PRODUCT DATASHEET

ES-HG-S28-F14-R80

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Ultra-Short Hollow Shaft Gear Unit

Product Overview

Precision Transmission Component with rated Torque 5.4 N·m, instantaneous Maximum Torque 35 N·m and start/Stop Peak Torque 16 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	5.4	N·m
Instantaneous Maximum Torque	35	N·m
Start/Stop Peak Torque	16	N·m
Reduction Ratio	80	
Maximum Input Speed	8500	r/min
Allowable Average Torque	7.7	N·m
Frame Size	14	
Weight	0.64	kg
Average Input Speed	3500	r/min

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	5.4	N·m	Frame Size: 14; Reduction Ratio: 80; Size: 14
Instantaneous Maximum Torque	35	N·m	Frame Size: 14; Reduction Ratio: 80; Size: 14
Start/Stop Peak Torque	16	N·m	Frame Size: 14; Reduction Ratio: 80; Size: 14
Allowable Average Torque	7.7	N·m	Frame Size: 14; Reduction Ratio: 80; Size: 14
Angle Transmission Accuracy	1.5	arc min	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Hysteresis Loss	2	arc min	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
MECHANICAL			
Frame Size	14		Frame Size: 14; Reduction Ratio: 80; Size: 14
Weight	0.64	kg	Frame Size: 14; Reduction Ratio: 80; Size: 14
RELIABILITY			
Design Life	10000	h	Frame Size: 14; Reduction Ratio: 80; Size: 14

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	80		Frame Size: 14; Reduction Ratio: 80; Size: 14
Maximum Input Speed	8500	r/min	Frame Size: 14; Reduction Ratio: 80; Size: 14
Average Input Speed	3500	r/min	Frame Size: 14; Reduction Ratio: 80; Size: 14
Torsional Rigidity K2	0.26	×10⁴ N·m/rad	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14; Source Condition: ratio>50
Torsional Rigidity K1	0.23	×10⁴ N·m/rad	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14; Source Condition: ratio>50
Torsional Rigidity K3	0.37	×10⁴ N·m/rad	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14; Source Condition: ratio>50
Torsional Rigidity T2	2	N·m	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14; Source Condition: all ratios
Torsional Rigidity T1	0.8	N·m	Frame Size: 14; Ratio Bucket: >50; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14; Source Condition: all ratios

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Weight	0.64	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.