,768	20,988			64,929			
	191	37,067																	23,113		26,712	33,911	37,510	41,110	48,310	51,910	55,511	59,111	17,354			61,272			
	254	40,664																	18,726		22,317	29,501	33,093	36,686	43,871	47,465	51,058	54,652	12,980			56,808			
GVO-G0414-04R1	0	45,643																		Please consult factory	44,287	48,657	57,398	61,768	66,139	70,511	10.3	13.8	42,539	73,134					
	64	50,527																	40,309		44,687	53,443	57,822	62,201	66,580	38,557			69,207						
	127	55,518																	35,522		39,902	48,662	53,043	57,423	61,804	33,770			64,432						
	191	60,960																	29,839		34,216	42,972	47,351	51,729	56,108	28,088			58,735						
	254	66,777																	23,105		27,475	36,214	40,585	44,955	49,326	21,358			51,949						
GVO-G0414-04R2	0	38,347																		Please consult factory	38,475	47,213	51,583	55,952	64,693	69,064	73,435	77,806	9.0	13.8	38,475	80,429			
	64	43,029																	34,674		43,429	47,807	52,185	60,942	65,321	69,700	74,078	34,674			76,706				
	127	47,800																	30,102		38,861	43,241	47,621	56,381	60,761	65,142	69,523	30,102			72,151				
	191	52,993																	24,673		33,428	37,806	42,183	50,939	55,318	59,696	64,075	24,673			66,702				
	254	58,534																	18,243		26,980	31,349	35,718	44,458	48,828	53,199	57,570	18,243			60,193				
GVO-G0414-04R3	0	32,331																		Please consult factory	40,123	44,491	53,229	57,599	61,969	70,709	75,080	79,451	83,823	7.6	13.8	32,260	86,445		
	64	36,314																	37,012		41,389	50,144	54,522	58,900	67,657	72,036	76,414	80,793	29,133			83,421			
	127	40,328																	33,194		37,574	46,333	50,713	55,092	63,853	68,233	72,614	76,995	25,312			79,623			
	191	44,668																	28,621		32,998	41,753	46,131	50,508	59,264	63,643	68,021	72,400	20,743			75,027			
	254	49,257																	23,151		27,519	36,256	40,625	44,995	53,735	58,105	62,476	66,846	15,289			69,469			
GVO-G0414-04R4	0	27,166																		Please consult factory	32,184	36,551	45,288	49,656	58,395	62,764	67,134	75,875	80,245	84,616	88,988	6.3	13.8	26,069	91,611
	64	30,395																	29,799		34,176	42,931	47,308	56,063	60,441	64,819	73,576	77,955	82,333	86,712	23,672			89,340	
	127	33,592																	26,793		31,172	39,930	44,310	53,069	57,449	61,829	70,589	74,969	79,350	83,731	20,663			86,359	
	191	37,011																	23,148		27,525	36,278	40,655	49,410	53,787	58,165	66,921	71,300	75,678	80,057	17,021			82,684	
	254	40,573																	18,732		23,099	31,835	36,203	44,940	49,309	53,679	62,419	66,789	71,159	75,530	12,618			78,153	

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)							
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G0416-04R1	0	45,528								Please consult factory	50,501	56,270	67,810	73,580	79,351	90,894	Exceeds MOP			7.8	42,425		92,048				
	64	50,458									46,557	52,336	63,895	69,675	75,455	87,016		38,466			88,172						
	127	55,460									41,778	47,560	59,123	64,905	70,687	82,252		33,684			83,409						
	191	60,889									36,086	41,864	53,423	59,202	64,982	76,542		27,996			77,698						
	254	66,660									29,317	35,086	46,625	52,395	58,165	69,706		21,242			70,861						
GVO-G0416-04R2	0	38,232							40,490	46,259	57,797	63,566	75,106	80,876	86,647	98,189	Exceeds MOP			6.8	38,183		99,343				
	64	42,960							36,719	42,498	54,056	59,835	71,394	77,174	82,954	94,515		34,408			95,671						
	127	47,741							32,153	37,934	49,497	55,278	66,842	72,624	78,406	89,971		29,841			91,127						
	191	52,922							26,717	32,495	44,052	49,831	61,390	67,169	72,949	84,509		24,406			85,665						
	254	58,416							20,257	26,024	37,561	43,330	54,869	60,638	66,409	77,950		17,950			79,104						
GVO-G0416-04R3	0	32,216							34,971	46,507	52,275	63,813	69,582	81,122	86,892	92,663	104,205	Exceeds MOP			5.7	31,511		105,360			
	64	36,245							31,877	43,434	49,213	60,770	66,550	78,109	83,889	89,669	101,230		28,410			102,386					
	127	40,269							28,064	39,625	45,406	56,969	62,750	74,314	80,096	85,878	97,443		24,595			98,599					
	191	44,597							23,486	35,042	40,820	52,378	58,156	69,715	75,494	81,274	92,834		20,020			93,990					
	254	49,139							17,999	29,533	35,301	46,838	52,606	64,145	69,915	75,685	87,227		14,538			88,381					
GVO-G0416-04R4	0	27,050							28,602	34,369	40,136	51,672	57,440	68,978	74,747	86,287	92,058	97,828	109,371	Exceeds MOP			4.8	26,295		110,525	
	64	30,326							26,240	32,018	37,796	49,353	55,132	66,690	72,469	84,028	89,808	95,588	107,149		23,929			108,305			
	127	33,533							23,239	29,019	34,800	46,361	52,142	63,705	69,486	81,050	86,832	92,614	104,179		20,927			105,335			
	191	36,940							19,588	25,366	31,143	42,699	48,477	60,034	65,813	77,372	83,151	88,931	100,491		17,277			101,647			
	254	40,456							15,149	20,916	26,682	38,217	43,985	55,522	61,290	72,829	78,599	84,369	95,911		12,843			97,065			
GVO-G0420-04R1	0	45,296							43,672	52,818	61,963	80,256									Exceeds MOP			4.9	41,843		80,256
	64	50,319							39,776	48,935	58,094	76,413										37,944			76,413		
	127	55,341							35,008	44,170	53,332	71,657										33,175			71,657		
	191	60,746							29,302	38,461	47,619	65,937										27,471			65,937		
	254	66,423							22,486	31,631	40,776	59,067										20,657			59,067		
GVO-G0420-04R2	0	38,000							50,968	60,113	69,259	87,552									Exceeds MOP			4.1	34,507		87,552
	64	42,820							47,274	56,433	65,592	83,911										30,789			83,911		
	127	47,622							42,726	51,888	61,050	79,375										26,236			79,375		
	191	52,779							37,269	46,428	55,586	73,904										20,785			73,904		
	254	58,179							30,730	39,874	49,020	67,311										14,270			67,311		
GVO-G0420-04R3	0	31,984							38,695	56,984	66,130	75,275	93,568								Exceeds MOP			3.6	31,379		93,568
	64	36,105							35,672	53,989	63,148	72,307	90,626									28,346			90,626		
	127	40,150							31,875	50,198	59,360	68,522	86,847									24,546			86,847		
	191	44,454							27,279	45,594	54,753	63,911	82,229									19,952			82,229		
	254	48,903							21,718	40,006	49,151	58,296	76,588									14,403			76,588		
GVO-G0420-04R4	0	26,818	25,572	34,716	43,860	62,149	71,295	80,441	98,733	Exceeds MOP											3.0	25,572		98,733			
	64	30,186	23,275	32,433	41,591	59,908	69,067	78,226	96,545		23,275												96,545				
	127	33,414	20,289	29,450	38,611	56,934	66,096	75,258	93,583		20,289												93,583				
	191	36,797	16,621	25,778	34,935	53,251	62,410	71,568	89,886		16,621												89,886				
	254	40,219	12,116	21,259	30,402	48,690	57,835	66,980	85,272		12,116												85,272				

Notes:

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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																				
GVO-G0424-04R1	0	45,128	Please consult factory	45,133	58,429	85,022	Exceeds MOP													3.4	42,473	5.1	87,681
	64	50,218		41,272	54,583	81,206		38,609	83,869														
	127	55,255		36,511	49,826	76,456		33,848	79,119														
	191	60,643		30,797	44,107	70,730		28,135	73,392														
	254	66,252		23,945	37,240	63,831		21,286	66,491														
GVO-G0424-04R2	0	37,833	39,133	52,428	65,724	92,317	Exceeds MOP												3.0	39,133	5.1	94,977	
	64	42,720	35,459	48,770	62,082	88,705		35,459	91,367														
	127	47,537	30,916	44,230	57,545	84,175		30,916	86,838														
	191	52,676	25,453	38,764	52,074	78,696		25,453	81,359														
	254	58,008	18,894	32,188	45,483	72,075		18,894	74,734														
GVO-G0424-04R3	0	31,816	45,149	58,444	71,740	98,334	Exceeds MOP												2.5	31,854	5.1	100,993	
	64	36,005	42,174	55,485	68,796	95,420		28,863	98,082														
	127	40,065	38,387	51,702	65,017	91,647		25,073	94,310														
	191	44,351	33,778	47,089	60,399	87,022		20,468	89,684														
	254	48,732	28,170	41,465	54,760	81,352		14,876	84,011														
GVO-G0424-04R4	0	26,651	50,314	63,610	76,906	103,499	Exceeds MOP												2.1	26,383	5.1	106,158	
	64	30,086	48,093	61,404	74,715	101,339		24,134	104,001														
	127	33,329	45,123	58,438	71,753	98,383		21,158	101,046														
	191	36,694	41,435	54,746	68,056	94,678		17,477	97,341														
	254	40,048	36,854	50,149	63,444	90,036		12,925	92,695														
GVO-G0428-04R1	0	44,412	63,842	Exceeds MOP															2.3	37,593	3.4	78,842	
	64	49,788	60,332		34,042	75,355																	
	127	54,889	55,651		29,352	70,679																	
	191	60,200	49,843		23,555	64,865																	
	254	65,521	42,636		16,389	57,634																	
GVO-G0428-04R2	0	37,116	71,137	Exceeds MOP															2.1	37,389	3.4	86,137	
	64	42,289	67,830		34,030	82,853																	
	127	47,171	63,369		29,557	78,398																	
	191	52,234	57,810		24,011	72,832																	
	254	57,277	50,879		17,133	65,878																	
GVO-G0428-04R3	0	31,100	77,154	Exceeds MOP															1.7	28,407	3.4	92,154	
	64	35,574	74,545		25,723	89,568																	
	127	39,699	70,841		22,002	85,869																	
	191	43,909	66,135		17,315	81,157																	
	254	48,001	60,156		11,413	75,155																	

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)														
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5											
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																															
GVO-G0516-05R2	0	60,409																		Please consult factory	81,593	87,344	93,095	12.3	79,293	13.8	96,545							
	76	70,717																	72,108		77,865	83,622	69,806		87,076									
	152	81,905																	61,008		66,765	72,523	58,705		75,978									
	229	93,839																	48,753		54,508	60,264	46,451		63,717									
	305	107,065																	34,587		40,335	46,083	32,288		49,532									
GVO-G0516-05R3	0	50,861																	Please consult factory	62,393	68,142	73,892	85,391	91,142	96,892	102,643	9.9	61,243	13.8	106,093				
	76	58,666																55,378		61,134	66,890	78,403	84,160	89,917	95,674	54,227		99,128						
	152	67,059																47,069		52,826	58,583	70,097	75,854	81,612	87,369	45,918		90,824						
	229	75,972																37,849		43,603	49,357	60,866	66,621	72,376	78,131	36,698		81,584						
	305	85,793																27,125		32,871	38,618	50,112	55,859	61,607	67,355	25,975		70,804						
GVO-G0516-05R4	0	43,018																	Please consult factory	52,989	58,737	64,485	76,994	84,502	92,010	99,518	8.3	50,690	13.8	113,936				
	76	49,438																47,339		53,094	58,848	71,356	78,864	86,372	93,880	45,037		108,356						
	152	56,284																40,574		46,331	52,087	64,595	72,103	79,610	87,118	38,272		101,599						
	229	63,525																33,034		38,788	44,542	57,050	64,558	72,066	79,574	30,733		94,031						
	305	71,461																24,218		29,972	35,726	48,234	55,742	63,250	70,758	21,920		85,136						
GVO-G0520-05R1	0	71,220																	Please consult factory	90,951	109,209	118,338	127,467	145,727	Exceeds MOP	8.6	12.1	83,649	147,553					
	76	81,776																81,367		99,642	108,780	117,918	136,195	74,057				138,023						
	152	93,162																70,085		88,362	97,500	106,639	124,918	62,774				126,746						
	229	105,271																57,597		75,867	85,003	94,138	112,410	50,289				114,238						
	305	118,640																43,119		61,368	70,494	79,620	97,873	35,819				99,698						
GVO-G0520-05R2	0	60,205																	Please consult factory	92,839	101,967	120,224	129,353	138,483	156,743	Exceeds MOP	7.7	12.1	78,234	158,569				
	76	70,590																83,415		92,553	110,828	119,966	129,104	147,380	68,796				149,208					
	152	81,787																72,322		81,460	99,737	108,876	118,015	136,293	57,701				138,121					
	229	93,691																60,043		69,178	87,448	96,583	105,719	123,991	45,428				125,818					
	305	106,828																45,806		54,930	73,180	82,306	91,431	109,684	31,208				111,510					
GVO-G0520-05R3	0	50,657																	Please consult factory	75,004	84,131	102,387	111,515	129,772	138,901	148,031	166,291	Exceeds MOP	6.2	12.1	60,401	168,117		
	76	58,539																68,056		77,193	95,467	104,604	122,879	132,017	141,155	159,432	53,438				161,260			
	152	66,940																59,754		68,892	87,168	96,306	114,583	123,722	132,861	151,139	45,134				152,967			
	229	75,823																50,508		59,642	77,910	87,045	105,315	114,451	123,586	141,858	35,894				143,685			
	305	85,556																39,707		48,831	67,078	76,202	94,452	103,578	112,704	130,956	25,111				132,782			
GVO-G0520-05R4	0	42,814																	Please consult factory	55,466	64,593	82,846	91,973	110,229	119,357	137,615	146,744	155,873	174,133	Exceeds MOP	5.2	12.1	49,991	175,959
	76	49,311																49,875		59,011	77,284	86,421	104,695	113,832	132,107	141,245	150,383	168,660	44,394				170,487	
	152	56,166																43,117		52,254	70,529	79,667	97,942	107,081	125,358	134,497	143,635	161,914	37,635				163,742	
	229	63,377																35,554		44,687	62,954	72,088	90,357	99,492	117,762	126,897	136,033	154,305	30,074				156,132	
	305	71,225																26,671		35,793	54,039	63,162	81,409	90,534	108,784	117,909	127,035	145,288	21,198				147,113	

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)											
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5									
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																													
GVO-G0524-05R1	0	71,073							85,865	112,423	125,703	152,264	165,544	Exceeds MOP												5.9	9.3	83,209	173,513			
	76	81,684							76,295	102,874	116,164	142,745	156,036		73,637	164,011																
	152	93,076							65,013	91,595	104,887	131,470	144,762		62,355	152,737																
	229	105,164							52,521	79,094	92,381	118,957	132,245		49,863	140,217																
	305	118,469							38,027	64,576	77,851	104,403	117,679		35,372	125,645																
GVO-G0524-05R2	0	60,058							83,602	96,881	123,439	136,719	163,279	176,560	Exceeds MOP												5.3	9.3	78,291	184,528		
	76	70,499							74,191	87,480	114,060	127,350	153,931	167,222		68,875	175,196															
	152	81,701							63,098	76,389	102,971	116,262	142,845	156,137		57,782	164,112															
	229	93,584							50,815	64,101	90,675	103,962	130,537	143,825		45,500	151,798															
	305	106,657							36,564	49,838	76,388	89,663	116,214	129,491		31,255	137,457															
GVO-G0524-05R3	0	50,509							79,872	93,150	106,429	132,987	146,267	172,827	186,108	Exceeds MOP												4.1	9.3	55,972	194,076	
	76	58,447							72,953	86,242	99,531	126,111	139,401	165,982	179,273		49,033	187,248														
	152	66,855							64,654	77,944	91,235	117,817	131,108	157,691	170,983		40,732	178,958														
	229	75,716							55,396	68,682	81,969	108,542	121,829	148,405	161,693		31,482	169,665														
	305	85,385							44,563	57,837	71,111	97,660	110,935	137,487	150,763		20,672	158,729														
GVO-G0524-05R4	0	42,667							61,159	87,714	100,992	114,271	140,829	154,109	180,669	193,950	Exceeds MOP												3.6	9.3	50,537	201,919
	76	49,219							55,603	82,181	95,470	108,759	135,339	148,629	175,210	188,501		44,972	196,475													
	152	56,080							48,848	75,429	88,719	102,010	128,591	141,883	168,466	181,758		38,216	189,733													
	229	63,269							41,271	67,843	81,129	94,415	120,989	134,276	160,851	174,139		30,643	182,112													
	305	71,054							32,348	58,894	72,168	85,442	111,991	125,266	151,818	165,094		21,731	173,060													
GVO-G0528-05R1	0	70,443							113,261	131,999	150,739	Exceeds MOP												4.1	6.6	79,534	173,226					
	76	81,293							104,017	122,776	141,536		70,251	164,049																		
	152	92,710							92,770	111,532	130,295		59,000	152,810																		
	229	104,705							80,151	98,904	117,658		46,396	140,164																		
	305	117,738							65,284	84,013	102,743		31,573	125,221																		
GVO-G0528-05R2	0	59,428							86,802	124,277	143,015	161,754	Exceeds MOP												3.7	6.6	75,560	184,242				
	76	70,107							77,684	115,202	133,962	152,722		66,429	175,235																	
	152	81,335							66,623	104,146	122,908	141,670		55,367	164,185																	
	229	93,125							54,225	91,731	110,485	129,239		42,974	151,745																	
	305	105,926							39,639	77,096	95,825	114,555		28,403	137,032																	
GVO-G0528-05R3	0	49,880	58,878	77,614	96,350	133,825	152,563	171,302	Exceeds MOP														3.0	6.6	58,878	193,790						
	76	58,056	52,219	70,977	89,736	127,254	146,013	164,773		52,219	187,286																					
	152	66,489	43,948	62,709	81,469	118,992	137,754	156,516		43,948	179,031																					
	229	75,257	34,589	53,341	72,093	109,599	128,352	147,106		34,589	169,612																					
	305	84,654	23,459	42,185	60,912	98,368	117,097	135,827		23,459	158,304																					
GVO-G0528-05R4	0	42,037	66,721	85,456	104,192	141,667	160,405	179,144	Exceeds MOP														2.6	6.6	51,733	201,632						
	76	48,828	61,447	80,205	98,963	136,481	155,241	174,001		46,441	196,514																					
	152	55,714	54,723	73,483	92,244	129,767	148,528	167,291		39,715	189,806																					
	229	62,811	47,036	65,788	84,540	122,045	140,799	159,553		32,035	182,059																					
	305	70,322	37,790	56,516	75,243	112,699	131,428	150,158		22,810	172,636																					

Notes:
 All Published Thrusts are Guaranteed Minimum Values.
 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Product Data Sheet

VA-DC-000-1796 Rev. 1

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G0532-05R1	0	70,188	Please consult factory	97,167	121,671	Exceeds MOP														3.2	82,465	4.8	160,879		
	76	81,134		87,978	112,507																		73,260	151,755	
	152	92,562		76,737	101,269																			62,018	140,521
	229	104,520		64,096	88,618																			49,383	127,855
	305	117,442		49,166	73,659																			34,471	112,850
GVO-G0532-05R2	0	59,173	83,679	108,182	132,686	Exceeds MOP														2.8	73,878	4.8	171,894		
	76	69,949	74,634	99,163	123,692																64,823		162,940		
	152	81,187	63,581	88,112	112,644																53,768		151,897		
	229	92,939	51,155	75,676	100,199																41,346		139,435		
	305	105,630	36,485	60,978	85,471																26,689		124,662		
GVO-G0532-05R3	0	49,625	93,227	117,730	142,234	Exceeds MOP														2.3	58,924	4.8	181,442		
	76	57,897	86,686	111,214	135,744																52,346		174,992		
	152	66,341	78,427	102,959	127,491																44,083		166,743		
	229	75,072	69,022	93,544	118,066																34,693		157,303		
	305	84,358	57,758	82,250	106,743																23,470		145,934		
GVO-G0532-05R4	0	41,783	101,069	125,573	150,077	Exceeds MOP														1.9	47,165	4.8	189,285		
	76	48,670	95,913	120,442	144,971																41,952		184,219		
	152	55,566	89,202	113,733	138,265																35,234		177,517		
	229	62,625	81,469	105,991	130,513																27,524		169,750		
	305	70,027	72,089	96,581	121,074																18,209		160,265		
GVO-G0536-05R1	0	69,934	111,634	142,675		Exceeds MOP														2.5	80,594	3.8	161,300		
	76	80,976	102,536	133,606																	71,467		152,249		
	152	92,414	91,305	122,379																	60,233		141,023		
	229	104,334	78,629	109,691																	47,567		128,328		
	305	117,146	63,594	94,623																	32,566		113,241		
GVO-G0536-05R2	0	58,918	122,649	153,690		Exceeds MOP														2.3	79,193	3.8	172,315		
	76	69,790	113,722	144,792																	70,225		163,434		
	152	81,039	102,681	133,754																	59,179		152,398		
	229	92,754	90,209	121,271																	46,724		139,908		
	305	105,335	75,406	106,434																	31,967		125,052		
GVO-G0536-05R3	0	49,370	132,197	163,238		Exceeds MOP														1.8	57,703	3.8	181,863		
	76	57,739	125,773	156,843																	51,207		175,485		
	152	66,193	117,527	148,600																	42,954		167,244		
	229	74,886	108,077	139,138																	33,531		157,776		
	305	84,062	96,678	127,707																	22,213		146,324		

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)																
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5														
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																		
GVO-G0720-07R3	0	76,533																		Please consult factory	111,560	120,648	138,824	147,913	157,003	166,093	10.1	104,291	13.8	171,547							
	102	90,226																	99,204		108,304	126,505	135,606	144,707	153,808	91,925		159,269									
	203	105,131																	84,640		93,743	111,949	121,053	130,157	139,261	77,357		144,724									
	305	121,667																	67,745		76,844	95,045	104,145	113,246	122,347	60,465		127,808									
	406	139,440																	48,607		57,694	75,869	84,958	94,047	103,136	41,337		108,590									
GVO-G0720-07R4	0	64,943																	Please consult factory	86,804	95,890	114,063	123,150	132,237	150,414	159,503	168,592	177,682	8.5	86,804	13.8	183,136					
	102	76,348																76,685		85,784	103,982	113,082	122,182	140,382	149,483	158,584	167,685	76,685		173,146							
	203	88,688																		64,673	73,775	91,980	101,083	110,186	128,393	137,496	146,600	155,705		64,673		161,167					
	305	102,327																		50,688	59,786	77,984	87,084	96,184	114,384	123,484	132,585	141,686		50,688		147,147					
	406	116,922																		34,780	43,866	62,038	71,124	80,212	98,387	107,476	116,565	125,654		34,780		131,108					
GVO-G0724-07R1	0	103,369																	Please consult factory	158,308	171,547	184,787	211,267						Exceeds MOP	145,070	9.5	12.4	221,860				
	102	122,458																140,713		153,966	167,219	193,726						127,461		204,330							
	203	143,354																		120,198	133,455	146,711	173,225							106,942			183,831				
	305	166,612																		96,539	109,791	123,044	149,551							83,286			160,154				
	406	191,712																		69,912	83,151	96,390	122,869							56,674			133,462				
GVO-G0724-07R2	0	91,780																	Please consult factory	130,184	143,421	169,898	183,136	196,376	222,856					Exceeds MOP	127,536	8.4	12.4	233,449			
	102	108,581																		114,834	128,086	154,591	167,844	181,097	207,604						112,184			218,207			
	203	126,911																		96,874	110,130	136,642	149,898	163,154	189,668						94,223			200,274			
	305	147,272																		76,122	89,374	115,878	129,131	142,383	168,890						73,472			179,493			
	406	169,195																		52,718	65,955	92,430	105,669	118,908	145,387						50,070			155,980			
GVO-G0724-07R3	0	76,355																	Please consult factory	105,899	119,135	145,609	158,846	185,323	198,562	211,801	238,282			Exceeds MOP	105,899	7.0	12.4	248,874			
	102	90,117																		93,544	106,795	133,297	146,549	173,054	186,307	199,560	226,067								93,544	236,670	
	203	105,041																		78,979	92,234	118,744	132,000	158,511	171,768	185,024	211,538								78,979	222,144	
	305	121,557																		62,084	75,334	101,837	115,089	141,593	154,846	168,098	194,605								62,084	205,208	
	406	139,259																		42,945	56,181	82,653	95,890	122,366	135,604	148,843	175,323								42,945	185,915	
GVO-G0724-07R4	0	64,765																	Please consult factory	91,018	117,489	130,725	157,198	170,436	196,912	210,151	223,391	249,871			Exceeds MOP	88,371	5.9	12.4	260,464		
	102	76,240																		80,920	107,421	120,672	147,175	160,427	186,932	200,184	213,437	239,945								78,270	250,548
	203	88,598																		68,913	95,422	108,677	135,187	148,443	174,955	188,211	201,468	227,982								66,262	238,587
	305	102,218																		54,922	81,423	94,674	121,176	134,428	160,932	174,185	187,438	213,944								52,272	224,548
	406	116,741																		38,994	65,463	78,699	105,171	118,408	144,884	158,122	171,361	197,841								36,347	208,433

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G0728-07R1	0	102,657							Please consult factory	154,547	173,241	210,632	229,329	Exceeds MOP							6.7	143,331	9.3	240,548
	102	122,026						137,320		156,041	193,484	212,206								126,088		223,439		
	203	142,993						116,899		135,626	173,082	191,811								105,663		203,048		
	305	166,175						93,140		111,861	149,303	168,024								81,909		179,258		
	406	190,991						66,139		84,832	122,221	140,917								54,923		152,135		
GVO-G0728-07R2	0	91,068						Please consult factory	128,751	166,137	184,831	222,222	Exceeds MOP							5.9	125,013	9.3	252,137	
	102	108,148					113,758		151,198	169,918	207,361	226,083									110,014		237,317	
	203	126,550					95,889		133,342	152,069	189,525	208,254									92,144		219,491	
	305	146,836					75,041		112,480	131,200	168,642	187,364									71,297		198,597	
	406	168,473					51,273		88,657	107,350	144,739	163,435									47,535		174,653	
GVO-G0728-07R3	0	75,643			Please consult factory	106,794	125,485	144,176	181,562	200,256	237,647	256,344	Exceeds MOP							4.9	103,056	9.3	267,562	
	102	89,685				94,784	113,502	132,221	169,661	188,381	225,824	244,546									91,040		255,780	
	203	104,680				80,307	99,033	117,759	155,212	173,939	211,395	230,124									76,562		241,361	
	305	121,121				63,319	82,037	100,756	138,195	156,915	194,357	213,079									59,576		224,312	
	406	138,537				43,828	62,518	81,208	118,592	137,285	174,674	193,370									40,090		204,588	
GVO-G0728-07R4	0	64,053			Please consult factory	118,384	137,074	155,766	193,151	211,845	249,236	267,933	Exceeds MOP							4.1	84,743	9.3	279,152	
	102	75,807				108,661	127,380	146,099	183,538	202,259	239,702	258,424									74,970		269,657	
	203	88,236				96,751	115,476	134,202	171,655	190,383	227,839	246,567									63,046		257,805	
	305	101,782				82,659	101,377	120,095	157,534	176,254	213,696	232,418									48,967		243,651	
	406	116,020				66,346	85,036	103,726	141,110	159,803	197,192	215,888									32,707		227,106	
GVO-G0732-07R1	0	102,366			Please consult factory	161,607	186,065	Exceeds MOP												5.1	142,041	6.9	230,093	
	102	121,848				144,457	168,947									124,866	213,030							
	203	142,845				124,055	148,553									104,458	192,650							
	305	165,996				100,276	124,765									80,685	168,847							
	406	190,695				73,195	97,653									53,630	141,679							
GVO-G0732-07R2	0	90,776			Please consult factory	148,739	173,196	197,655	Exceeds MOP												4.6	129,174	6.9	241,682
	102	107,971				133,846	158,335	182,824								114,255	226,907							
	203	126,402				116,002	140,499	164,996								96,404	209,093							
	305	146,657				95,127	119,615	144,105								75,536	188,187							
	406	168,177				71,257	95,713	120,171								51,693	164,196							
GVO-G0732-07R3	0	75,351			Please consult factory	115,252	164,164	188,621	Exceeds MOP												3.7	100,579	6.9	257,108
	102	89,508				103,332	152,309	176,798		201,287						88,640	245,370							
	203	104,532				88,879	137,872	162,369		186,866						74,181	230,963							
	305	120,942				71,866	120,842	145,330		169,820						57,174	213,902							
	406	138,242				52,283	101,192	125,649		150,106						37,611	194,132							
GVO-G0732-07R4	0	63,762			Please consult factory	102,387	126,841	175,753	Exceeds MOP												3.2	87,715	6.9	268,697
	102	75,630				92,723	117,210	166,186		190,675	215,165						78,031	259,248						
	203	88,088				80,827	105,322	154,315		178,812	203,309						66,129	247,406						
	305	101,603				66,719	91,206	140,181		164,670	189,159						52,027	233,241						
	406	115,724				50,347	74,801	123,710		148,167	172,624						35,676	216,650						

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)														MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12					12.5	13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0736-07R1	0	102,074			Please consult factory	202,222	233,216	Exceeds MOP													4.1	146,434	5.5	233,216		
	102	121,671				185,195	216,225																		129,343	216,225
	203	142,697				164,825	195,864																		108,956	195,864
	305	165,818				141,012	172,042																		85,161	172,042
	406	190,399				113,806	144,799																		58,021	144,799
GVO-G0736-07R2	0	90,485			Please consult factory	151,825	213,811	Exceeds MOP													3.6	127,032	5.5	244,805		
	102	107,794				137,015	199,073		230,102																112,193	230,102
	203	126,254				119,192	181,268		212,307																94,362	212,307
	305	146,478				98,295	160,352		191,381																73,473	191,381
	406	167,881				74,341	136,324		167,317																49,549	167,317
GVO-G0736-07R3	0	75,059	105,269	136,259	167,251	229,236	260,231	Exceeds MOP													3.0	105,269	5.5	260,231		
	102	89,331	93,423	124,450	155,478	217,536	248,566																	93,423	248,566	
	203	104,384	78,988	110,025	141,062	203,138	234,177																	78,988	234,177	
	305	120,763	61,956	92,983	124,010	186,067	217,096																	61,956	217,096	
	406	137,946	42,297	73,286	104,276	166,259	197,252																	42,297	197,252	
GVO-G0736-07R4	0	63,470	116,859	147,849	178,840	240,826	271,820	Exceeds MOP													2.5	85,870	5.5	271,820		
	102	75,453	107,301	138,328	169,356	231,413	262,443																	76,274	262,443	
	203	87,940	95,431	126,468	157,505	219,581	250,620																	64,395	250,620	
	305	101,424	81,295	112,322	143,349	205,406	236,435																	50,269	236,435	
	406	115,428	64,815	95,804	126,794	188,777	219,770																	33,828	219,770	
GVO-G07T28-07R1	0	100,446			Please consult factory	151,441	188,695	Exceeds MOP													3.4	143,990	4.5	225,951		
	102	120,682				135,098	172,410																		127,636	209,723
	203	141,871				114,902	152,229																		107,437	189,556
	305	164,820				90,906	128,217																		83,444	165,529
	406	188,749				63,001	100,253																		55,551	137,507
GVO-G07T28-07R2	0	88,857	125,778	163,030	200,284	Exceeds MOP														3.0	125,778	4.5	237,540			
	102	106,805	111,665	148,976	186,288																			111,665	223,600	
	203	125,428	94,020	131,346	168,672																			94,020	206,000	
	305	145,481	72,935	110,245	147,556																			72,935	184,868	
	406	166,232	48,269	85,519	122,771																			48,269	160,025	
GVO-G07T28-07R3	0	73,432	141,203	178,455	215,710	Exceeds MOP														2.5	103,952	4.5	252,966			
	102	88,342	130,128	167,439	204,751																			92,818	242,064	
	203	103,558	115,890	153,215	190,542																			78,565	227,869	
	305	119,766	98,650	135,960	173,271																			61,341	210,583	
	406	136,296	78,204	115,454	152,707																			40,955	189,961	
GVO-G07T28-07R4	0	61,842	152,792	190,045	227,299	Exceeds MOP														2.1	85,742	4.5	264,555			
	102	74,464	144,006	181,316	218,628																			76,849	255,941	
	203	87,114	132,333	169,659	206,985																			65,149	244,313	
	305	100,426	117,989	155,299	192,610																			50,834	229,923	
	406	113,778	100,722	137,972	175,224																			33,676	212,478	

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G0824-08R1	0	151,488																		11.9	159,833	13.8	210,011				
	114	170,321																						162,474	175,678	188,883	202,088
	229	190,870																						145,076	158,293	171,509	184,726
	343	212,893																						124,748	137,967	151,185	164,404
	457	236,949																						102,236	115,450	128,665	141,879
GVO-G0824-08R2	0	128,675																		Please consult factory	9.7	13.8	124,553				
	114	142,309																	132,474					145,676	158,879	172,082	
	229	157,039																	120,226					133,442	146,657	160,870	
	343	172,746																	105,710					118,927	132,144	145,359	
	457	189,796																	89,530					102,742	115,955	129,167	
GVO-G0824-08R3	0	109,263																		Please consult factory	8.2	13.8	104,361				
	114	120,873																	112,282					125,483	138,684	151,885	
	229	133,338																	102,019					115,233	128,444	141,655	
	343	146,587																	89,761					102,977	116,188	129,399	
	457	160,911																	76,052					89,264	102,475	115,686	
GVO-G0828-08R1	0	150,822																		Please consult factory	8.4	12.1	158,442				
	114	169,915																	162,174					180,836	200,498	220,160	
	229	190,504																	145,142					163,828	183,490	203,152	
	343	212,438																	124,871					143,560	163,250	182,940	
	457	236,218																	102,234					120,915	140,596	160,277	
GVO-G0828-08R2	0	128,009																		Please consult factory	6.8	12.1	121,542				
	114	141,903																	129,006					147,665	166,324	184,983	
	229	156,673																	117,101					135,785	154,469	173,153	
	343	172,292																	102,637					121,325	140,014	158,702	
	457	189,065																	86,340					105,020	123,700	142,380	
GVO-G0828-08R3	0	108,597																		Please consult factory	5.8	12.1	103,638				
	114	120,467																	111,101					129,269	147,438	165,607	
	229	132,972																	101,170					119,339	137,508	155,677	
	343	146,133																	88,964					107,133	125,302	143,471	
	457	160,179																	75,142					93,311	111,480	129,649	

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product data sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)					
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0832-08R1	0	150,553							Please consult factory	186,664	211,091	259,950	284,380	Exceeds MOP							6.4	157,352	9.7	318,584		
	114	169,751						169,715		194,171	243,083	267,540	140,369		301,781											
	229	190,356						149,456		173,916	222,837	247,298	120,106		281,545											
	343	212,255						126,791		151,241	200,144	224,596	97,452		258,830											
	457	235,922						100,727		125,148	173,992	198,416	71,424		232,611											
GVO-G0832-08R2	0	127,740						Please consult factory	136,199	160,624	209,477	233,904	282,762	307,193	Exceeds MOP							5.2	121,545	9.7	341,397	
	114	141,739							124,365	148,819	197,728	222,183	271,096	295,553		109,693	329,794									
	229	156,525							109,912	134,370	183,288	207,748	256,669	281,130		95,237	315,376									
	343	172,108							93,591	118,039	166,938	191,388	240,290	264,742		78,922	298,977									
	457	188,770							74,624	99,041	147,880	172,300	221,145	245,568		59,974	279,763									
GVO-G0832-08R3	0	108,328						Please consult factory	131,188	155,612	180,036	228,889	253,317	302,175	326,605	Exceeds MOP							4.4	101,880	9.7	360,809
	114	120,302							121,348	145,801	170,255	219,164	243,619	292,532	316,989		92,005	351,230								
	229	132,824							109,155	133,613	158,071	206,989	231,449	280,370	304,831		79,807	339,077								
	343	145,949							95,302	119,750	144,198	193,097	217,547	266,449	290,901		65,966	325,135								
	457	159,884							79,093	103,510	127,927	176,766	201,186	250,031	274,454		49,794	308,649								
GVO-G0836-08R1	0	150,284						Please consult factory	154,065	185,026	215,989	277,918	308,884	Exceeds MOP							5.0	154,065	7.6	315,077		
	114	169,587							137,144	168,138	199,133	261,125	292,122		137,144	298,321										
	229	190,208							116,889	147,888	178,888	240,890	271,892		116,889	278,092										
	343	212,071							94,214	125,203	156,192	218,172	249,163		94,214	255,361										
	457	235,626							68,121	99,075	130,029	191,942	222,900		68,121	229,092										
GVO-G0836-08R2	0	127,471						Please consult factory	176,878	207,839	238,802	300,731	331,697	Exceeds MOP							4.1	121,149	7.6	337,890		
	114	141,574							165,156	196,151	227,146	289,137	320,134		109,368	326,334										
	229	156,377							150,721	181,720	212,720	274,722	305,723		94,923	311,924										
	343	171,924							134,361	165,349	196,338	258,318	289,309		78,584	295,508										
	457	188,474							115,274	146,227	177,182	239,094	270,052		59,560	276,244										
GVO-G0836-08R3	0	108,058						Please consult factory	103,411	134,370	196,290	227,252	258,214	320,143	351,109	Exceeds MOP							3.4	97,219	7.6	357,302
	114	120,138							93,613	124,605	186,592	217,587	248,582	310,574	341,571		87,414	347,770								
	229	132,676							81,427	112,424	174,422	205,421	236,421	298,423	329,424		75,227	335,625								
	343	145,765							67,559	98,545	160,520	191,508	222,497	284,477	315,468		61,362	321,667								
	457	159,588							51,306	82,256	144,159	175,113	206,068	267,980	298,938		45,116	305,130								

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5			
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																							
GVO-G0840-08R1	0	150,014			Please consult factory	226,869	265,139	Exceeds MOP													4.1	157,986	5.9	295,755		
	114	169,423				210,090	248,396																	141,141	279,041	
	229	190,060				189,857	228,169																	120,898	258,818	
	343	211,887				167,134	205,433																	98,198	236,073	
	457	235,330				140,890	179,150																		72,024	209,760
GVO-G0840-08R2	0	127,202		134,880	173,146	249,682	287,952	Exceeds MOP													3.3	119,574	5.9	318,568		
	114	141,410	Please consult factory	123,189	161,493	238,103	276,408																	107,868	307,053	
	229	156,229		108,758	147,068	223,689	262,000																	93,435	292,650	
	343	171,740		92,388	130,685	207,281	245,580																		77,070	276,220
	457	188,178		73,268	111,525	188,042	226,303																		57,966	256,912
GVO-G0840-08R3	0	107,789		116,027	154,292	192,558	269,094	307,364	Exceeds MOP														2.8	100,721	5.9	337,980
	114	119,974	106,322	144,625	182,929	259,539	297,844																91,001	328,490		
	229	132,528	94,151	132,459	170,769	247,390	285,701																78,827	316,351		
	343	145,581	80,251	118,547	156,844	233,440	271,739																64,933	302,379		
	457	159,292	63,898	102,154	140,411	216,928	255,189																	48,596		285,798

Notes:
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 MOP defined in this document are for standard stroke actuators identified in the GVO-G product date sheet. For MOP of longer stroke linear actuator, please consult Emerson.

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)			
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G08T32-08R1	0	148,111	Please consult factory	182,887	231,545	Exceeds MOP														3.2	153,693	4.8	309,402	
	114	168,262		166,915	215,634																137,683		293,588	
	229	189,014		146,806	195,535																		117,569	273,504
	343	210,588		123,808	172,516																		94,584	250,452
	457	233,240		96,704	145,347																		67,520	223,180
GVO-G08T32-08R2	0	125,298	157,043	205,700	254,358	Exceeds MOP														2.6	118,120	4.8	332,215	
	114	140,250	146,209	194,927	243,647														107,235		321,601			
	229	155,182	131,910	180,638	229,367																92,928		307,335	
	343	170,441	115,248	163,955	212,663																76,283		290,598	
	457	186,088	95,216	143,856	192,499																56,305		270,332	
GVO-G08T32-08R3	0	105,886	176,456	225,112	273,770	Exceeds MOP														2.2	98,609	4.8	351,627	
	114	118,813	167,645	216,363	265,083														89,698		343,037			
	229	131,481	155,611	204,339	253,068																77,648		331,036	
	343	144,282	141,407	190,114	238,822																63,478		316,757	
	457	157,202	124,102	172,742	221,385																46,281		299,218	
GVO-G08T36-08R1	0	147,573	212,135	273,866	Exceeds MOP															2.6	162,752	3.8	310,906	
	114	167,934	196,356	258,157																	146,917		295,238	
	229	188,718	176,278	238,089																	126,830		275,176	
	343	210,220	153,214	215,001																	103,785		252,074	
	457	232,649	125,904	187,617																	76,535		224,646	
GVO-G08T36-08R2	0	124,760	234,948	296,679	Exceeds MOP															2.1	123,838	3.8	333,719	
	114	139,921	224,369	286,169																	113,132		323,250	
	229	154,886	210,109	271,920																	98,852		309,007	
	343	170,073	193,360	255,148																	82,147		292,221	
	457	185,496	173,056	234,770																	61,978		271,799	
GVO-G08T36-08R3	0	105,348	254,360	316,091	Exceeds MOP															1.7	93,870	3.8	353,131	
	114	118,485	245,805	307,606																	85,130		344,686	
	229	131,185	233,810	295,621																	73,107		332,709	
	343	143,914	219,519	281,307																	58,879		318,380	
	457	156,611	201,942	263,655																	41,498		300,685	

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)										
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5									
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																													
GVO-G1028-10R2	0	190,761																			Please consult factory	268,838	287,408	305,979	12.1	253,983	13.8	317,121				
	152	223,657																					238,355	256,947		275,540		223,481	286,696			
	305	258,460																					203,963	222,559		241,155		189,086	252,313			
	457	296,500																					165,178	183,768		202,357		150,308	213,511			
	610	338,179																					121,021	139,587		158,154		106,169	169,295			
GVO-G1028-10R3	0	158,925														244,970	282,105	300,674	319,244	337,814	Please consult factory	244,970	282,105	300,674	11.0	244,970	13.8	348,957				
	152	192,679														213,559	250,741	269,333	287,925	306,518		213,559	317,674									
	305	228,410														178,227	215,417	234,013	252,609	271,205		178,227	282,363									
	457	267,476														138,439	175,614	194,203	212,792	231,381		138,439	242,536									
	610	310,295														93,213	130,340	148,905	167,471	186,038		93,213	197,179									
GVO-G1028-10R4	0	133,978															195,656	232,785	251,350	269,917	307,052	325,621	344,191	362,761	Please consult factory	188,231	13.8	373,904				
	152	159,586														172,295	209,473	228,062	246,653	283,834	302,426	321,018	339,611	164,860		350,767						
	305	186,501														145,762	182,948	201,542	220,136	257,326	275,921	294,517	313,114	138,325		324,272						
	457	215,822														115,748	152,919	171,505	190,092	227,267	245,856	264,445	283,035	108,314		294,189						
	610	247,812														81,451	118,571	137,133	155,695	192,823	211,388	229,954	248,521	74,027		259,662						
GVO-G1032-10R1	0	226,366																			Please consult factory	352,528	376,866	401,205	425,545	11.4	323,324	13.8	440,149			
	152	269,562														312,031	336,394	360,758	385,123	282,795		399,742										
	305	315,407														266,644	291,012	315,380	339,749	237,403		354,371										
	457	365,600														215,619	239,979	264,340	288,701	186,388		303,318										
	610	420,710														157,739	182,073	206,407	230,743	128,540		245,345										
GVO-G1032-10R2	0	190,483																			Please consult factory	291,070	315,404	339,739	388,411	412,749	437,088	461,428	9.2	252,137	13.8	476,032
	152	223,491														260,653	285,014	309,376	358,102	382,465		406,830	431,194	221,676	445,814							
	305	258,312														226,272	250,638	275,005	323,739	348,107		372,476	396,845	187,288	411,467							
	457	296,318														187,468	211,825	236,183	284,901	309,262		333,622	357,984	148,497	372,601							
	610	337,883														143,242	167,571	191,902	240,566	264,899		289,234	313,569	104,317	328,171							
GVO-G1032-10R3	0	158,647															249,909	274,240	322,905	347,239	371,574	420,247	444,585	468,924	493,263	Please consult factory	240,177	13.8	507,868			
	152	192,513														218,551	242,910	291,631	315,992	340,354	389,080	413,443	437,808	462,173	208,807		476,792					
	305	228,262														183,228	207,592	256,322	280,688	305,055	353,789	378,157	402,526	426,895	173,482		441,517					
	457	267,294														143,423	167,778	216,492	240,849	265,207	313,926	338,286	362,646	387,008	133,681		401,625					
	610	309,999														98,143	122,470	171,126	195,455	219,786	268,450	292,783	317,118	341,454	88,413		356,055					
GVO-G1032-10R4	0	133,700																201,869	226,197	274,856	299,187	347,852	372,186	396,521	445,194	469,532	493,871	518,210	Please consult factory	187,272	13.8	532,815
	152	159,419														178,569	202,927	251,644	276,004	324,724	349,086	373,448	422,173	446,537	470,901	495,266	163,954	509,885				
	305	186,353														152,046	176,409	225,136	249,501	298,231	322,597	346,963	395,698	420,066	444,434	468,804	137,428	483,425				
	457	215,640														122,013	146,367	195,076	219,432	268,145	292,502	316,861	365,579	389,939	414,300	438,661	107,401	453,278				
	610	247,516														87,653	111,977	160,626	184,953	233,609	257,938	282,269	330,933	355,266	379,601	403,936	73,060	418,538				

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G1036-10R1	0	226,089																			Exceeds MOP	8.9	12.4	317,742	533,856
	152	269,395																						277,252	493,578
	305	315,259																						231,867	448,228
	457	365,418																						180,840	397,136
	610	420,414																						122,951	339,031
GVO-G1036-10R2	0	190,206																			Exceeds MOP	7.2	12.4	248,674	469,739
	152	223,324																		218,263				539,649	
	305	258,164																		183,883				505,324	
	457	296,136																		145,076				466,418	
	610	337,588																		100,845				421,857	
GVO-G1036-10R3	0	158,370																			Exceeds MOP	6.6	12.4	243,471	601,575
	152	192,346																		212,162				570,627	
	305	228,114																		176,848				535,374	
	457	267,111																		137,028				495,443	
	610	309,704																		91,697				449,741	
GVO-G1036-10R4	0	133,423																			Exceeds MOP	5.3	12.4	188,174	626,521
	152	159,252																		164,922				603,721	
	305	186,205																		138,407				577,283	
	457	215,458																		108,359				547,096	
	610	247,221																		73,950				512,224	
GVO-G1040-10R1	0	225,811																			Exceeds MOP	7.2	8.8	317,739	439,902
	152	269,228																		277,305				399,583	
	305	315,111																		231,929				354,226	
	457	365,236																		180,884				303,146	
	610	420,118																		122,939				245,084	
GVO-G1040-10R2	0	189,928																			Exceeds MOP	5.8	8.8	246,739	475,785
	152	223,157																		216,388				445,654	
	305	258,016																		182,019				411,322	
	457	295,954																		143,194				372,429	
	610	337,292																		98,900				327,910	
GVO-G1040-10R3	0	158,092																			Exceeds MOP	5.3	8.8	240,404	507,621
	152	192,179																		209,158				476,632	
	305	227,966																		173,854				441,372	
	457	266,929																		134,015				401,453	
	610	309,408																		88,620				355,794	
GVO-G1040-10R4	0	133,146																			Exceeds MOP	4.1	8.8	173,748	532,568
	152	159,085																		150,554				509,726	
	305	186,057																		124,049				483,280	
	457	215,276																		93,984				453,106	
	610	246,925																		59,515				418,277	

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Product Data Sheet

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Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)						
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5				
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																								
GVO-G10T32-10R1	0	223,904						346,877	443,675	492,077	Exceeds MOP										5.7	317,839	7.9	530,800			
	152	268,081						307,416	404,335	452,797																278,341	491,567
	305	314,094						262,205	359,145	407,617																233,124	446,395
	457	363,984						210,861	307,763	356,217																181,791	394,980
	610	418,085						151,916	248,695	297,087																122,884	335,803
GVO-G10T32-10R2	0	188,021				285,969	334,363	382,760	479,558	527,960	Exceeds MOP										4.6	247,254	7.9	566,683			
	152	222,010				256,572	305,029	353,487	450,406	498,868																217,808	537,638
	305	256,998				222,365	270,832	319,301	416,241	464,712																183,592	503,490
	457	294,701				183,246	231,694	280,143	377,046	425,499																144,488	464,263
	610	335,259				137,972	186,357	234,743	331,521	379,914																99,267	418,629
GVO-G10T32-10R3	0	156,185				317,804	366,199	414,595	511,394	559,796	Exceeds MOP										4.1	230,699	7.9	598,519			
	152	191,032				287,550	336,007	384,465	481,385	529,846																200,331	568,616
	305	226,948				252,415	300,882	349,351	446,291	494,762																165,176	533,540
	457	265,677				212,270	260,718	309,167	406,070	454,523																125,066	493,287
	610	307,375				165,856	214,241	262,627	359,405	407,798																78,770	446,513
GVO-G10T32-10R4	0	131,238			197,579	245,968	342,751	391,146	439,542	536,341	584,743	Exceeds MOP									3.4	187,902	7.9	623,466			
	152	157,938			175,280	223,733	320,644	369,100	417,558	514,478	562,939															165,590	601,709
	305	185,039			148,927	197,392	294,323	342,791	391,259	488,199	536,671															139,235	575,449
	457	214,024			118,586	167,030	263,923	312,371	360,821	457,723	506,177															108,897	544,940
	610	244,892			83,199	131,577	228,339	276,723	325,110	421,888	470,281															73,524	508,996
GVO-G10T36-10R1	0	223,349				380,268	441,738	503,209				Exceeds MOP									4.5	318,801	6.2	527,798			
	152	267,748				340,983	402,522	464,062																		279,445	488,679
	305	313,798				295,802	357,353	418,905																		234,252	443,526
	457	363,620				244,403	305,933	367,464																		182,875	392,076
	610	417,494				185,279	246,737	308,197																		123,823	332,782
GVO-G10T36-10R2	0	187,466			293,219	416,151	477,620	539,092				Exceeds MOP									3.6	244,048	6.2	563,681			
	152	221,676			263,979	387,054	448,593	510,133																		214,751	534,750
	305	256,702			229,799	352,897	414,448	476,000																		180,561	500,622
	457	294,337			190,631	313,686	375,215	436,746																		141,411	461,359
	610	334,668			145,196	268,105	329,563	391,023																		96,035	415,608
GVO-G10T36-10R3	0	155,630			263,591	325,054	447,987	509,456	570,928				Exceeds MOP								3.3	239,007	6.2	595,517			
	152	190,698			233,422	294,958	418,032	479,571	541,111																	208,809	565,728
	305	226,652			198,302	259,849	382,947	444,498	506,050																	173,683	530,672
	457	265,313			158,130	219,655	342,710	404,239	465,770																	133,520	490,383
	610	306,784			111,629	173,080	295,989	357,447	418,907																	87,050	443,492
GVO-G10T36-10R4	0	130,683	227,077	288,538	350,001	472,934	534,403	595,875				Exceeds MOP									2.6	177,910	6.2	620,464			
	152	157,605	204,982	266,516	328,051	451,125	512,664	574,205																	155,756	598,821	
	305	184,743	178,664	240,210	301,758	424,856	486,407	547,959																	129,427	572,580	
	457	213,660	148,259	209,783	271,309	394,363	455,893	517,424																	99,041	542,036	
	610	244,301	112,663	174,112	235,563	358,472	419,930	481,390																	63,506	505,975	

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)				
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5		
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																						
GVO-G10T40-10R1	0	222,794			373,692	Please consult factory	Exceeds MOP														3.6	312,830	4.8	495,421	
	152	267,414			334,549																			273,623	456,404
	305	313,501			289,392																			228,455	411,269
	457	363,256			237,950																			177,033	359,787
	610	416,903			178,679																			117,827	300,388
GVO-G10T40-10R2	0	186,911	257,422	333,497	409,575	Exceeds MOP														2.9	242,207	4.8	531,304		
	152	221,343	228,307	304,463	380,620																213,076		502,475		
	305	256,406	194,147	270,317	346,488																178,913		468,364		
	457	293,973	154,941	231,086	307,233																139,712		429,070		
	610	334,076	109,379	185,441	261,506																94,167		383,214		
GVO-G10T40-10R3	0	155,075	289,258	365,333	441,411	Exceeds MOP														2.6	228,399	4.8	563,140		
	152	190,365	259,285	335,441	411,598																198,361		533,453		
	305	226,356	224,197	300,367	376,538																163,262		498,414		
	457	264,949	183,965	260,110	336,257																123,051		458,094		
	610	306,192	137,263	213,325	289,390																76,416		411,098		
GVO-G10T40-10R4	0	130,128	314,205	390,280	466,358	Exceeds MOP														2.1	177,275	4.8	588,087		
	152	157,271	292,378	368,534	444,692																155,301		566,547		
	305	184,447	266,106	342,276	418,447																129,003		540,323		
	457	213,296	235,619	311,763	387,910																98,562		509,747		
	610	243,709	199,746	275,808	351,873																62,841		473,581		

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Bettis GVO-G Series

April 2021

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)															
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5														
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																		
GVO-G1340-13R1	0	364,125																			Please consult factory	581,424	619,494	657,566	12.5	581,424	13.8	680,409									
	191	443,690																				504,976	543,076	581,176					504,976	604,036							
	381	531,521																				417,566	455,670	493,773					417,566	516,636							
	572	626,089																				321,897	359,990	398,084					321,897	420,940							
	762	732,020																				212,523	250,583	288,645					212,523	311,483							
GVO-G1340-13R2	0	317,533																			Please consult factory	513,813	589,948	628,016	666,087	704,158	10.8	498,587	13.8	727,001							
	191	385,585																				448,788	524,983	563,082	601,181	639,281					433,550	662,141					
	381	460,547																				374,235	450,438	488,540	526,644	564,747					358,995	587,610					
	572	541,176																				292,536	368,717	406,810	444,902	482,996					277,300	505,853					
	762	631,378																				198,990	275,105	313,165	351,225	389,287					183,768	412,125					
GVO-G1340-13R3	0	261,650																			Please consult factory	417,441	493,566	531,630	569,696	645,830	683,899	721,969	760,041	9.0	417,441	13.8	782,884				
	191	319,287																				362,705	438,894	476,990	515,086	591,281	629,380	667,479	705,579					362,705	728,439		
	381	382,607																				299,776	375,974	414,074	452,175	528,378	566,480	604,583	642,687					299,776	665,550		
	572	450,628																				230,731	306,906	344,995	383,084	459,266	497,358	535,451	573,545					230,731	596,401		
	762	526,600																				151,554	227,659	265,713	303,769	379,884	417,943	456,004	494,066					151,554	516,903		
GVO-G1340-13R4	0	215,058																			Please consult factory	349,854	425,972	464,033	540,158	578,223	616,288	692,423	730,491	768,562	806,633	7.3	334,630	13.8	829,476		
	191	261,181																				306,531	382,717	420,810	496,999	535,095	573,192	649,386	687,485	725,584	763,684					291,295	786,544
	381	311,633																				256,458	332,652	370,750	446,948	485,048	523,149	599,352	637,454	675,557	713,661					241,220	736,524
	572	365,716																				201,386	277,556	315,643	391,818	429,907	467,997	544,178	582,270	620,363	658,457					186,152	681,313
	762	425,958																				138,049	214,146	252,196	328,301	366,355	404,411	480,526	518,585	556,646	594,708					122,830	617,545
GVO-G1344-13R1	0	363,846																			Please consult factory	598,506	644,651	736,943	Exceeds MOP	10.3	580,049	12.4	773,862								
	191	443,519																				522,121	568,300	660,659						503,650	697,603						
	381	531,364																				434,720	480,903	573,271						416,247	610,219						
	572	625,894																				339,029	385,200	477,544						320,560	514,483						
	762	731,707																				229,584	275,718	367,989						211,131	404,899						
GVO-G1344-13R2	0	317,254																			Please consult factory	506,673	598,955	645,098	691,243	783,535	Exceeds MOP	8.9	497,445	12.4	820,454						
	191	385,414																				441,696	534,049	580,227	626,405	718,764						432,461	755,709				
	381	460,390																				367,149	459,512	505,694	551,877	644,245						357,913	681,193				
	572	540,982																				285,433	377,771	423,941	470,112	562,456						276,199	599,395				
	762	631,065																				191,835	284,094	330,226	376,360	468,631						182,609	505,541				
GVO-G1344-13R3	0	261,371																			Please consult factory	424,142	516,416	562,556	654,838	700,981	747,126	839,418	Exceeds MOP	7.4	414,914	12.4	876,337				
	191	319,116																				369,470	461,819	507,994	600,347	646,525	692,703	785,062						360,236	822,007		
	381	382,451																				306,550	398,909	445,089	537,451	583,634	629,817	722,185						297,315	759,133		
	572	450,433																				237,482	329,814	375,982	468,319	514,489	560,660	653,005						228,249	689,944		
	762	526,287																				158,234	250,485	296,613	388,873	435,005	481,138	573,409						149,009	610,319		
GVO-G1344-13R4	0	214,779																			Please consult factory	332,331	424,598	470,734	563,009	609,148	701,430	747,573	793,718	886,010	Exceeds MOP	6.0	332,331	12.4	922,929		
	191	261,010																				289,059	381,403	427,576	519,924	566,099	658,452	704,630	750,808	843,167						289,059	880,112
	381	311,477																				238,992	331,346	377,524	469,883	516,063	608,425	654,608	700,791	793,159						238,992	830,107
	572	365,521																				183,902	276,229	322,394	414,726	460,894	553,231	599,401	645,572	737,917						183,902	774,856
	762	425,645																				120,510	212,753	258,876	351,127	397,255	489,515	535,647	581,780	674,051						120,510	710,961

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)															MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)															
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5					13	13.5													
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																																	
GVO-G1348-13R1	0	363,582									619,086	729,067	Please consult factory							Exceeds MOP							8.6							10.3	575,095	762,062
	191	443,356									542,759	652,817																498,737	685,835							
	381	531,216									455,366	565,434																411,339	598,455							
	572	625,709									359,654	469,695																315,639	502,708							
	762	731,410									250,145	360,101																206,164	393,090							
GVO-G1348-13R2	0	316,990									500,716	610,689	Please consult factory							Exceeds MOP							7.4							10.3	489,719	808,655
	191	385,251									435,784	545,837																424,779	743,940							
	381	460,242									361,243	471,307																350,237	669,429							
	572	540,797									279,512	389,547																268,508	587,620							
	762	630,768									185,864	295,811																174,869	493,731							
GVO-G1348-13R3	0	261,107									501,615	556,599	Please consult factory							Exceeds MOP							6.2							10.3	413,643	864,537
	191	318,953									447,057	502,082																359,019	810,238							
	381	382,302									384,153	439,183																296,105	747,369							
	572	450,248									315,044	370,060																227,020	678,169							
	762	525,990									235,671	290,642																147,720	598,510							
GVO-G1348-13R4	0	214,515									328,283	383,262	Please consult factory	438,242	548,207	603,191	713,164	768,153	878,134	Exceeds MOP							5.0							10.3	328,283	911,130
	191	260,848									285,070	340,092																285,070	868,344							
	381	311,328									235,012	290,040																235,012	818,343							
	572	365,336									179,901	234,913																179,901	763,081							
	762	425,348									116,443	171,408																116,443	699,152							
GVO-G1352-13R1	0	363,318									598,135	727,346	Please consult factory							Exceeds MOP							7.4							9.0	585,214	791,954
	191	443,194									521,844	651,142																508,915	715,792							
	381	531,067									434,455	563,764																421,525	628,420							
	572	625,524									338,731	468,010																325,803	532,651							
	762	731,113									229,183	358,366																216,265	422,961							
GVO-G1352-13R2	0	316,725									580,124	644,727	Please consult factory							Exceeds MOP							6.3							9.0	489,681	838,547
	191	385,088									515,302	579,949																424,797	773,897							
	381	460,093									440,776	505,429																350,263	699,394							
	572	540,612									359,005	423,643																268,514	617,563							
	762	630,471									265,235	329,825																174,813	523,603							
GVO-G1352-13R3	0	260,843									442,205	506,804	Please consult factory							Exceeds MOP							5.3							9.0	416,365	894,429
	191	318,790									387,663	452,308																361,806	840,195							
	381	382,153									324,761	389,412																298,901	777,334							
	572	450,064									255,646	320,281																229,793	708,111							
	762	525,692									176,255	240,840																150,422	628,381							
GVO-G1352-13R4	0	214,250									424,199	488,797	Please consult factory	553,396	682,599	747,202	876,414	941,022	Exceeds MOP							4.1							9.0	307,927	941,022	
	191	260,685									381,125	445,768																264,768	898,300							
	381	311,179									331,085	395,735																214,717	848,308							
	572	365,151									275,925	340,559																159,587	793,023							
	762	425,050									212,315	276,897																96,070	729,023							

Notes:
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Product Data Sheet

VA-DC-000-1796 Rev. 1

Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G13T40-13R1	0	361,209							Please consult factory	687,107	762,837	Exceeds MOP									6.3	581,089	7.6	777,983
	191	441,897							611,954	687,752										702,912				
	381	529,880							524,719	600,526										615,688				
	572	624,051							428,593	504,376										519,533				
	762	728,742							317,787	393,495										408,637				
GVO-G13T40-13R2	0	314,617						Please consult factory	506,523	582,246	Exceeds MOP									5.4	491,379	7.6	824,575	
	191	383,792					442,675		518,468	670,060		745,858											761,017	
	381	458,906					368,280		444,083	595,694		671,501											686,662	
	572	539,139					286,165		361,944	513,505		589,288											604,445	
	762	628,100					191,321		267,021	418,429		494,137											509,279	
GVO-G13T40-13R3	0	258,734						Please consult factory	486,685	562,406	Exceeds MOP									4.5	410,967	7.6	880,458	
	191	317,494					433,180		508,973	584,766		736,358	812,156										827,315	
	381	380,966					370,418		446,220	522,023		673,633	749,440										764,602	
	572	448,590					300,937		376,714	452,492		604,054	679,837										694,993	
	762	523,322					220,401		296,099	371,799		523,208	598,916										614,058	
GVO-G13T40-13R4	0	212,142						Please consult factory	381,843	533,277	Exceeds MOP									3.7	336,414	7.6	927,050	
	191	259,389					339,705		491,286	567,078		642,871	794,463	870,261									885,421	
	381	309,992					289,792		441,392	517,194		592,997	744,607	820,414									835,576	
	572	363,678					234,301		385,849	461,626		537,404	688,966	764,749									779,905	
	762	422,680					169,656		321,043	396,741		472,441	623,850	699,558									714,699	
GVO-G13T44-13R1	0	360,652						Please consult factory	637,068	728,946	Exceeds MOP									5.2	581,942	6.2	765,698	
	191	441,555					562,006		653,962										690,745					
	381	529,567					474,783		566,750										603,537					
	572	623,662					378,624		470,564										507,340					
	762	728,116					267,719		359,572										396,314					
GVO-G13T44-13R2	0	314,060						Please consult factory	591,784	683,660	Exceeds MOP									4.5	499,911	6.2	812,291	
	191	383,450					528,156		620,111	712,067									748,850					
	381	458,593					453,792		545,757	637,724									674,511					
	572	538,749					371,599		463,536	555,476									592,252					
	762	627,474					276,510		368,361	460,214									496,956					
GVO-G13T44-13R3	0	258,177						Please consult factory	463,923	647,667	Exceeds MOP									3.7	408,801	6.2	868,173	
	191	317,152					410,550		594,454	686,409		778,365							815,148					
	381	380,653					347,805		531,732	623,697		715,664							752,451					
	572	448,201					278,278		462,148	554,085		646,024							682,801					
	762	522,696					197,596		381,289	473,139		564,993							601,735					
GVO-G13T44-13R4	0	211,585	326,781	418,647	510,515	694,259	786,135	878,013	Exceeds MOP										3.0	326,781	6.2	914,766		
	191	259,046	284,756	376,705	468,655	652,560	744,514	836,471										873,254						
	381	309,679	234,858	326,818	418,779	602,706	694,671	786,638										823,425						
	572	363,289	179,327	271,258	363,190	547,060	638,997	730,936										767,713						
	762	422,054	114,557	206,396	298,238	481,931	573,781	665,635										702,377						

Notes:
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Actuator Model (Fail Up)	Spring Stroke		Operating Pressure (barg)																MinOP (barg)	Thrust @ MinOP (N)	MOP (barg)	Thrust @ MOP (N)		
	Stroke (mm)	Thrust (N)	3	3.5	4	5	5.5	6	7	7.5	8.5	9	10	10.5	11	12	12.5	13					13.5	
			Pressure Stroke Thrust: Start / 25% Stroke / 50% Stroke / 75% Stroke / End (N)																					
GVO-G13T48-13R1	0	360,123				721,621	Please consult factory	Exceeds MOP													4.1	5.2	524,397	765,450
	191	441,230				646,756			690,619															
	381	529,269				559,560			603,427															
	572	623,292				463,331			507,187															
	762	727,521				352,208			396,026															
GVO-G13T48-13R2	0	313,531			549,075	768,213	Please consult factory	Exceeds MOP													3.7	5.2	483,336	812,042
	191	383,125			485,549	704,861			748,724															
	381	458,295			411,198	630,534			674,401															
	572	538,380			328,970	548,243			592,099															
	762	626,880			233,769	452,850			496,668															
GVO-G13T48-13R3	0	257,648		495,394	604,958	824,096	Please consult factory	Exceeds MOP													3.1	5.2	407,744	867,925
	191	316,827		442,194	551,847	771,159			815,022															
	381	380,355		379,473	489,138	708,473			752,341															
	572	447,831		309,884	419,518	638,792			682,648															
	762	522,101		229,011	338,547	557,629			601,446															
GVO-G13T48-13R4	0	211,056	432,424	541,986	651,550	870,688		Exceeds MOP													2.6	5.2	344,776	914,517
	191	258,721	390,648	500,299	609,953	829,264			873,127															
	381	309,381	340,783	450,447	560,112	779,447			823,315															
	572	362,919	285,164	394,796	504,430	723,704			767,560															
	762	421,459	220,120	329,653	439,189	658,271			702,088															
GVO-G13T52-13R1	0	359,595			655,842	Please consult factory	Exceeds MOP														3.7	4.5	578,561	784,646
	191	440,905			581,065			709,964																
	381	528,971			493,880			622,792																
	572	622,922			397,621			526,499																
	762	726,927			286,401			415,175																
GVO-G13T52-13R2	0	313,003		573,633	702,434	Please consult factory	Exceeds MOP														3.2	4.5	496,353	831,238
	191	382,799		510,273	639,170			768,069																
	381	457,997		435,944	564,854			693,766																
	572	538,010		353,657	482,533			611,411																
	762	626,285		258,273	387,043			515,817																
GVO-G13T52-13R3	0	257,120	500,717	629,516	758,317		Exceeds MOP														2.6	4.5	397,681	887,121
	191	316,501	447,676	576,571	705,468			834,367																
	381	380,058	384,976	513,884	642,794			771,706																
	572	447,462	315,332	444,206	573,082			701,960																
	762	521,507	234,284	363,051	491,821			620,595																
GVO-G13T52-13R4	0	210,528	547,309	676,108	804,909		Exceeds MOP														2.1	4.5	315,480	933,713
	191	258,396	505,781	634,676	763,573			892,472																
	381	309,084	455,950	584,858	713,768			842,680																
	572	362,549	400,244	529,118	657,994			786,872																
	762	420,865	334,926	463,693	592,463			721,237																

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