PRODUCT DATASHEET

ES-HG-S27-F17-R100

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Thin Cup Gear Unit

Product Overview

Precision Transmission Component with rated Torque 16 N·m, instantaneous Maximum Torque 71 N·m and start/Stop Peak Torque 37 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	16	N·m
Instantaneous Maximum Torque	71	N·m
Start/Stop Peak Torque	37	N·m
Reduction Ratio	100	
Backlash	≤20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	27	N·m
Frame Size	17	
Weight	0.46	kg

Technical Specifications

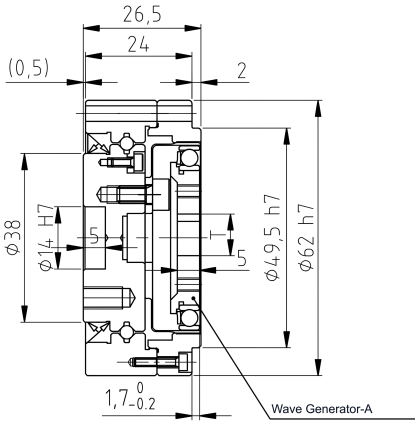
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	16	N·m	Frame Size: 17; Reduction Ratio: 100
Instantaneous Maximum Torque	71	N·m	Frame Size: 17; Reduction Ratio: 100
Start/Stop Peak Torque	37	N·m	Frame Size: 17; Reduction Ratio: 100
Backlash	≤20	arc sec	Frame Size: 17; Reduction Ratio: 100
Allowable Average Torque	27	N·m	Frame Size: 17; Reduction Ratio: 100
MECHANICAL			
Frame Size	17		Frame Size: 17; Reduction Ratio: 100
Weight	0.46	kg	Frame Size: 17; Reduction Ratio: 100
Wave Generator Dimension T	9.4+0.10	mm	Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 100; Wave Generator Option: wave-generator-dd7ad026bda9
Wave Generator Bore U	φ8H7 / φ15H7		Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 100; Wave Generator Option: wave-generator-dd7ad026bda9 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 100; Wave Generator Option: wave-generator-60faafd165ad
Wave Generator Keyway W	3P9/JS9		Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 100; Wave Generator Option: wave-generator-dd7ad026bda9
RELIABILITY			
Design Life	10000	h	Frame Size: 17; Reduction Ratio: 100
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	100		Frame Size: 17; Reduction Ratio: 100
Maximum Input Speed	7300	r/min	Frame Size: 17; Reduction Ratio: 100
Average Input Speed	3500	r/min	Frame Size: 17; Reduction Ratio: 100

Dimensional & Integration Overview

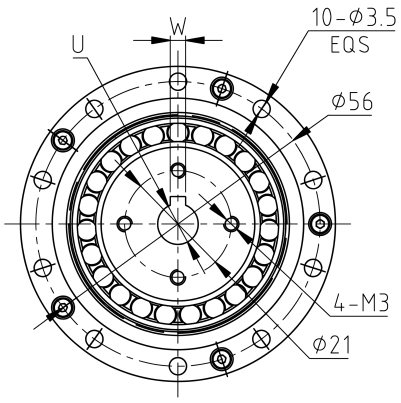
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	17	
Weight	0.46	kg
Wave Generator Dimension T	9.4+0.10	mm
Wave Generator Bore U	φ8H7 / φ15H7	
Wave Generator Keyway W	3P9/JS9	

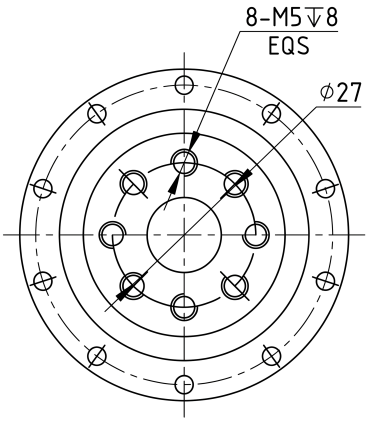
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	26.5 mm
	Mid-section length	24 mm
	Left side length (reference)	0.5 mm (reference)
	Right side length	2 mm
	Outer diameter	φ38 mm
	Inner bore diameter with tolerance	φ14 H7
	Left local width	5 mm
	Right local width	
	Shaft diameter with tolerance	φ49.5 h7
	Outer diameter with tolerance	φ62 h7
	Lower dimension tolerance	1.7 mm (+0/-0.2)
	Component identifier	Wave Generator-A
Mechanical View 2	Dimension label W	W
	Equally spaced holes quantity and diameter	10 holes of Φ3.5 mm
	Equally spaced notation	EQS (equally spaced)
	Outer circle diameter	Φ56 mm
	Mounting threaded holes quantity and specification	4 threaded holes M3
	Center bore diameter	Φ21 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Mounting hole pattern	8 holes, M5 threaded, counterbore depth 8mm, equally spaced
	Hole diameter	φ27

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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.