PRODUCT DATASHEET

# ES-HG-S27-F25-R80

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Thin Cup Gear Unit

## Product Overview

Precision Transmission Component with rated Torque 44 N·m, instantaneous Maximum Torque 179 N·m and start/Stop Peak Torque 96 N·m.

## Key Specifications

| PARAMETER | VALUE | UNIT |
|---|---|---|
| Rated Torque | 44 | N·m |
| Instantaneous Maximum Torque | 179 | N·m |
| Start/Stop Peak Torque | 96 | N·m |
| Reduction Ratio | 80 | |
| Backlash | ≤20 | arc sec |
| Maximum Input Speed | 5600 | r/min |
| Allowable Average Torque | 60 | N·m |
| Frame Size | 25 | |
| Weight | 1.2 | kg |

# Technical Specifications

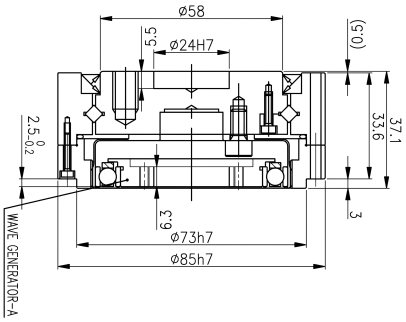
| PARAMETER | SPECIFICATION | UNIT | NOTES |
|---|---|---|---|
| **PERFORMANCE** | | | |
| Rated Torque | 44 | N·m | Frame Size: 25; Reduction Ratio: 80 |
| Instantaneous Maximum Torque | 179 | N·m | Frame Size: 25; Reduction Ratio: 80 |
| Start/Stop Peak Torque | 96 | N·m | Frame Size: 25; Reduction Ratio: 80 |
| Backlash | ≤20 | arc sec | Frame Size: 25; Reduction Ratio: 80 |
| Allowable Average Torque | 60 | N·m | Frame Size: 25; Reduction Ratio: 80 |
| **MECHANICAL** | | | |
| Frame Size | 25 | | Frame Size: 25; Reduction Ratio: 80 |
| Weight | 1.2 | kg | Frame Size: 25; Reduction Ratio: 80 |
| **RELIABILITY** | | | |
| Design Life | 10000 | h | Frame Size: 25; Reduction Ratio: 80 |
| **ADDITIONAL SPECIFICATIONS** | | | |
| Reduction Ratio | 80 | | Frame Size: 25; Reduction Ratio: 80 |
| Maximum Input Speed | 5600 | r/min | Frame Size: 25; Reduction Ratio: 80 |
| Average Input Speed | 3500 | r/min | Frame Size: 25; Reduction Ratio: 80 |

# Dimensional & Integration Overview

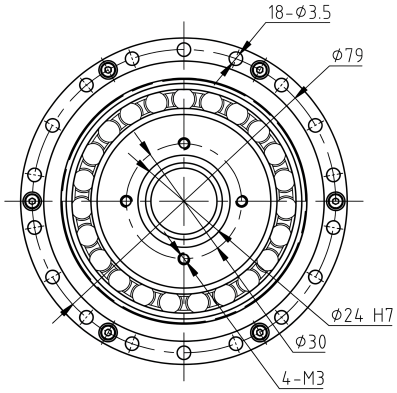
## Mechanical Overview

| PARAMETER | VALUE | UNIT |
|---|---|---|
| Frame Size | 25 | |
| Weight | 1.2 | kg |

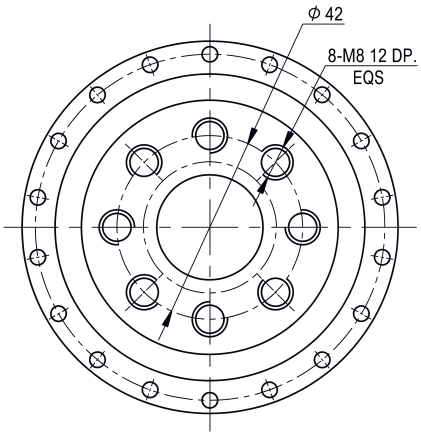
## Dimensional Drawings




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 |

View Product Online  Request Engineering Data  Request a Quote

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.