PRODUCT DATASHEET

ES-HG-S09-F50-R100

Precision Transmission Component

Hollow Shaft Harmonic Gearboxes | High-Torque Hollow Shaft Gear Unit

Product Overview

Precision Transmission Component with rated Torque 611 N·m, instantaneous Maximum Torque 2678 N·m and start/Stop Peak Torque 1247 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	611	N·m
Instantaneous Maximum Torque	2678	N·m
Start/Stop Peak Torque	1247	N·m
Reduction Ratio	100	
Maximum Input Speed	3500	r/min
Allowable Average Torque	866	N·m
Backlash	≤20	arc sec
Frame Size	50	
Weight	14.5	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	611	N·m	Frame Size: 50; Reduction Ratio: 100; Size: 50
Instantaneous Maximum Torque	2678	N·m	Frame Size: 50; Reduction Ratio: 100; Size: 50
Start/Stop Peak Torque	1247	N·m	Frame Size: 50; Reduction Ratio: 100; Size: 50
Backlash	≤20	arc sec	Reduction Ratio: 100; Size: 50; Frame Size: 50
Allowable Average Torque	866	N·m	Frame Size: 50; Reduction Ratio: 100; Size: 50
Angular Transmission Accuracy	1	arcmin	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
Hysteresis Loss	1	arcmin	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
MECHANICAL			
Frame Size	50		Frame Size: 50; Reduction Ratio: 100; Size: 50
Weight	14.5	kg	Frame Size: 50; Reduction Ratio: 100; Size: 50

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
RELIABILITY			
Design Life	15000	h	Frame Size: 50; Reduction Ratio: 100; Size: 50
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	100		Frame Size: 50; Reduction Ratio: 100; Size: 50
Maximum Input Speed	3500	r/min	Frame Size: 50; Reduction Ratio: 100; Size: 50
Average Input Speed	2500 / 3500	r/min	Frame Size: 50; Reduction Ratio: 100; Size: 50 / Frame Size: 50; Reduction Ratio: 100
Torsional Rigidity K2	40	×10⁴ N·m/rad	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
Torsional Rigidity K1	25	×10⁴ N·m/rad	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
Torsional Rigidity K3	44	×10⁴ N·m/rad	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
Torsional Rigidity T2	382	N·m	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50
Torsional Rigidity T1	108	N·m	Frame Size: 50; Reduction Ratio: 100; Reduction Ratio Min: 50; Size: 50

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	50	
Weight	14.5	kg

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.