

PRODUCT DATASHEET

ES-HG-S03-F17-R120

Precision Transmission Component

Harmonic Component Sets | High-Torque Cup Component Set

Product Overview

Precision Transmission Component with rated Torque 31 Nm, instantaneous Maximum Torque 112 Nm and start/Stop Peak Torque 70 Nm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	31	Nm
Instantaneous Maximum Torque	112	Nm
Start/Stop Peak Torque	70	Nm
Reduction Ratio	120	
Backlash	≤20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	51	Nm
Frame Size	17	
Weight	0.15	kg

Technical Specifications

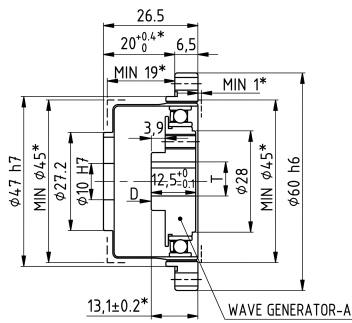
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	31	Nm	Frame Size: 17; Reduction Ratio: 120
Instantaneous Maximum Torque	112	Nm	Frame Size: 17; Reduction Ratio: 120
Start/Stop Peak Torque	70	Nm	Frame Size: 17; Reduction Ratio: 120
Backlash	≤20	arc sec	Frame Size: 17; Reduction Ratio: 120
Allowable Average Torque	51	Nm	Frame Size: 17; Reduction Ratio: 120
MECHANICAL			
Frame Size	17		Frame Size: 17; Reduction Ratio: 120
Weight	0.15	kg	Frame Size: 17; Reduction Ratio: 120
Wave Generator Dimension T	9.4+0.10 / 12.8+0.10	mm	Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b
Wave Generator Bore U	φ11H7 / φ8H7		Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b / Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3
Wave Generator Keyway W	3JS9/P9 / 4JS9/P9		Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b
RELIABILITY			
Design Life	15000	h	Frame Size: 17; Reduction Ratio: 120
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	120		Frame Size: 17; Reduction Ratio: 120
Maximum Input Speed	7300	r/min	Frame Size: 17; Reduction Ratio: 120
Average Input Speed	3500	r/min	Frame Size: 17; Reduction Ratio: 120

Dimensional & Integration Overview

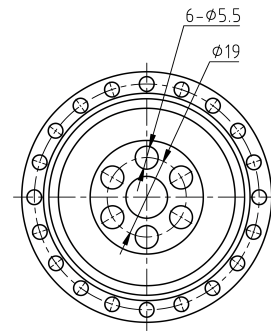
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	17	
Weight	0.15	kg
Wave Generator Dimension T	9.4+0.10 / 12.8+0.10	mm
Wave Generator Bore U	φ11H7 / φ8H7	
Wave Generator Keyway W	3JS9/P9 / 4JS9/P9	

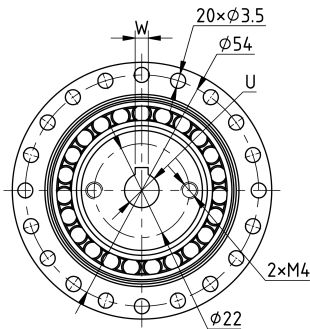
Dimensional Drawings



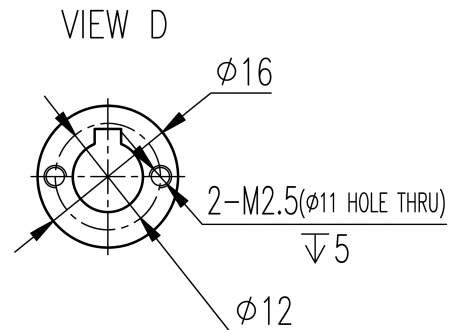
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall axial length	26.5 mm
	Axial length with unilateral tolerance	20 mm +0.4/0
	End axial length	6.5 mm
	Minimum axial distance	Minimum 19 mm
	Minimum end clearance	Minimum 1 mm
	Local step width	3.9 mm
	Minimum outside diameter	Minimum diameter 45 mm
	Fit outside diameter	Diameter 47 mm h7
	Diameter dimension	Diameter 27.2 mm
	Hole diameter fit	Diameter 10 mm H7
	Datum D	
	Axial dimension with tolerance	12.5 mm +0/-0.1
	Right-side minimum outside diameter	Minimum diameter 45 mm
	Diameter dimension	Diameter 28 mm
	Fit outside diameter	Diameter 60 mm h6
	Bottom axial dimension	13.1 mm $\pm$ 0.2
	Component label	WAVE GENERATOR-A

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Flange mounting hole quantity and diameter	6 holes, diameter 5.5 mm
	Central hole diameter	Diameter 19 mm
Mechanical View 3	Twenty holes diameter	20 holes, diameter 3.5 mm
	Slot width W	W dimension designation, numeric value not specified in crop
	Diameter 54	Diameter 54 mm
	U designation	U designation, numeric value not specified in crop
	A datum or section identifier	A identifier
	Two M4 threaded holes	2 × M4 threaded holes
	Diameter 22 hole	Diameter 22 mm
Mechanical View 4	View direction	View D
	Diameter callout	Diameter 16 mm
	Threaded hole specification with through-hole diameter	2 × M2.5, Ø11 hole through
	Depth-style callout	Depth-style symbol 5 mm
	Inner diameter callout	Diameter 12 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.