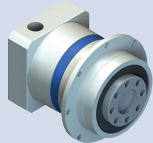
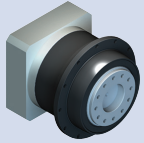
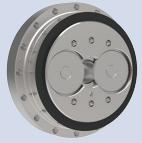
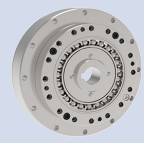
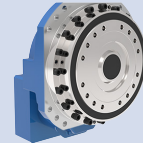




▶ ZERO-BACKLASH & ROBOTIC FLANGE SELECTION GUIDE

GAM offers a full range gearboxes from planetary servo gearboxes through zero-backlash robotic gearboxes for a wide variety of applications.

INCREASING PRECISION - DECREASING BACKLASH										
Gearbox	Planetary EPL		Helical Planetary SPH		Cycloidal GCL		Strain Wave GSL		Robotic Planetary GPL	
		Precision Inline for general servo applications								
			High precision inline for demanding servo applications		Zero-backlash cycloidal Available with integral pre-stage		Zero-backlash strain wave with high torque density and small, lightweight design for easy integration		Zero-backlash planetary with the lowest backlash. Vibration-free for high positional accuracy.	
Gearbox Type	Servo		Servo		Zero-Backlash Robotic Flange		Zero-Backlash Robotic Flange		Zero-Backlash Robotic Flange	
Features	Easily customizable		Precision Inline		Impact Resistance 5x nominal torque. Precision positioning and point-to-point motion		Small, lightweight design		High precision during motion Unique, revolutionary design maintains lifetime zero-backlash	
Advantages	Shaft, hollow or flange output Very high ratio		Quiet operation		Available with integral pre-stage for higher ratios		Quiet operation Easy integration		Very high precision Quiet operation Smooth, vibration-free motion	
Applications	Servo		Servo		Zero-Backlash		Zero-Backlash		Zero-Backlash	
Backlash	≤ 8-20 arcmin		≤ 1 - 3 arcmin		≤ 1 arcmin		≤ 0.5 arcmin (≤ 30 arcsec)		≤ 0.1 arcmin (≤ 6 arcsec)	
Ratio:	3:1 - 1000:1		3:1 - 1000:1		57:1 - 258:1 Integral pre-stage option for additional ratio		50:1 - 160:1		50:1 - 200:1 Integral pre-stage option for additional ratio	
Service Life	30,000 hours		20,000 hours		6000 hours		7000-15,000 hours		20,000 hours	
Torque Range (Nm)	Model	Nominal Torque (Nm)	Model	Nominal Torque (Nm)	Model	Nominal Torque (Nm)	Model	Nominal Torque (Nm)	Model	Nominal Torque (Nm)
≤ 15	EPL-F-047	14					GSL-CS-014	12.7		
16-25							GSL-HS-014	14		
							GSL-HS-017	17		
							GSL-HS-020	20		
26 - 50	EPL-F-064	42					GSL-HS-025	25		
							GSL-HS-032	32		
							GSL-HS-040	40		
51 - 100							GSL-CS-017	45		
	EPL-F-090	100	SPH-F-075	100			GSL-CS-020	56		
101 - 250					GCL-F-020	167	GSL-CS-025	124		
	EPL-F-110	210	SPH-F-100	250			GSL-CS-032	248		
251 - 500	EPL-F-140	340	SPH-F-140	450	GCL-F-040	412			GPL-F-056	445
501 - 1000					GCL-F-080	784			GPL-F-080	770
1001 - 2500					GCL-F-110	1078			GPL-F-112	1165
					GCL-F-160	1565			GPL-F-160	1450
2501 - 5000									GPL-F-224	1820
					GCLC-F-320	3136			GPL-F-300	2690
					GCLC-F-450	4500			GPL-F-400	3505