PRODUCT DATASHEET

ES-HG-S18-F45-R160

Precision Transmission Component

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

Product Overview

Precision Transmission Component with reduction Ratio 160, frame Size 45 and angle Transmission Accuracy 1 arcmin.

Key Specifications

PARAMETER	VALUE	UNIT
Reduction Ratio	160	
Frame Size	45	
Angle Transmission Accuracy	1	arcmin
Hysteresis Loss	1	arcmin
Series Family	High-Torque Hat-Type Harmonic Gear Series	
Torsional Rigidity K1	18	×10⁴ N·m/rad
Torsional Rigidity K2	29	×10⁴ N·m/rad
Torsional Rigidity K3	33	×10⁴ N·m/rad
Torsional Rigidity T1	76	N·m

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Frame Size	45		Frame Size: 45; Reduction Ratio: 160; Size: 45
CONFIGURATION			
Variant Style	Simple Integrated Hollow-Shaft Type		Frame Size: 45; Reduction Ratio: 160
Unit Structure	Complete Unit		Frame Size: 45; Reduction Ratio: 160
Series Family	High-Torque Hat-Type Harmonic Gear Series		Frame Size: 45; Reduction Ratio: 160
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	160		Frame Size: 45; Reduction Ratio: 160; Size: 45
Angle Transmission Accuracy	1	arcmin	Frame Size: 45; Reduction Ratio Min: 50; Size: 45
Torsional Rigidity K2	29	$\times 10^4$ N·m/rad	Frame Size: 45; Reduction Ratio: 160; Rigidity Scope: reduction ratio above 50; Size: 45
Torsional Rigidity K1	18	$\times 10^4$ N·m/rad	Frame Size: 45; Reduction Ratio: 160; Rigidity Scope: reduction ratio above 50; Size: 45
Torsional Rigidity K3	33	$\times 10^4$ N·m/rad	Frame Size: 45; Reduction Ratio: 160; Rigidity Scope: reduction ratio above 50; Size: 45
Torsional Rigidity T2	275	N·m	Frame Size: 45; Rigidity Scope: all reduction ratios; Size: 45
Hysteresis Loss	1	arcmin	Frame Size: 45; Reduction Ratio Min: 50; Size: 45
Torsional Rigidity T1	76	N·m	Frame Size: 45; Rigidity Scope: all reduction ratios; Size: 45

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	45	

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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.