PRODUCT DATASHEET

ES-HG-S29-F32-R50

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Ultra-Short Gear Unit

Product Overview

Precision Transmission Component with rated Torque 53 N·m, instantaneous Maximum Torque 268 N·m and start/Stop Peak Torque 151 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	53	N·m
Instantaneous Maximum Torque	268	N·m
Start/Stop Peak Torque	151	N·m
Reduction Ratio	50	
Maximum Input Speed	4800	r/min
Allowable Average Torque	75	N·m
Frame Size	32	
Weight	1.9	kg
Average Input Speed	3500	r/min

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	53	N·m	Frame Size: 32; Reduction Ratio: 50; Size: 32
Instantaneous Maximum Torque	268	N·m	Frame Size: 32; Reduction Ratio: 50; Size: 32
Start/Stop Peak Torque	151	N·m	Frame Size: 32; Reduction Ratio: 50; Size: 32
Allowable Average Torque	75	N·m	Frame Size: 32; Reduction Ratio: 50; Size: 32
Angle Transmission Accuracy	1	arc min	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32
Hysteresis Loss	2	arc min	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32
MECHANICAL			
Frame Size	32		Frame Size: 32; Reduction Ratio: 50; Size: 32
Weight	1.9	kg	Frame Size: 32; Reduction Ratio: 50; Size: 32
RELIABILITY			
Design Life	9000	h	Frame Size: 32; Reduction Ratio: 50; Size: 32

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 32; Reduction Ratio: 50; Size: 32
Maximum Input Speed	4800	r/min	Frame Size: 32; Reduction Ratio: 50; Size: 32
Average Input Speed	3500	r/min	Frame Size: 32; Reduction Ratio: 50; Size: 32
Torsional Rigidity K2	2.7	×10⁴ N·m/rad	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32; Source Condition: ratio=50
Torsional Rigidity K1	2	×10⁴ N·m/rad	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32; Source Condition: ratio=50
Torsional Rigidity K3	3.7	×10⁴ N·m/rad	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32; Source Condition: ratio=50
Torsional Rigidity T2	48	N·m	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32; Source Condition: all ratios
Torsional Rigidity T1	14	N·m	Frame Size: 32; Ratio Bucket: 50; Reduction Ratio: 50; Size: 32; Source Condition: all ratios

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	32	
Weight	1.9	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.