PRODUCT DATASHEET

ES-HG-S11-F25-R160

Precision Transmission Component

Cup Harmonic Gearboxes | Lightweight Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 67 N·m, instantaneous Maximum Torque 314 N·m and start/Stop Peak Torque 176 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	67	N·m
Instantaneous Maximum Torque	314	N·m
Start/Stop Peak Torque	176	N·m
Reduction Ratio	160	
Backlash	≤20	arc sec
Maximum Input Speed	5600	r/min
Allowable Average Torque	108	N·m
Frame Size	25	
Weight	1.14	kg

Technical Specifications

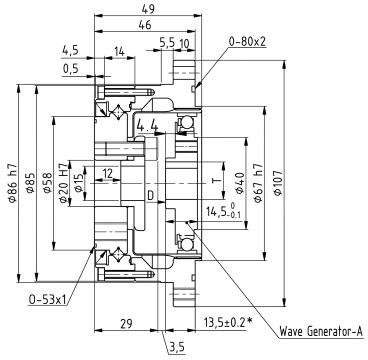
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	67	N·m	Frame Size: 25; Reduction Ratio: 160
Instantaneous Maximum Torque	314	N·m	Frame Size: 25; Reduction Ratio: 160
Start/Stop Peak Torque	176	N·m	Frame Size: 25; Reduction Ratio: 160
Backlash	≤20	arc sec	Frame Size: 25; Reduction Ratio: 160
Allowable Average Torque	108	N·m	Frame Size: 25; Reduction Ratio: 160
MECHANICAL			
Frame Size	25		Frame Size: 25; Reduction Ratio: 160
Weight	1.14	kg	Frame Size: 25; Reduction Ratio: 160
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10	mm	Frame Size: 25; Option Index: 1; Option Label: Wave generator - A φ14; Reduction Ratio: 160; Wave Generator Option: wave-generator-307ae5fd0846 / Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 160; Wave Generator Option: wave-generator-fd26f6670d9b
Wave Generator Bore U	φ11H7 / φ14H7		Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 160; Wave Generator Option: wave-generator-fd26f6670d9b / Frame Size: 25; Option Index: 1; Option Label: Wave generator - A φ14; Reduction Ratio: 160; Wave Generator Option: wave-generator-307ae5fd0846
Wave Generator Keyway W	5JS9/P9 / 4JS9/P9		Frame Size: 25; Option Index: 1; Option Label: Wave generator - A φ14; Reduction Ratio: 160; Wave Generator Option: wave-generator-307ae5fd0846 / Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 160; Wave Generator Option: wave-generator-fd26f6670d9b
RELIABILITY			
Design Life	15000	h	Frame Size: 25; Reduction Ratio: 160
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	160		Frame Size: 25; Reduction Ratio: 160
Maximum Input Speed	5600	r/min	Frame Size: 25; Reduction Ratio: 160
Average Input Speed	3500	r/min	Frame Size: 25; Reduction Ratio: 160

Dimensional & Integration Overview

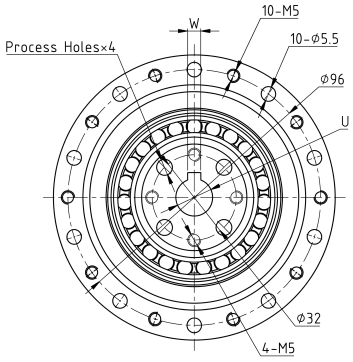
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	25	
Weight	1.14	kg
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10	mm
Wave Generator Bore U	φ11H7 / φ14H7	
Wave Generator Keyway W	5JS9/P9 / 4JS9/P9	

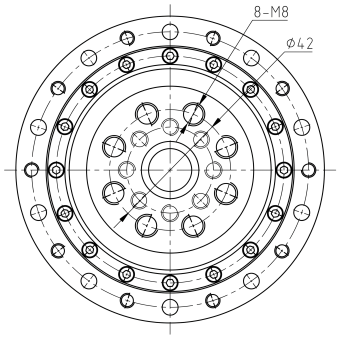
Dimensional Drawings



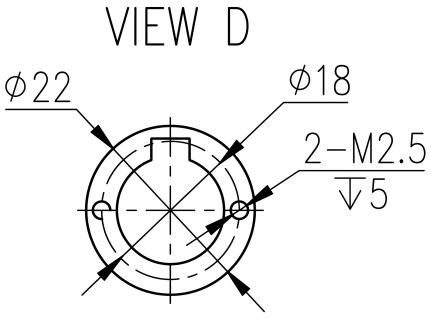
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall axial length	49
	Inner axial length	46
	O-ring or groove callout	O-80 x 2
	Local axial dimensions	5.5 and 10
	End step axial width	4.5
	Local axial length	14
	Small step axial width	0.5
	Local clearance or offset dimension	4.4
	Diameter 86 h7 fit	Diameter 86 h7
	Diameter 20 H7 fit	Diameter 20 H7
	Diameter 58	
	Outer diameter 107	Diameter 107
	Diameter 85	
	Diameter 40	
	Diameter 15	
	Diameter 67 h7 fit	Diameter 67 h7
	Local axial dimension	12
	Dimension symbol T	T, value not specified in this crop

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Dimension symbol D	D, value not specified in this crop
	Axial dimension 14.5 tolerance	14.5 +0/-0.1
	O-ring or groove callout	O-53 x 1
	Axial dimension 13.5 tolerance	13.5 ±0.2
	Bottom axial length	29

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Number of process holes	4 process holes
	View or feature label W	Label W
	M5 threaded holes quantity	10 × M5 threaded holes
	Diameter 5.5 holes quantity and diameter	10 × Φ5.5 holes
	Diameter 96	Φ96
	View or feature label U	Label U
	Diameter 32	Φ32
	M5 holes quantity	4 × M5 holes
Mechanical View 3	M8 threaded mounting holes quantity and size	8 × M8 threaded holes
	Hole diameter	Diameter 42
Mechanical View 4	View identifier	View D
	Hole diameter	Diameter 22 mm
		Diameter 18 mm
	Threaded hole quantity and size	2 × M2.5 threaded holes
	Hole depth or depth callout	Depth 5 mm

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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.