PRODUCT DATASHEET

ES-HG-S27-F25-R100

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Thin Cup Gear Unit

Product Overview

Precision Transmission Component with rated Torque 47 N·m, instantaneous Maximum Torque 184 N·m and start/Stop Peak Torque 110 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	47	N·m
Instantaneous Maximum Torque	184	N·m
Start/Stop Peak Torque	110	N·m
Reduction Ratio	100	
Backlash	≤20	arc sec
Maximum Input Speed	5600	r/min
Allowable Average Torque	75	N·m
Frame Size	25	
Weight	1.2	kg

Technical Specifications

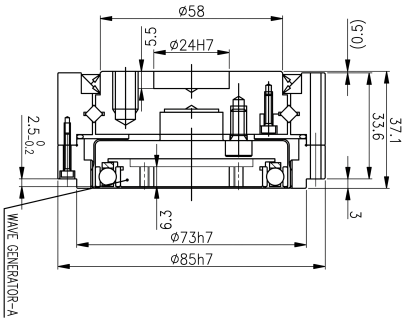
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	47	N·m	Frame Size: 25; Reduction Ratio: 100
Instantaneous Maximum Torque	184	N·m	Frame Size: 25; Reduction Ratio: 100
Start/Stop Peak Torque	110	N·m	Frame Size: 25; Reduction Ratio: 100
Backlash	≤20	arc sec	Frame Size: 25; Reduction Ratio: 100
Allowable Average Torque	75	N·m	Frame Size: 25; Reduction Ratio: 100
MECHANICAL			
Frame Size	25		Frame Size: 25; Reduction Ratio: 100
Weight	1.2	kg	Frame Size: 25; Reduction Ratio: 100
RELIABILITY			
Design Life	10000	h	Frame Size: 25; Reduction Ratio: 100
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	100		Frame Size: 25; Reduction Ratio: 100
Maximum Input Speed	5600	r/min	Frame Size: 25; Reduction Ratio: 100
Average Input Speed	3500	r/min	Frame Size: 25; Reduction Ratio: 100

Dimensional & Integration Overview

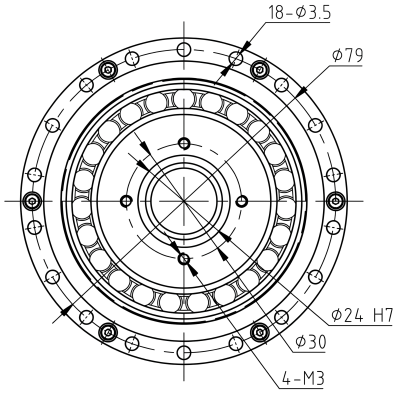
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	25	
Weight	1.2	kg

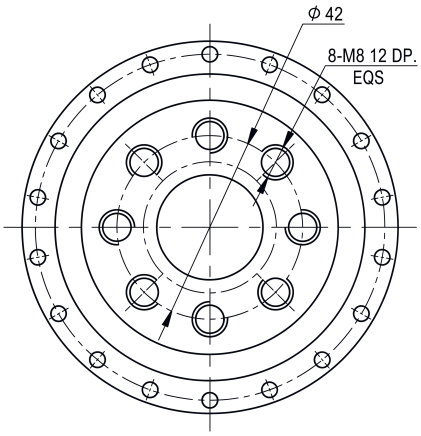
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Upper outside diameter	Diameter 58
	Reference clearance	Reference dimension 0.5
	Local step dimension	5.5
	Bore diameter fit	Diameter 24 H7
	Local height dimension	33.6
		37.1
	Local dimension with unilateral tolerance	2.5 with upper deviation +0 and lower deviation -0.2
	Local width dimension	3
	Local height dimension	6.3
	Component label	Wave Generator-A
	Shaft or bearing fit diameter	Diameter 73 h7
		Diameter 85 h7
Mechanical View 2	18 holes diameter 3.5	18 × Φ3.5 holes
	Outer diameter	Φ79 outer diameter
	Central bore diameter and fit tolerance	Φ24 H7 bore
	Mounting locating diameter	Φ30 diameter
	4 M3 threaded holes	4 × M3 threaded holes

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Mounting hole pitch circle diameter	Pitch circle diameter Φ42
	Threaded mounting hole specification and depth	8 × M8 threaded holes, 12 mm deep, equally spaced

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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.