

Bettis CBB/CBA300-Series

Pneumatic Double-Acting and Spring-Return Actuator Torque Chart Imperial

BETTIS™



Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)			
			40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115					120		
			Pressure Torque Output: Start/Min./End (lbf-in)																						
CBB315	Outboard	Start	623	711	800	888	976	1,064	1,153	1,241	1,329	1,417	1,506	1,594	1,682	1,771	1,859	1,947	2,036	40		120	623	2,036	
		Min	345	392	439	486	533	579	626	673	720	767	813	860	907	954	1,001	1,048	1,094				345	1,094	
		End	671	762	853	944	1,035	1,126	1,217	1,308	1,399	1,490	1,581	1,672	1,763	1,854	1,945	2,036	2,127				671	2,127	
	Inboard	Start	636	726	816	907	997	1,087	1,177	1,267	1,357	1,447	1,537	1,628	1,718	1,808	1,898	1,988	2,079				636	2,079	
		Min	345	392	439	486	533	579	626	673	720	767	813	860	907	954	1,001	1,048	1,094				345	1,094	
		End	657	746	835	924	1,013	1,102	1,192	1,281	1,370	1,459	1,548	1,637	1,726	1,815	1,905	1,994	2,083				657	2,083	
CBB420	Outboard	Start	1,388	1,578	1,767	1,957	2,147	2,336	2,526	2,716	2,905	3,095	3,285	3,474	3,664	3,854	4,044	4,233	4,423	40		120	1,388	4,423	
		Min	778	881	984	1,087	1,190	1,293	1,396	1,499	1,602	1,705	1,808	1,911	2,014	2,117	2,221	2,324	2,427				778	2,427	
		End	1,555	1,761	1,967	2,173	2,379	2,585	2,791	2,997	3,203	3,409	3,615	3,821	4,027	4,233	4,439	4,645	4,851				1,555	4,851	
	Inboard	Start	1,495	1,700	1,904	2,108	2,312	2,516	2,721	2,925	3,129	3,334	3,538	3,742	3,947	4,151	4,356	4,560	4,764				1,495	4,764	
		Min	778	881	984	1,087	1,190	1,293	1,396	1,499	1,602	1,705	1,808	1,911	2,014	2,117	2,221	2,324	2,427				778	2,427	
		End	1,443	1,634	1,825	2,016	2,207	2,399	2,590	2,781	2,972	3,163	3,354	3,546	3,737	3,928	4,119	4,311	4,502				1,443	4,502	
CBB520	Outboard	Start	2,222	2,522	2,822	3,122	3,421	3,721	4,021	Exceeds MOP											40		70	2,222	4,021
		Min	1,236	1,398	1,560	1,723	1,885	2,048	2,210		1,236	2,210													
		End	2,461	2,784	3,108	3,431	3,755	4,078	4,402		2,461	4,402													
	Inboard	Start	2,376	2,697	3,018	3,338	3,659	3,980	4,301		2,376	4,301													
		Min	1,236	1,398	1,560	1,723	1,885	2,048	2,210		1,236	2,210													
		End	2,300	2,602	2,905	3,207	3,509	3,812	4,114		2,300	4,114													
CBB525	Outboard	Start	2,872	3,261	3,649	4,038	4,427	4,815	5,204	5,593	5,981	6,370	6,759	7,148	7,537	7,926	8,315	8,704	9,093	40		120	2,872	9,093	
		Min	1,540	1,742	1,945	2,148	2,350	2,553	2,756	2,959	3,161	3,364	3,567	3,770	3,972	4,175	4,378	4,581	4,784				1,540	4,784	
		End	2,946	3,334	3,721	4,109	4,497	4,885	5,273	5,661	6,049	6,437	6,825	7,213	7,601	7,989	8,377	8,765	9,153				2,946	9,153	
	Inboard	Start	2,847	3,232	3,617	4,002	4,388	4,773	5,158	5,543	5,929	6,314	6,700	7,085	7,470	7,856	8,241	8,627	9,013				2,847	9,013	
		Min	1,540	1,742	1,945	2,148	2,350	2,553	2,756	2,959	3,161	3,364	3,567	3,770	3,972	4,175	4,378	4,581	4,784				1,540	4,784	
		End	2,972	3,363	3,755	4,146	4,537	4,929	5,320	5,711	6,103	6,494	6,886	7,277	7,668	8,060	8,452	8,843	9,235				2,972	9,235	

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Torque - Pneumatic Double-Acting Actuator

Actuator Model	Stroke Direction Start/Min./End		Operating Pressure, (psig)														MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)													
			40	45	50	55	60	65	70	75	80	85	90	95	100	105					110	115	120										
			Pressure Torque Output: Start/Min./End (lbf-in)																														
CBB725	Start	Outboard	5,862	6,635	7,407	8,180	8,953	9,726	10,499	11,272	12,045	Exceeds MOP													40	5,862	80	12,045					
	Min		3,110	3,513	3,916	4,318	4,721	5,124	5,526	5,929	6,332		3,110	6,332																			
	End		5,951	6,721	7,492	8,262	9,033	9,803	10,574	11,344	12,115		5,951	12,115																			
	Start	Inboard	5,810	6,576	7,342	8,108	8,874	9,640	10,407	11,173	11,939		5,810	11,939																			
	Min		3,110	3,513	3,916	4,318	4,721	5,124	5,526	5,929	6,332		3,110	6,332																			
	End		6,004	6,781	7,559	8,336	9,113	9,890	10,668	11,445	12,223		6,004	12,223																			
CBA730	Start	Outboard	7,160	8,106	9,053	9,999	10,946	11,893	12,839	13,786	14,733	15,680	16,627	17,574	18,521	19,468	Exceeds MOP													40	7,160	105	19,468
	Min		3,810	4,304	4,798	5,292	5,787	6,281	6,775	7,269	7,763	8,258	8,752	9,246	9,741	10,235		3,810	10,235														
	End		7,291	8,237	9,183	10,128	11,074	12,020	12,966	13,911	14,857	15,803	16,749	17,695	18,641	19,587		7,291	19,587														
	Start	Inboard	7,117	8,058	8,998	9,939	10,880	11,821	12,762	13,703	14,644	15,585	16,527	17,468	18,409	19,351		7,117	19,351														
	Min		3,810	4,304	4,798	5,292	5,787	6,281	6,775	7,269	7,763	8,258	8,752	9,246	9,741	10,235		3,810	10,235														
	End		7,336	8,287	9,239	10,190	11,141	12,093	13,045	13,996	14,948	15,899	16,851	17,803	18,755	19,707		7,336	19,707														
CBA830	Start	Outboard	9,485	10,728	11,972	13,215	14,459	15,703	16,947	18,191	19,435	Exceeds MOP														40	9,485	80	19,435				
	Min		5,031	5,680	6,329	6,978	7,627	8,276	8,925	9,574	10,224		5,031	10,224																			
	End		9,628	10,870	12,112	13,354	14,596	15,838	17,081	18,323	19,565		9,628	19,565																			
	Start	Inboard	9,427	10,663	11,900	13,136	14,372	15,608	16,845	18,081	19,318		9,427	19,318																			
	Min		5,031	5,680	6,329	6,978	7,627	8,276	8,925	9,574	10,224		5,031	10,224																			
	End		9,686	10,936	12,186	13,435	14,685	15,935	17,185	18,434	19,684		9,686	19,684																			
CBA930	Start	Outboard	12,127	13,708	15,288	16,869	18,449	20,030	Exceeds MOP																	40	12,127	65	20,030				
	Min		6,417	7,242	8,067	8,891	9,716	10,541		6,417	10,541																						
	End		12,281	13,859	15,437	17,015	18,594	20,172		12,281	20,172																						
	Start	Inboard	12,054	13,625	15,196	16,767	18,338	19,909		12,054	19,909																						
	Min		6,417	7,242	8,067	8,891	9,716	10,541		6,417	10,541																						
	End		12,356	13,944	15,531	17,119	18,707	20,295		12,356	20,295																						
CBA1030	Start	Outboard	16,134	18,225	20,315	Exceeds MOP																		40	16,134	50	20,315						
	Min		8,518	9,608	10,698		8,518	10,698																									
	End		16,301	18,387	20,474		16,301	20,474																									
	Start	Inboard	16,037	18,115	20,192		16,037	20,192																									
	Min		8,518	9,608	10,698		8,518	10,698																									
	End		16,400	18,499	20,598		16,400	20,598																									

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Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
		40	45	50	55	60	65	70	80	90	100	110	120	130	140	150	160					165	
		Pressure Torque Output: Start/Min./End (lbf-in)																					
CBB315-SR40	Start	309	325	408	491	574	657	739	822	988	1,154	1,319	1,485	1,651	1,817	1,983	2,149	Exceeds MOP	35	243	155	2,232	
	Min	133	140	184	227	271	314	357	400	487	573	659	745	831	917	1,004	1,090			95		1,133	
	End	184	194	275	357	439	521	603	685	848	1,012	1,176	1,340	1,504	1,667	1,831	1,995			112		2,077	
CBB315-SR60	Start	509			Please consult factory	449	532	615	697	863	1,029	1,195	1,360	1,526	1,692	1,858	2,024	Exceeds MOP	52	399	152	2,057	
	Min	217				181	226	269	313	400	486	573	659	745	832	918	1,004			154		1,021	
	End	310				239	321	402	484	648	812	976	1,139	1,303	1,467	1,631	1,795			190		1,828	
CBB315-SR80	Start	708			Please consult factory				573	738	904	1,070	1,236	1,401	1,567	1,733	1,899	Exceeds MOP	70	573	150	1,899	
	Min	301				222	311	399	486	572	659	745	832	918	222	918	222			918			
	End	435				284	448	611	775	939	1,103	1,267	1,431	1,595	284	1,595	284			1,595			
CBB315-SR100	Start	908			Please consult factory					782	947	1,113	1,279	1,445	1,611	1,777	1,943	Exceeds MOP	87	732	164	2,009	
	Min	384				309	397	485	572	659	746	832	919	282	919	282	919						
	End	558				411	575	739	902	1,066	1,230	1,394	1,558	362	1,558	362	1,558						
CBB415-SR40	Start	634	638	788	937	1,087	1,237	1,387	1,536	1,836	2,136	2,435	Exceeds MOP					36	518	100	2,435		
	Min	265	261	341	419	498	576	654	732	888	1,043	1,199		196	1,199	196	1,199						
	End	367	355	502	650	798	946	1,093	1,241	1,537	1,833	2,128		236	2,128	236	2,128						
CBB415-SR60	Start	977			Please consult factory	850	1,000	1,149	1,299	1,599	1,898	2,198	2,498	Exceeds MOP					53	790	112	2,558	
	Min	416				339	418	498	576	733	889	1,045	1,201		306	1,201	306	1,201					
	End	605				453	601	748	896	1,192	1,488	1,783	2,079		394	2,079	394	2,079					
CBB415-SR80	Start	1,321			Please consult factory				1,091	1,391	1,690	1,990	2,290	Exceeds MOP					70	1,091	117	2,500	
	Min	558				422	582	740	897	1,053	1,210	1,367	1,524		422	1,524	422	1,524					
	End	814				551	847	1,142	1,438	1,734	2,029	2,325	2,621		551	2,621	551	2,621					
CBB415-SR100	Start	1,809			Please consult factory								1,934	2,233	Exceeds MOP					93	1,724	114	2,353
	Min	683				732	893	1,054	1,215	1,376	1,537	1,698	1,859	618		1,859	618	1,859					
	End	871				948	1,244	1,540	1,836	2,132	2,428	2,724	3,020	741		3,020	741	3,020					

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Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)		
		40	45	50	55	60	65	70	80	90	100	110	120	130	140	150	160					165	
		Pressure Torque Output: Start/Min./End (lbf-in)																					
CBB420-SR40	Start	759	858	1,045	1,233	1,420	1,608	1,796	1,984	2,359	2,735	3,110	3,486	3,861	4,237	4,613	4,989	Exceeds MOP	37	745	157	5,252	
	Min	305	324	422	518	614	710	805	901	1,091	1,281	1,470	1,660	1,850	2,040	2,229	2,419			264		2,552	
	End	393	408	583	759	935	1,110	1,286	1,462	1,813	2,164	2,516	2,867	3,219	3,570	3,922	4,273			302		4,520	
CBB420-SR60	Start	1,215			Please consult factory	1,148	1,336	1,523	1,711	2,087	2,462	2,838	3,213	3,589	3,965	4,341	4,717	Exceeds MOP	55	1,148	156	4,942	
	Min	494				405	505	603	699	892	1,083	1,273	1,464	1,654	1,844	2,034	2,224			405		2,338	
	End	667				476	652	828	1,003	1,355	1,706	2,057	2,409	2,760	3,112	3,464	3,815			476		4,026	
CBB420-SR80	Start	1,655			Please consult factory					1,855	2,230	2,606	2,981	3,357	3,733	4,109	4,485	4,861	Exceeds MOP	72	1,554	161	4,898
	Min	667				700	894	1,087	1,279	1,470	1,660	1,851	2,041	2,232	2,423	2,614	2,805	541			2,251		
	End	900				913	1,265	1,616	1,968	2,319	2,671	3,022	3,374	3,725	4,077	4,428	4,779	632			3,761		
CBB420-SR100	Start	2,150			Please consult factory						2,364	2,740	3,116	3,491	3,867	4,243	4,619	4,807	92	2,064	166	4,845	
	Min	855				873	1,069	1,262	1,455	1,647	1,838	2,029	2,124	2,219	2,314	2,409	2,504	714		2,143			
	End	1,143				1,119	1,470	1,822	2,173	2,525	2,876	3,228	3,404	3,579	3,754	3,929	4,104	837		3,439			
CBB520-SR40	Start	1,262	1,422	1,717	2,012	2,306	2,601	2,896	3,191	3,780	4,370	4,960	5,550	Exceeds MOP					37	1,245	110	5,550	
	Min	486	521	676	829	980	1,131	1,282	1,432	1,732	2,032	2,331	2,630		2,929	3,228	3,527	3,826		425		2,630	
	End	598	913	1,191	1,469	1,747	2,025	2,303	2,858	3,414	3,970	4,526	5,082		5,638	6,194	6,750	7,306		469		4,526	
CBB520-SR60	Start	1,921			Please consult factory	1,801	2,095	2,390	2,685	3,275	3,865	4,454	5,044	Exceeds MOP						54	1,742	116	5,399
	Min	794				656	812	965	1,117	1,419	1,720	2,021	2,321		2,622	2,923	3,224	3,525	3,826		625		2,500
	End	1,106				807	1,085	1,363	1,640	2,196	2,752	3,308	3,864		4,420	4,976	5,532	6,088	6,644		751		4,198
CBB520-SR80	Start	2,637			Please consult factory					2,920	3,510	4,100	4,690	5,280	Exceeds MOP					72	2,448	120	5,280
	Min	1,067				1,114	1,420	1,724	2,026	2,327	2,628	2,929	3,230	3,531		3,832	4,133	4,434	4,735		864		2,327
	End	1,462				1,477	2,033	2,589	3,145	3,701	4,257	4,813	5,369	5,925		6,481	7,037	7,593	8,149		1,032		3,701
CBB520-SR100	Start	3,611			Please consult factory					3,394	3,984	4,574	5,164	Exceeds MOP					97	3,217	132	5,282	
	Min	1,507				1,257	1,565	1,870	2,173	2,476	2,779	3,082	3,385		3,688	3,991	4,294	4,597		4,899		1,163	2,233
	End	2,172				1,611	2,167	2,723	3,279	3,835	4,391	4,947	5,503		6,059	6,615	7,171	7,727		8,283		1,444	3,390

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Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)				
		40	45	50	55	60	65	70	80	90	100	110	120	130	140	150	160					165			
		Pressure Torque Output: Start/Min./End (lbf-in)																							
CBB525-SR40	Start	1,475	1,501	1,855	2,209	2,563	2,917	3,271	3,625	4,333	5,042	5,750	6,458	7,167	7,876	8,585	Exceeds MOP			35	1,148	146	9,010		
	Min	631	659	848	1,036	1,223	1,410	1,597	1,784	2,158	2,531	2,904	3,277	3,650	4,023	4,396								467	4,620
	End	914	973	1,333	1,693	2,052	2,412	2,771	3,131	3,850	4,569	5,289	6,009	6,728	7,448	8,168								614	8,600
CBB525-SR60	Start	2,389			Please consult factory	2,104	2,458	2,812	3,166	3,875	4,583	5,291	6,000	6,708	7,417	8,126	8,835	Exceeds MOP		53	1,963	151	8,906		
	Min	977		844		1,036	1,226	1,415	1,791	2,166	2,540	2,914	3,287	3,661	4,034	4,408	767							4,445	
	End	1,374		1,135		1,494	1,854	2,213	2,933	3,652	4,372	5,091	5,811	6,530	7,250	7,970	991							8,042	
CBB525-SR80	Start	3,326						Please consult factory	3,393	4,102	4,810	5,519	6,227	6,936	7,645	8,354	Exceeds MOP		71	2,756	159	8,992			
	Min	1,335							1,401	1,781	2,158	2,534	2,909	3,284	3,658	4,032							1,054	4,369	
	End	1,856							1,993	2,712	3,432	4,151	4,871	5,590	6,310	7,030							1,345	7,678	
CBB525-SR100	Start	4,188						Please consult factory	3,583	4,292	5,000	5,709	6,418	7,127	7,836	8,545	Exceeds MOP		88	3,442	163	8,758			
	Min	1,689							1,397	1,781	2,161	2,538	2,915	3,290	3,666	4,040							1,320	4,153	
	End	2,376							1,848	2,567	3,287	4,006	4,726	5,446	6,166	6,886							1,704	7,102	
CBB725-SR40	Start	3,215	3,162	3,866	4,569	5,273	5,977	6,681	7,385	8,793	10,202	11,610	Exceeds MOP						36	2,599	102	11,892			
	Min	1,333	1,329	1,706	2,080	2,453	2,825	3,197	3,568	4,310	5,051	5,793											1,024	5,941	
	End	1,904	1,911	2,625	3,339	4,054	4,768	5,482	6,197	7,626	9,054	10,483											1,340	10,769	
CBB725-SR60	Start	5,078			Please consult factory	4,263	4,967	5,671	6,375	7,783	9,191	10,600	12,008	Exceeds MOP						55	4,263	115	12,713		
	Min	2,062				1,659	2,041	2,419	2,795	3,543	4,288	5,031	5,774											1,659	6,145
	End	2,918				2,185	2,899	3,614	4,328	5,757	7,186	8,615	10,044											2,185	10,759
CBB725-SR80	Start	6,824						Please consult factory	6,798	8,207	9,615	11,024	12,433	Exceeds MOP						72	5,672	124	12,996		
	Min	2,757							2,796	3,550	4,299	5,045	5,790											2,185	6,088
	End	3,906							4,005	5,434	6,863	8,292	9,722											2,862	10,293
CBB725-SR100	Start	8,988						Please consult factory	8,888	10,297	11,706	Exceeds MOP								94	8,043	124	12,269		
	Min	3,461							3,476	4,237	4,992													3,013	5,292
	End	4,635							4,692	6,121	7,551													3,835	8,122

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

Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)			
		40	45	50	55	60	65	70	80	90	100	110	120	130	140	150	160					165		
		Pressure Torque Output: Start/Min./End (lbf-in)																						
CBA730-SR40	Start	4,059	4,077	4,966	5,856	6,746	7,636	8,526	9,417	11,197	12,978	14,759	16,540	18,321	20,103	Exceeds MOP				35	3,187	135	20,994	
	Min	1,651	1,686	2,163	2,637	3,108	3,579	4,048	4,518	5,455	6,393	7,329	8,265	9,202	10,138						1,201		10,607	
	End	2,294	2,372	3,271	4,171	5,071	5,971	6,871	7,772	9,572	11,372	13,173	14,974	16,775	18,576						1,472		19,477	
CBA730-SR60	Start	6,406			Please consult factory	5,566	6,456	7,346	8,236	10,017	11,797	13,578	15,359	17,141	18,923	20,704	Exceeds MOP				52	5,032	140	20,704
	Min	2,541				2,123	2,607	3,086	3,562	4,508	5,450	6,390	7,330	8,267	9,205	10,143						1,827		10,143
	End	3,478				2,718	3,618	4,518	5,419	7,219	9,019	10,820	12,621	14,422	16,223	18,024						2,178		18,024
CBA730-SR80	Start	9,041							Please consult factory	9,165	10,945	12,726	14,507	16,289	18,070	19,852	Exceeds MOP				72	7,740	145	20,743
	Min	3,383								3,507	4,472	5,426	6,374	7,319	8,261	9,203						2,716		9,673
	End	4,332									4,578	6,378	8,179	9,979	11,780	13,582		15,383						3,137
CBA730-SR100	Start	11,350							Please consult factory	9,789	11,570	13,351	15,132	16,914	18,696	20,478	Exceeds MOP				90	9,789	150	20,478
	Min	4,257								3,461	4,447	5,412	6,367	7,317	8,264	9,209						3,461		9,209
	End	5,491									4,063	5,864	7,665	9,466	11,267	13,068		14,870						4,063
CBA830-SR40	Start	5,394	5,448	6,618	7,787	8,956	10,126	11,295	12,465	14,804	17,144	19,484	Exceeds MOP							35	4,279	105	20,654	
	Min	2,191	2,253	2,879	3,500	4,119	4,737	5,354	5,971	7,202	8,433	9,663									1,616		10,278	
	End	3,062	3,191	4,373	5,555	6,738	7,920	9,102	10,284	12,649	15,014	17,379									2,009		18,561	
CBA830-SR60	Start	8,752			Please consult factory	7,723	8,893	10,062	11,232	13,571	15,911	18,251	20,591	Exceeds MOP							54	7,490	110	20,591
	Min	3,315				2,799	3,444	4,078	4,706	5,953	7,193	8,430	9,664									2,668		9,664
	End	4,298				3,371	4,553	5,735	6,918	9,282	11,647	14,012	16,377									3,135		16,377
CBA830-SR80	Start	12,015							Please consult factory	12,234	14,573	16,913	19,253	Exceeds MOP							73	10,596	115	20,423
	Min	4,450								4,641	5,910	7,163	8,410									3,732		9,030
	End	5,638									6,012	8,377	10,742		13,107							4,357		14,289
CBA830-SR100	Start	15,378							Please consult factory	15,676	18,016	20,356	Exceeds MOP								92	13,804	120	20,356
	Min	5,570								5,825	7,102	8,362										4,779		8,362
	End	6,879									7,370	9,735		12,101								5,478		12,101

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

Torque - Pneumatic Spring-Return Actuator

Actuator Model	Spring Torque Start/Min./End (lbf-in)	Operating Pressure, (psig)																MinOP (psig)	Torque @ MinOP (lbf-in)	MOP (psig)	Torque @ MOP (lbf-in)							
		40	45	50	55	60	65	70	80	90	100	110	120	130	140	150	160					165						
		Pressure Torque Output: Start/Min./End (lbf-in)																										
CBA930-SR40	Start	6,930	7,010	8,496	9,982	11,468	12,954	14,440	15,927	18,900	Exceeds MOP										35	5,524	85	20,386				
	Min	2,810	2,893	3,688	4,477	5,264	6,049	6,832	7,616	9,180														2,084	9,962			
	End	3,939	4,111	5,613	7,115	8,617	10,119	11,621	13,123	16,127														2,610	17,629			
CBA930-SR60	Start	11,419			Please consult factory	10,202	11,688	13,174	14,661	17,634	20,607	Exceeds MOP									55	10,202	90	20,607				
	Min	4,184				3,569	4,397	5,207	6,009	7,597	9,176														3,569	9,176		
	End	5,208				4,117	5,619	7,121	8,623	11,627	14,632															4,117	14,632	
CBA930-SR80	Start	15,367			Please consult factory					15,701	18,674	Exceeds MOP									73	13,620	95	20,161				
	Min	5,663								5,933	7,546															4,778	8,345	
	End	7,145									7,670		10,675														5,567	12,177
CBA930-SR100	Start	19,333			Please consult factory						19,677	Exceeds MOP									91	17,001	105	21,164				
	Min	7,159									7,455																5,972	8,265
	End	9,120											9,703															6,999
CBA1030-SR40	Start	9,319	9,456	11,421	13,387	15,352	17,317	19,283	21,249	Exceeds MOP											35	7,491	70	21,249				
	Min	3,740	3,864	4,916	5,960	7,001	8,039	9,075	10,111																	2,794	10,111	
	End	5,199	5,456	7,441	9,427	11,412	13,398	15,384	17,370																		3,470	17,370
CBA1030-SR60	Start	15,341			Please consult factory	13,876	15,842	17,807	19,773	Exceeds MOP											55	13,876	75	21,739				
	Min	5,502				4,762	5,864	6,939	8,001																		4,762	9,056
	End	6,678				5,375	7,361	9,347	11,332																			5,375
CBA1030-SR80	Start	20,016			Please consult factory					20,363	Exceeds MOP										71	16,825	80	20,363				
	Min	7,611										7,906															5,957	7,906
	End	10,027										10,618																7,044

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