PRODUCT DATASHEET

ES-HG-S22-F25-R50

Precision Transmission Component

Cup Harmonic Gearboxes | Standard Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 39 N·m, instantaneous Maximum Torque 186 N·m and start/Stop Peak Torque 98 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	39	N·m
Instantaneous Maximum Torque	186	N·m
Start/Stop Peak Torque	98	N·m
Reduction Ratio	50	
Backlash	≤20	arc sec
Maximum Input Speed	5600	r/min
Allowable Average Torque	55	N·m
Frame Size	25	
Weight	1.46	kg

Technical Specifications

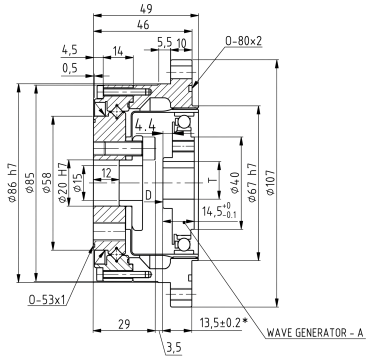
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	39	N·m	Frame Size: 25; Reduction Ratio: 50
Instantaneous Maximum Torque	186	N·m	Frame Size: 25; Reduction Ratio: 50
Start/Stop Peak Torque	98	N·m	Frame Size: 25; Reduction Ratio: 50
Backlash	≤20	arc sec	Frame Size: 25; Reduction Ratio: 50
Allowable Average Torque	55	N·m	Frame Size: 25; Reduction Ratio: 50
MECHANICAL			
Frame Size	25		Frame Size: 25; Reduction Ratio: 50
Weight	1.46	kg	Frame Size: 25; Reduction Ratio: 50
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: 50; Wave Generator Option: wave-generator-307ae5fd0846 / Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 50; Wave Generator Option: wave-generator-fd26f6670d9b
Wave Generator Bore U	φ11H7 / φ14H7		Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 50; Wave Generator Option: wave-generator-fd26f6670d9b / Frame Size: 25; Option Index: 1; Option Label: Wave generator - A φ14; Reduction Ratio: 50; 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: 50; Wave Generator Option: wave-generator-307ae5fd0846 / Frame Size: 25; Option Label: Wave generator - A φ11; Reduction Ratio: 50; Wave Generator Option: wave-generator-fd26f6670d9b
RELIABILITY			
Design Life	10000	h	Frame Size: 25; Reduction Ratio: 50
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 25; Reduction Ratio: 50
Maximum Input Speed	5600	r/min	Frame Size: 25; Reduction Ratio: 50
Average Input Speed	3500	r/min	Frame Size: 25; Reduction Ratio: 50

Dimensional & Integration Overview

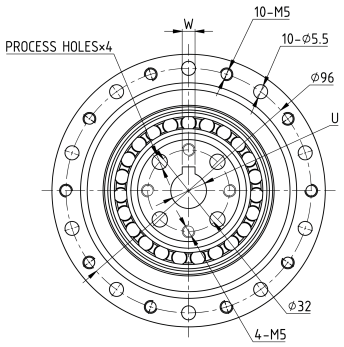
Mechanical Overview

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	5JS9/P9 / 4JS9/P9	

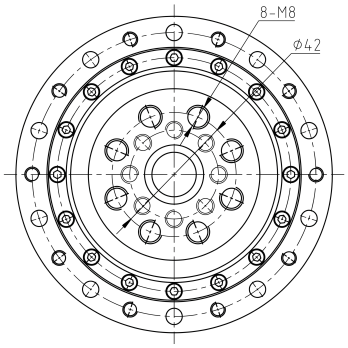
Dimensional Drawings



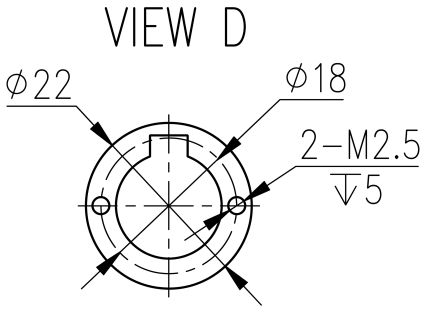
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall axial length	49 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.