

PRODUCT DATASHEET

ES-HG-S08-F14-R120

Precision Transmission Component

Hat Harmonic Gearboxes | High-Torque Hat Unit Type II

Product Overview

Precision Transmission Component with reduction Ratio 120, frame Size 14 and angular Transmission Accuracy 1.5 arcmin.

Key Specifications

PARAMETER	VALUE	UNIT
Reduction Ratio	120	
Frame Size	14	
Angular Transmission Accuracy	1.5	arcmin
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10 / 9.4+0.10	mm
Wave Generator Bore U	φ14H7 / φ11H7 / φ8H7	
Wave Generator Keyway W	4JS9/P9 / 5JS9/P9 / 3JS9/P9	
Hysteresis Loss	1	arcmin
Torsional Rigidity K1	0.47	×10 ⁴ Nm/rad
Torsional Rigidity K2	0.61	×10 ⁴ Nm/rad

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Angular Transmission Accuracy	1.5	arcmin	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Hysteresis Loss	1	arcmin	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
MECHANICAL			
Frame Size	14		Frame Size: 14; Reduction Ratio: 120; Size: 14
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10 / 9.4+0.10	mm	Varies by published configuration.
Wave Generator Bore U	φ14H7 / φ11H7 / φ8H7		Varies by published configuration.
Wave Generator Keyway W	4JS9/P9 / 5JS9/P9 / 3JS9/P9		Varies by published configuration.
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	120		Frame Size: 14; Reduction Ratio: 120; Size: 14
Torsional Rigidity K2	0.61	×10 ⁴ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K1	0.47	×10 ⁴ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K3	0.71	×10 ⁴ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T2	6.9	Nm	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T1	2	Nm	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10 / 9.4+0.10	mm
Wave Generator Bore U	φ14H7 / φ11H7 / φ8H7	
Wave Generator Keyway W	4JS9/P9 / 5JS9/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.