PRODUCT DATASHEET

ES-HG-S22-F25-R160

Precision Transmission Component

Cup Harmonic Gearboxes | Standard 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	1.46	kg

Technical Specifications

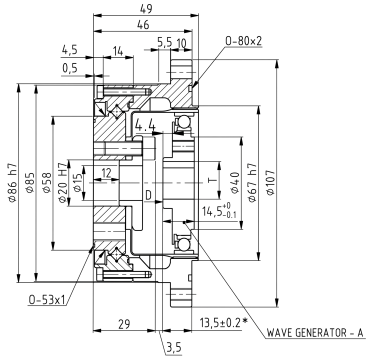
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	67	N·m	Frame Size: 25; Reduction Ratio: 160
Instantaneous Maximum Torque	314	N·m	Frame Size: 25; Reduction Ratio: 160
Start/Stop Peak Torque	176	N·m	Frame Size: 25; Reduction Ratio: 160
Backlash	≤20	arc sec	Frame Size: 25; Reduction Ratio: 160
Allowable Average Torque	108	N·m	Frame Size: 25; Reduction Ratio: 160
MECHANICAL			
Frame Size	25		Frame Size: 25; Reduction Ratio: 160
Weight	1.46	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	4JS9/P9 / 5JS9/P9		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
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

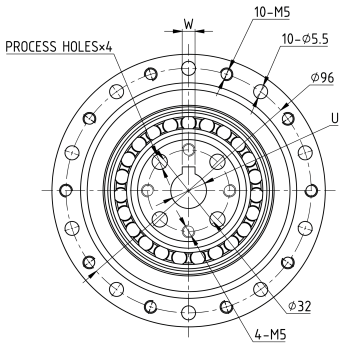
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	25	
Weight	1.46	kg
Wave Generator Dimension T	16.3+0.10 / 12.8+0.10	mm
Wave Generator Bore U	φ11H7 / φ14H7	
Wave Generator Keyway W	4JS9/P9 / 5JS9/P9	

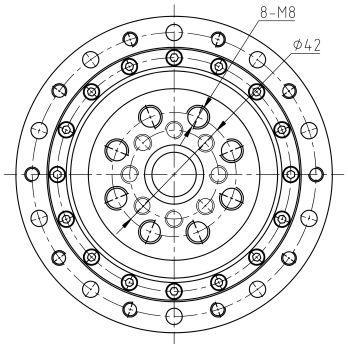
Dimensional Drawings



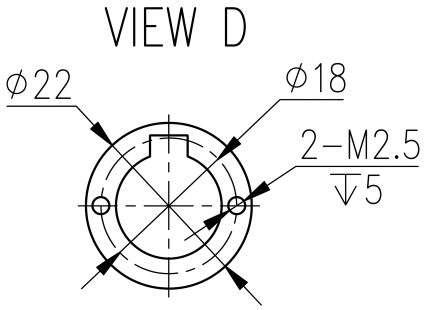
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall axial length	49 mm
	Axial length 2	46 mm
	Thread or tooth profile specification	0-80x2
	Axial segment length 5.5	5.5 mm
	Axial segment length 10	10 mm
	Axial segment length 4.5	4.5 mm
	Axial segment length 14	14 mm
	Axial segment length 0.5	0.5 mm
	Outer diameter Φ86 h7	Φ86 h7
	Outer diameter Φ85	Φ85 mm
	Outer diameter Φ58	Φ58 mm
	Bore diameter Φ20 H7	Φ20 H7
	Bore diameter Φ15	Φ15 mm
	Axial segment length 12	12 mm
	Groove depth or step 4.4	4.4 mm
	Datum D (left view)	Datum D
	Label T	T
	Outer diameter Φ40	Φ40 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Outer diameter Φ67 h7	Φ67 h7
	Maximum outer diameter Φ107	Φ107 mm
	Axial dimension 14.5 +0/-0.1	14.5 +0/-0.1 mm
	Datum D (right view)	Datum D
	Thread or spline specification 0-53x1	0-53x1
	Axial length 29	29 mm
	Axial dimension 13.5±0.2 (reference/special)	13.5 ±0.2 mm *
	Axial segment length 3.5	3.5 mm
	Component label - Wave Generator A	Wave Generator - A

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	M5 threaded hole quantity	10 × M5 threaded holes
	Local width label	Width identified as W; numeric value not specified in this crop
	5.5 mm mounting hole quantity	10 × Φ5.5 holes
	Process hole quantity note	Process holes ×4
	Diameter 96 circular feature	Φ96
	U label	U label; numeric value not specified
	Diameter 32 circular feature	Φ32
	M5 threaded hole quantity	4 × M5 threaded holes
Mechanical View 3	Threaded mounting hole quantity and thread size	8 × M8 threaded holes
	Mounting hole pitch circle diameter	Diameter 42
Mechanical View 4	View identification	View D
	Outer diameter dimension	Diameter 22 mm
	Inner diameter dimension	Diameter 18 mm
	Threaded hole quantity and thread size	2 × M2.5 threaded holes
	Hole depth	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.