PRODUCT DATASHEET

ES-HG-S18-F17-R50

Precision Transmission Component

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

Product Overview

Precision Transmission Component with rated Torque 21 N·m, instantaneous Maximum Torque 91 N·m and start/Stop Peak Torque 44 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	21	N·m
Instantaneous Maximum Torque	91	N·m
Start/Stop Peak Torque	44	N·m
Reduction Ratio	50	
Backlash	≤20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	34	N·m
Frame Size	17	
Weight	0.62	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	21	N·m	Frame Size: 17; Reduction Ratio: 50; Size: 17
Instantaneous Maximum Torque	91	N·m	Frame Size: 17; Reduction Ratio: 50; Size: 17
Start/Stop Peak Torque	44	N·m	Frame Size: 17; Reduction Ratio: 50; Size: 17
Backlash	≤20	arc sec	Frame Size: 17; Reduction Ratio: 50; Size: 17
Allowable Average Torque	34	N·m	Frame Size: 17; Reduction Ratio: 50; Size: 17
MECHANICAL			
Frame Size	17		Frame Size: 17; Reduction Ratio: 50; Size: 17
Weight	0.62	kg	Frame Size: 17; Reduction Ratio: 50; Size: 17
RELIABILITY			
Design Life	10000	h	Frame Size: 17; Reduction Ratio: 50; Size: 17
CONFIGURATION			
Variant Style	Simple Integrated Hollow-Shaft Type		Frame Size: 17; Reduction Ratio: 50
Unit Structure	Complete Unit		Frame Size: 17; Reduction Ratio: 50
Series Family	High-Torque Hat-Type Harmonic Gear Series		Frame Size: 17; Reduction Ratio: 50

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 17; Reduction Ratio: 50; Size: 17
Maximum Input Speed	7300	r/min	Frame Size: 17; Reduction Ratio: 50; Size: 17
Average Input Speed	3500	r/min	Frame Size: 17; Reduction Ratio: 50; Size: 17
Angle Transmission Accuracy	1.5	arcmin	Frame Size: 17; Reduction Ratio: 50; Size: 17
Torsional Rigidity K2	1.1	×10⁴ N·m/rad	Frame Size: 17; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 17
Torsional Rigidity K1	0.81	×10⁴ N·m/rad	Frame Size: 17; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 17
Torsional Rigidity K3	1.3	×10⁴ N·m/rad	Frame Size: 17; Reduction Ratio: 50; Rigidity Scope: reduction ratio 50; Size: 17
Torsional Rigidity T2	12	N·m	Frame Size: 17; Rigidity Scope: all reduction ratios; Size: 17
Hysteresis Loss	2	arcmin	Frame Size: 17; Reduction Ratio: 50; Size: 17
Torsional Rigidity T1	3.9	N·m	Frame Size: 17; Rigidity Scope: all reduction ratios; Size: 17
Starting Torque	6.7	N·m	Frame Size: 17; Reduction Ratio: 50; Size: 17

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	17	
Weight	0.62	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.