

Parts

Cyclo® BBB5 Reducer

Figure 41. Cyclo® BBB5 Reducer Parts

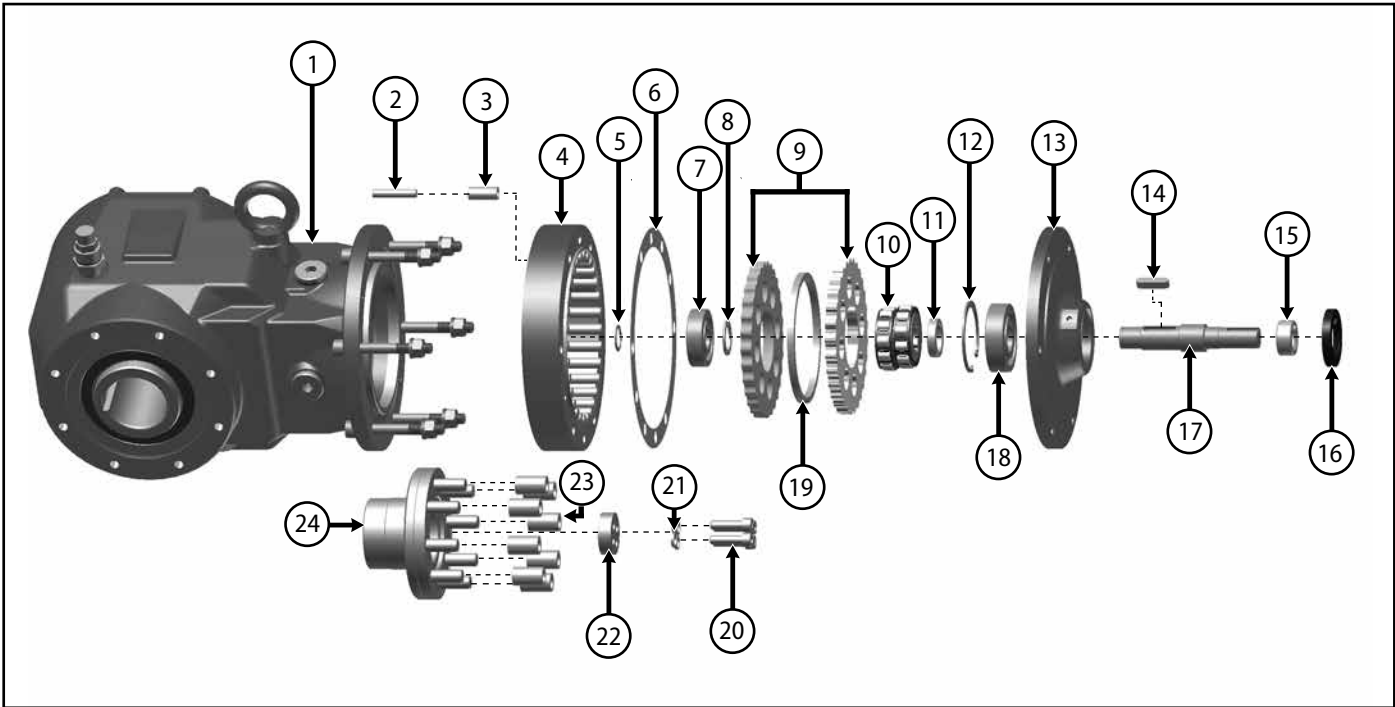


Table 31. Cyclo® BBB5 Reducer Parts

Number	Description	Number	Description
1	BBB5 Gear Assembly	13	Cyclo® High-Speed End Shield
2	Cyclo® Ring Gear Housing Pins	14	Eccentric Key
3	Cyclo® Ring Gear Housing Rollers	15	High Speed Shaft Oil Seal Collar
4	Cyclo® Ring Gear Housing	16	High Speed Shaft Oil Seal
5	Snap Ring	17	High Speed Shaft
6	Gasket Set	18	High Speed Shaft B Bearing
7	High-Speed Shaft A Bearing	19	Cycloid Disc Spacer
8	Spacer	20	Retaining Bolts
9	Cycloid Discs	21	Lock Washers
10	Cyclo® Eccentric Cam Assembly	22	End Plate
11	Spacer	23	Pin Carrier Rollers
12	Snap Ring	24	Pin Carrier

Cyclo® Planetary Reduction Component Parts

Cyclo® Planetary Reduction Component Parts (Cyclo® Ratios 11 - 18:1)

Figure 42. Cyclo® Planetary Reduction Component

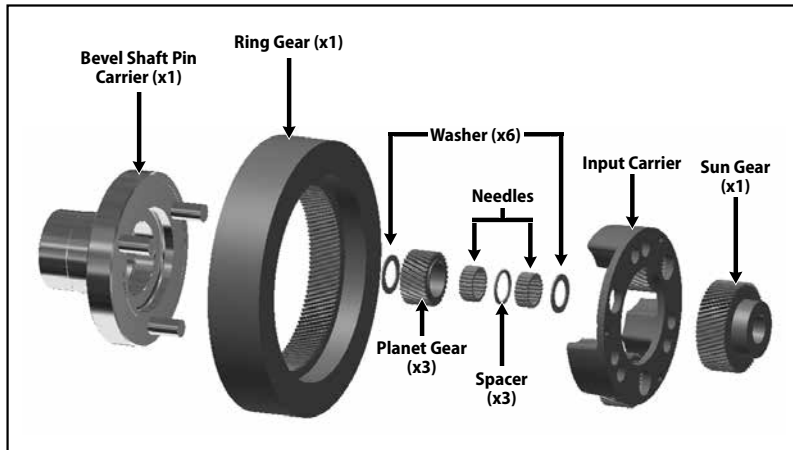


Table 32. Cyclo® Planetary Reduction Component Part Numbers (Ratios 11 - 18:1)

Unit Size	Reduction Ratio (nominal)		Cyclo® Planetary Reduction Part Numbers								
	Overall	Cyclo® Planetary	Reduction Block Set (gears & bear- ings)	Planet Gear	Ring Gear	Sun Gear	Needles	Spacer	Washer	Input Carrier	Bevel Shaft Pin Carrier
5Z100, 5Z105 5A100, 5A105	11	3:1	931SD610-003G	AN8911G	AN8303G	AN8910G	-	AW5434G	-	-	CK320LG (for 5Z) BL515LG (for 5A)
	13, 14	4:1	931SD610-004G	AN8870G	AN8871G	AN8869G					
	16, 18	5:1	931SD610-005G	AN8305G	AN8306G	AN8304G					
5A110 5A115	11	3:1	931BB612-003G	See Note ^[1]							
	13, 14	4:1	931BB612-004G								
	16, 18	5:1	931BB612-005G								
5Z120, 5Z125 5A120, 5A125 5B120, 5B125	11	3:1	931BB612-003G	AP8712G	CJ584LG	AP8711G	AX2806G	AX2543G	AX2761G	CJ244LG	CK322LG (for 5Z) CJ701LG (for 5A) CJ703LG (for 5B)
	13, 14	4:1	931BB612-004G	AP8706G	CJ554LG	AP8705G					
	16, 18	5:1	931BB612-005G	AP8714G	CJ585LG	AP8713G					
5A140, 5A145 5B140, 5B145 5C140, 5C145	11	3:1	931BB614-003G	AP8717G	CJ586LG	AP8716G	AX2807G	AX2763G	AX2544G	CJ588LG	CJ702LG (for 5A) CJ704LG (for 5B) CJ706LG (for 5C)
	13, 14	4:1	931BB614-004G	AP8708G	CJ555LG	AP8707G					
	16,18	5:1	931BB614-005G	AP8719G	CJ587LG	AP8718G					
5B160, 5B165 5C160, 5C165	11	3:1	931BB616-003G	AP8721G	CJ589LG	AP8720G	AX2808G	AX2555G	AX2554G	CJ591LG	CJ705LG (for 5B) CJ707LG (for 5C)
	13, 14	4:1	931BB616-004G	AP8710G	CJ556LG	AP8709G					
	16, 18	5:1	931BB616-005G	AP8726G	CJ590LG	AP8722G					
5C170 5C175	11	3:1	931BB617-003G	AP9278G	CJ993LG	AP9277G	AX3077G	AX3061G	AX3060G	CJ996LG	CJ938LG (for 5C)
	13,14	4:1	931BB617-004G	AP9280G	CJ994LG	AP9279G					
	16,18	5:1	931BB617-005G	AP9282G	CJ995LG	AP9281G					

Notes: [1] Consult Factory

Parts, continued

Cyclo® Reduction Component Parts

Cyclo® BBB5 Reduction Component Part Numbers (Ratios≥ 19:1)

Figure 43. Cyclo® BBB5 Reduction Components - 5Z100 thru 5C175

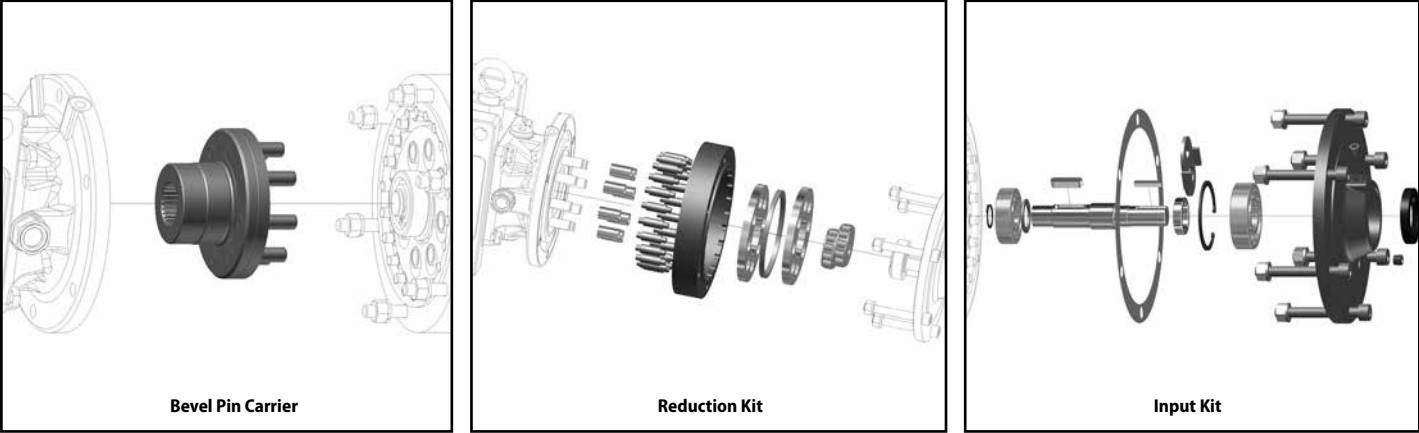


Table 33. Cyclo® Reduction Component Part Numbers (Ratios ≥ 19:1)

Unit Size	Reduction Ratio		Part Numbers		
	Overall	Cyclo®	Input Kit	Reduction Kit	Bevel Pin Carrier
5Z100 5Z105 5A100 5A105	19, 21	6	D78622	D78675	BL514LG
	22, 25	7		See Note ⁽¹⁾	
	26, 28	8		D78676	
	35, 39	11		D78677	
	42, 46	13		D78678	
	48, 53	15		D78679	
	54, 60	17		D78680	
	67, 74	21		D78681	
	80, 88	25		D78682	
	93, 102	29		D78683	
	112, 123	35		D78684	
	138, 151	43		D78685	
	163, 179	51		D78686	
	189, 207	59		D78687	
	227, 249	71		D78688	
	278, 305	87		D78689	
5A120 5A125 5B120 5B125	364	104	D78623	See Note ⁽¹⁾	CJ691LG CJ693LG
	364, 417	119		See Note ⁽¹⁾	
	≥ 424	≥ 121		See Note ⁽¹⁾	
	19, 21	6		D78690	
	22, 25	7		See Note ⁽¹⁾	
	26, 28	8		D78691	
	35, 39	11		D78692	
	42, 46	13		D78693	
	48, 53	15		D78694	
	54, 60	17		D78695	
	67, 74	21		D78696	
	80, 88	25		D78697	
5A125 5B120 5B125	93, 102	29		D78698	
	112, 123	35		D78699	
	138, 151	43		D78700	
	163, 179	51		D78701	
	189, 207	59		D78702	
	227, 249	71		D78703	
	278, 305	89		D78704	
	364	104		See Note ⁽¹⁾	
	364, 417	119		See Note ⁽¹⁾	
	≥ 424	≥ 121		See Note ⁽¹⁾	

Notes: [1] Consult Factory

Cyclo® Reduction Component Parts

Table 34. Cyclo® Reduction Component Part Numbers (Ratios ≥ 19:1), continued

Unit Size	Reduction Ratio		Part Numbers		
	Overall	Cyclo®	Input Kit	Reduction Kit	Bevel Pin Carrier
5Z100 5Z105 5A100 5A105	19, 21	6	D78504	D78520	CJ690LG
	22, 25	7		See Note ^[1]	
	26, 28	8		D78521	
	35, 39	11		D78522	
	42, 46	13		D78523	
	48, 53	15		D78524	
	54, 60	17		D78525	
	67, 74	21		D78526	
	80, 88	25		D78527	
	93, 102	29		D78528	
	112, 123	35		D78529	
	138, 151	43		D78530	
	163, 179	51		D78531	
	189, 207	59		D78532	
	227, 249	71		D78532	
	278, 305	87		D78534	
	364	104		See Note ^[1]	
	364, 417	119		See Note ^[1]	
	≥ 424	≥ 121		See Note ^[1]	

Unit Size	Reduction Ratio		Part Numbers				
	Overall	Cyclo®	Input Kit	Reduction Kit	5A14 Bevel Pin Carrier	5B14 Bevel Pin Carrier	5C14 Bevel Pin Carrier
5A140 5A145 5B140 5B145 5C140 5C145	19, 21	6	D78624	D78535	CJ692LG	CJ694LG	CJ696LG
	22, 25	7		See Note ^[1]			
	26, 28	8		D78536			
	35, 39	11		D78537			
	42, 46	13		D78538			
	48, 53	15		D78539			
	54, 60	17		D78540			
	67, 74	21		D78541			
	80, 88	25		D78542			
	93, 102	29		D78543			
	112, 123	35		D78544			
	138, 151	43		D78545			
	163, 179	51		D78546			
	189, 207	59		D78547			
	227, 249	71		D78548			
	278, 305	87		D78549			
	364	104		See Note ^[1]			
	364, 417	119		See Note ^[1]			
	≥ 424	≥ 121		See Note ^[1]			

Unit Size	Reduction Ratio		Part Numbers			
	Overall	Cyclo®	Input Kit	Reduction Kit	5B16 Bevel Pin Carrier	5C16 Bevel Pin Carrier
5B160 5B165 5C160 5C165	19, 21	6	D78625	D78720	CJ695LG	
	22, 25	7		See Note ^[1]		
	26, 28	8		D78721		
	35, 39	11		D78722		
	42, 46	13		D78723		
	48, 53	15		D78724		
	54, 60	17		D78725		
	67, 74	21		D78726		
	80, 88	25		D78727		
	93, 102	29		D78728		
	112, 123	35		D78729		
	138, 151	43		D78730		

Notes: [1] Consult Factory

Unit Size	Reduction Ratio		Part Numbers		
	Overall	Cyclo®	Input Kit	Reduction Kit	Bevel Pin Carrier
5C170 5C175	19, 21	6	D78624	D78535	CJ698LG
	22, 25	7		See Note ^[1]	
	26, 28	8		D78794	
	35, 39	11		D78736	
	42, 46	13		D78737	
	48, 53	15		D78738	
	54, 60	17		D78739	
	67, 74	21		D78740	
	80, 88	25		D78741	
	93, 102	29		D78742	
	112, 123	35		D78743	
	138, 151	43		D78744	
	163, 179	51		D78745	
	189, 207	59		D78746	
	227, 249	71		D78747	
	278, 305	87		D78748	
	364	104		See Note ^[1]	
	364, 417	119		See Note ^[1]	
	≥ 424	≥ 121		See Note ^[1]	

Bearing and Oil Seals

Figure 44. Cyclo® BBB5 Bearings and Oil Seals

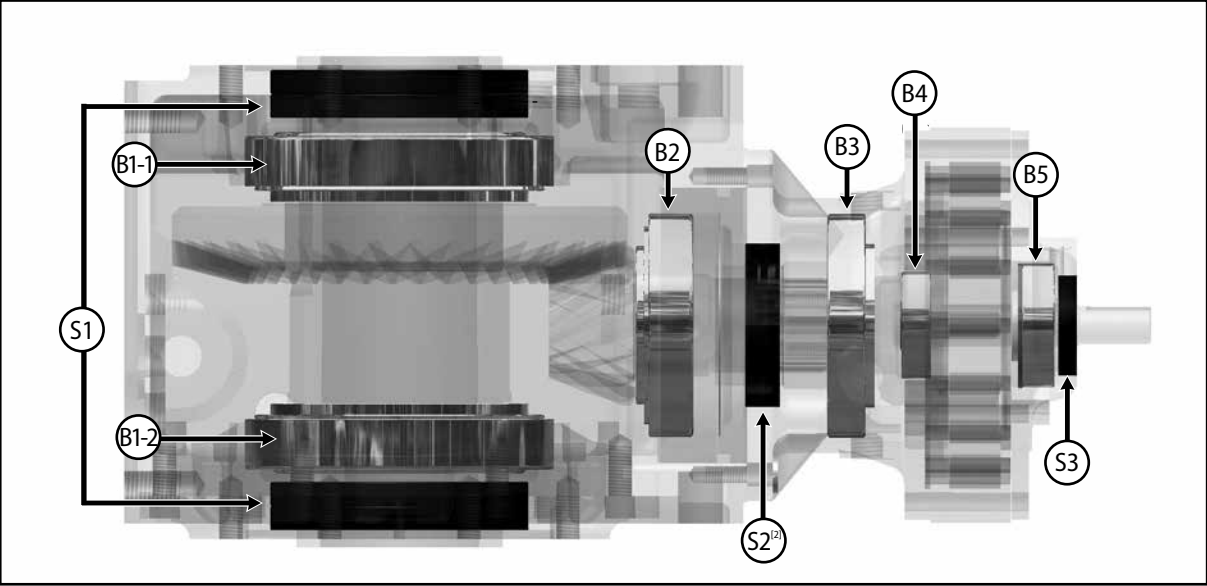


Table 35. Cyclo® BBB5 Reducer Bearings and Oil Seals

Unit Size	Bearings						Oil Seals ^[1]		
	B1-1	B1-2	B2	B3	B4	B5	S1	S2 ^[2]	S3
5Z100 5Z105	6214	6213	32307	32011	6302RSH2	6302Z	D 65 x 120 x 13	S 50 x 68 x 9	S 20 x 35 x 7
5Z110 5Z115				32013	6304	6305Z			D 32 x 52 x 8
5Z120 5Z125									D 38 x 58 x 11
5A110 5A115	32016	32916	32308	32011	6302RSH2	6302Z	D 80 x 105 x 13	S 50 x 68 x 9	S 20 x 35 x 7
5A120 5A125				32013	6304	6305Z			D 32 x 52 x 8
5A140 5A145				30215	6305R	6306			D 38 x 58 x 11
5B120 5B125	32020	32018	32310	32013	6304	6305Z	D 90 x 115 x 13	S 60 x 75 x 9	D 32 x 52 x 8
5B140 5B145				30215	6305R	6306			D 38 x 58 x 11
5B160 5B165				30217	6307R	6308			D 55x78 x 12
5C140 5C145	32022	32020	32312	30215	6305R	6306	D 100 x 125 x 13	S 70 x 95 x 13	D 38 x 58 x 11
5C160 5C165				30217	6307R	6308			D 55 x 78 x 12
5C170 5C175				30220	6406	6407			D 62 x 82 x 12

Notes: [1] D = Double Lip Seal. S = Single Lip Seal. Seal Dimensions are in mm.
[2] for "Y4" assembly only.

Bevel Gearing Parts and Tooth Count

Bevel Gearing Parts and Tooth Count

Bevel gear and pinions are sold in sets only. Individual components are not available for purchase. The information below regarding tooth count of the bevel gearset is provided for vibration analysis purposes.

Figure 45. Cyclo® BBB5 Bevel Gearing Tooth Count

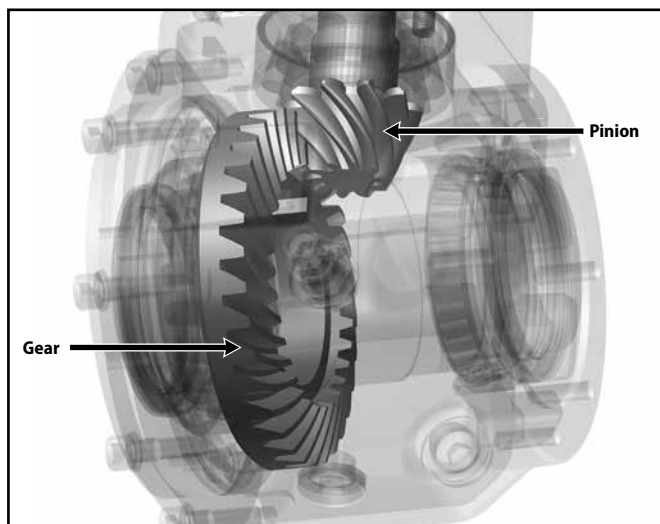


Table 36. Cyclo® BBB5 Ratios

Cyclo® BBB5 Nominal Ratio	Bevel Ratio	Cyclo® Input Ratio
11	3.5	3 ⁽¹⁾
13	3.2	4 ⁽¹⁾
14	3.5	4 ⁽¹⁾
16	3.2	5 ⁽¹⁾
18	3.5	5 ⁽¹⁾
19	3.2	6
21	3.5	6
22	3.2	7
25	3.5	7
26	3.2	8
28	3.5	8
35	3.2	11
39	3.5	11
42	3.2	13
46	3.5	13
48	3.2	15
53	3.5	15
54	3.2	17
60	3.5	17
67	3.2	21
74	3.5	21

Notes: [1] Planetary Input

Cyclo® BBB5 Nominal Ratio	Bevel Ratio	Cyclo® Input Ratio
80	3.2	25
88	3.5	25
93	3.2	29
102	3.5	29
112	3.2	35
123	3.5	35
138	3.2	43
151	3.5	43
163	3.2	51
179	3.5	51
189	3.2	59
207	3.5	59
227	3.2	71
249	3.5	71
278	3.2	87
305	3.5	87
364	3.5	104
417	3.5	119
424	3.5	121
501	3.5	143
578	3.5	165
683	3.5	195

Cyclo® BBB5 Nominal Ratio	Bevel Ratio	Cyclo® Input Ratio
809	3.5	231
956	3.5	273
1117	3.5	319
1320	3.5	377
1656	3.5	473
1957	3.5	559
2272	3.5	649
2559	3.5	731
2944	3.5	841
3511	3.5	1003
4365	3.5	1247
5177	3.5	1479
6472	3.5	1849
7228	3.5	2065
8880	3.5	2537
10658	3.5	3045
12184	3.5	3481
15530	3.5	4437
17966	3.5	5133
21620	3.5	6177
26492	3.5	7569

To determine the bevel tooth count, identify the Cyclo® BBB5 nominal ratio and corresponding bevel ratio from Table 36. Then reference Table 37 to identify the actual number of bevel gear and pinion teeth.

Table 37. Bevel Tooth Count and Part Numbers

Bevel Ratio	Number of Teeth		Bevel Gear Set Part Number			
	Pinion	Gear	5A10, 5A11, 5Z12, 5A14	5B12, 5B14, 5B16	5B12, 5B14, 5B16	5C14, 5C16, 5C17
3.2	10	32	CJ570LG/CJ560LG	CJ561LG/CJ571LG	CJ562LG/CJ572LG	CJ562LG/CJ572LG
3.5	10	35	998BBB-2A---G	998BBB-2B---G	998BBB-2C---G	998BBB-2C---G