PRODUCT DATASHEET

ES-HG-S05-F17-R100

Precision Transmission Component

Cup Harmonic Gearboxes | High-Torque Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 31 N·m, instantaneous Maximum Torque 109 N·m and start/Stop Peak Torque 70 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	31	N·m
Instantaneous Maximum Torque	109	N·m
Start/Stop Peak Torque	70	N·m
Reduction Ratio	100	
Backlash	≤20 / 20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	51	N·m
Frame Size	17	
Weight	0.67	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	31	N·m	
Instantaneous Maximum Torque	109	N·m	
Start/Stop Peak Torque	70	N·m	
Backlash	≤20 / 20	arc sec	
Allowable Average Torque	51	N·m	
Angular Transmission Accuracy	1.5	arc min	
Hysteresis Loss	1	arc min	
Starting Torque	3.7 / 0.037	N·m	
MECHANICAL			
Frame Size	17		
Weight	0.67	kg	
Wave Generator Dimension T	12.8+0.10 / 9.4+0.10	mm	Varies by published configuration.

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Wave Generator Bore U	φ8H7 / φ11H7		Varies by published configuration.
Wave Generator Keyway W	4JS9/P9 / 3JS9/P9		Varies by published configuration.
RELIABILITY			
Design Life	15000	h	
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	100		
Maximum Input Speed	7300	r/min	
Average Input Speed	3500	r/min	
Torsional Rigidity K1	1 / 10000	N·m/rad	
Torsional Rigidity K2	1.4 / 14000	N·m/rad	
Torsional Rigidity K3	1.6 / 16000	N·m/rad	
Torsional Rigidity T2	12	N·m	
Torsional Rigidity T1	3.9	N·m	

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	17	
Weight	0.67	kg
Wave Generator Dimension T	12.8+0.10 / 9.4+0.10	mm
Wave Generator Bore U	φ8H7 / φ11H7	
Wave Generator Keyway W	4JS9/P9 / 3JS9/P9	

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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.