PRODUCT DATASHEET

ES-HG-S18-F40-R50

Precision Transmission Component

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

Product Overview

Precision Transmission Component with rated Torque 178 N·m, instantaneous Maximum Torque 892 N·m and start/Stop Peak Torque 523 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	178	N·m
Instantaneous Maximum Torque	892	N·m
Start/Stop Peak Torque	523	N·m
Reduction Ratio	50	
Backlash	≤20	arc sec
Maximum Input Speed	4000	r/min
Allowable Average Torque	255	N·m
Frame Size	40	
Weight	5.4	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	178	N·m	Frame Size: 40; Reduction Ratio: 50; Size: 40
Instantaneous Maximum Torque	892	N·m	Frame Size: 40; Reduction Ratio: 50; Size: 40
Start/Stop Peak Torque	523	N·m	Frame Size: 40; Reduction Ratio: 50; Size: 40
Backlash	≤20	arc sec	Frame Size: 40; Reduction Ratio: 50; Size: 40
Allowable Average Torque	255	N·m	Frame Size: 40; Reduction Ratio: 50; Size: 40
MECHANICAL			
Frame Size	40		Frame Size: 40; Reduction Ratio: 50; Size: 40
Weight	5.4	kg	Frame Size: 40; Reduction Ratio: 50; Size: 40
RELIABILITY			
Design Life	10000	h	Frame Size: 40; Reduction Ratio: 50; Size: 40
CONFIGURATION			
Variant Style	Simple Integrated Hollow-Shaft Type		Frame Size: 40; Reduction Ratio: 50
Unit Structure	Complete Unit		Frame Size: 40; Reduction Ratio: 50
Series Family	High-Torque Hat-Type Harmonic Gear Series		Frame Size: 40; Reduction Ratio: 50

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 40; Reduction Ratio: 50; Size: 40
Maximum Input Speed	4000	r/min	Frame Size: 40; Reduction Ratio: 50; Size: 40
Average Input Speed	3500 / 3000	r/min	Frame Size: 40; Reduction Ratio: 50 / Frame Size: 40; Reduction Ratio: 50; Size: 40
Angle Transmission Accuracy	1	arcmin	Frame Size: 40; Reduction Ratio: 50; Size: 40
Torsional Rigidity K2	14	×10⁴ N·m/rad	Frame Size: 40; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 40
Torsional Rigidity K1	10	×10⁴ N·m/rad	Frame Size: 40; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 40
Torsional Rigidity K3	18	×10⁴ N·m/rad	Frame Size: 40; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 40
Torsional Rigidity T2	196	N·m	Frame Size: 40; Rigidity Scope: all reduction ratios; Size: 40
Hysteresis Loss	2	arcmin	Frame Size: 40; Reduction Ratio: 50; Size: 40
Torsional Rigidity T1	54	N·m	Frame Size: 40; Rigidity Scope: all reduction ratios; Size: 40
Starting Torque	61	N·m	Frame Size: 40; Reduction Ratio: 50; Size: 40

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	40	
Weight	5.4	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.