

PRODUCT DATASHEET

ES-HG-S09-F14-R50

Precision Transmission Component

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

Product Overview

Precision Transmission Component with rated Torque 7 Nm, instantaneous Maximum Torque 46 Nm and start/Stop Peak Torque 23 Nm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	7	Nm
Instantaneous Maximum Torque	46	Nm
Start/Stop Peak Torque	23	Nm
Reduction Ratio	50	
Maximum Input Speed	8500	r/min
Allowable Average Torque	9	Nm
Backlash	≤20	arc sec
Frame Size	14	
Weight	0.7	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	7	Nm	Frame Size: 14; Reduction Ratio: 50; Size: 14
Instantaneous Maximum Torque	46	Nm	Frame Size: 14; Reduction Ratio: 50; Size: 14
Start/Stop Peak Torque	23	Nm	Frame Size: 14; Reduction Ratio: 50; Size: 14
Backlash	≤20	arc sec	Reduction Ratio: 50; Size: 14; Frame Size: 14
Allowable Average Torque	9	Nm	Frame Size: 14; Reduction Ratio: 50; Size: 14
Angular Transmission Accuracy	1.5	arcmin	Frame Size: 14; Reduction Ratio: 50; Size: 14
Hysteresis Loss	2	arcmin	Frame Size: 14; Reduction Ratio: 50; Size: 14
MECHANICAL			
Frame Size	14		Frame Size: 14; Reduction Ratio: 50; Size: 14
Weight	0.7	kg	Frame Size: 14; Reduction Ratio: 50; Size: 14

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
RELIABILITY			
Design Life	10000	h	Frame Size: 14; Reduction Ratio: 50; Size: 14
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 14; Reduction Ratio: 50; Size: 14
Maximum Input Speed	8500	r/min	Frame Size: 14; Reduction Ratio: 50; Size: 14
Average Input Speed	3500	r/min	Frame Size: 14; Reduction Ratio: 50; Size: 14
Torsional Rigidity K2	0.47	$\times 10^4$ N·m/rad	Frame Size: 14; Reduction Ratio: 50; Size: 14
Torsional Rigidity K1	0.34	$\times 10^4$ N·m/rad	Frame Size: 14; Reduction Ratio: 50; Size: 14
Torsional Rigidity K3	0.57	$\times 10^4$ N·m/rad	Frame Size: 14; Reduction Ratio: 50; Size: 14
Torsional Rigidity T2	6.9	N·m	Frame Size: 14; Reduction Ratio: 50; Size: 14
Torsional Rigidity T1	2	N·m	Frame Size: 14; Reduction Ratio: 50; Size: 14

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Weight	0.7	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.