

PRODUCT DATASHEET

ES-HG-S09-F14-R80

Precision Transmission Component

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

Product Overview

Precision Transmission Component with rated Torque 10 N·m, instantaneous Maximum Torque 61 N·m and start/Stop Peak Torque 30 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	10	N·m
Instantaneous Maximum Torque	61	N·m
Start/Stop Peak Torque	30	N·m
Reduction Ratio	80	
Maximum Input Speed	8500	r/min
Allowable Average Torque	14	N·m
Backlash	≤20	arc sec
Frame Size	14	
Weight	0.7	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	10	Nm	Frame Size: 14; Reduction Ratio: 80; Size: 14
Instantaneous Maximum Torque	61	Nm	Frame Size: 14; Reduction Ratio: 80; Size: 14
Start/Stop Peak Torque	30	Nm	Frame Size: 14; Reduction Ratio: 80; Size: 14
Backlash	≤20	arc sec	Reduction Ratio: 80; Size: 14; Frame Size: 14
Allowable Average Torque	14	Nm	Frame Size: 14; Reduction Ratio: 80; Size: 14
Angular Transmission Accuracy	1.5	arcmin	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Hysteresis Loss	1	arcmin	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
MECHANICAL			
Frame Size	14		Frame Size: 14; Reduction Ratio: 80; Size: 14
Weight	0.7	kg	Frame Size: 14; Reduction Ratio: 80; Size: 14

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
RELIABILITY			
Design Life	15000	h	Frame Size: 14; Reduction Ratio: 80; Size: 14
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	0.61	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K1	0.47	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K3	0.71	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T2	6.9	Nm	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T1	2	Nm	Frame Size: 14; Reduction Ratio: 80; Reduction Ratio Min: 50; Size: 14

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Weight	0.7	kg

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Specifications are subject to change without notice. Verify the current product configuration before final design release.
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2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.