

PRODUCT DATASHEET

ES-HG-S06-F17-R50

Precision Transmission Component

Cup Harmonic Gearboxes | High-Torque Cup Unit Type II

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 / 20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	34	N·m
Frame Size	17	
Weight	0.67	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	21	Nm	
Instantaneous Maximum Torque	91	Nm	
Start/Stop Peak Torque	44	Nm	
Backlash	≤20 / 20	arc sec	
Allowable Average Torque	34	Nm	
Angular Transmission Accuracy	1.5	arc min	
Hysteresis Loss	2	arc min	
Starting Torque	6.7 / 0.067	Nm	
MECHANICAL			
Frame Size	17		
Weight	0.67	kg	
Wave Generator Dimension T	9.4+0.10 / 12.8+0.10	mm	Varies by published configuration.
Wave Generator Bore U	φ8H7 / φ11H7		Varies by published configuration.
Wave Generator Keyway W	3JS9/P9 / 4JS9/P9		Varies by published configuration.
RELIABILITY			
Design Life	10000	h	
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		
Maximum Input Speed	7300	r/min	
Average Input Speed	3500	r/min	
Torsional Rigidity K1	0.81 / 8100	Nm/rad	
Torsional Rigidity K2	1.1 / 11000	Nm/rad	
Torsional Rigidity K3	1.3 / 13000	Nm/rad	
Torsional Rigidity T2	12	Nm	
Torsional Rigidity T1	3.9	Nm	

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	45.0±0.2*
	Middle section length	39
	Inner section length	37
	Right boss width	8
	Left step height	4.5
	O-ring specification	O-ring 56x2
	Groove width	12
	Left bottom height	0.5
	Right boss height	3
	Left shaft outer diameter	φ63 h7
	Middle diameter	φ62
	Internal bore diameter	φ38
	Internal hole diameter	φ10 H7
	Small hole diameter	φ7
	Middle section width	9.5
	Datum T	
	Right side diameter	φ18
	Right shaft outer diameter	φ48 h7

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Maximum outer diameter	φ79
	Threaded hole specification	2-M3
	O-ring specification	O-ring 34.5x0.8

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Threaded hole bolt circle diameter	φ27
	Threaded hole specification	6-M5 threaded holes
Mechanical View 3	Mounting hole thread specification	8 holes, M4 thread
	Mounting hole diameter	8 holes, Φ4.5 mm diameter
	Mounting hole bolt circle diameter	Φ71 mm
	Width identifier	Width dimension (value not specified on drawing)
	Datum identifier	Datum U

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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.