PRODUCT DATASHEET

ES-HG-S22-F17-R80

Precision Transmission Component

Cup Harmonic Gearboxes | Standard Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 22 N·m, instantaneous Maximum Torque 87 N·m and start/Stop Peak Torque 43 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	22	N·m
Instantaneous Maximum Torque	87	N·m
Start/Stop Peak Torque	43	N·m
Reduction Ratio	80	
Backlash	≤20	arc sec
Maximum Input Speed	7300	r/min
Allowable Average Torque	27	N·m
Frame Size	17	
Weight	0.67	kg

Technical Specifications

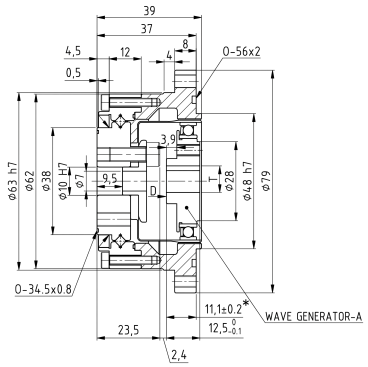
PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	22	N·m	Frame Size: 17; Reduction Ratio: 80
Instantaneous Maximum Torque	87	N·m	Frame Size: 17; Reduction Ratio: 80
Start/Stop Peak Torque	43	N·m	Frame Size: 17; Reduction Ratio: 80
Backlash	≤20	arc sec	Frame Size: 17; Reduction Ratio: 80
Allowable Average Torque	27	N·m	Frame Size: 17; Reduction Ratio: 80
MECHANICAL			
Frame Size	17		Frame Size: 17; Reduction Ratio: 80
Weight	0.67	kg	Frame Size: 17; Reduction Ratio: 80
Wave Generator Dimension T	9.4+0.10 / 12.8+0.10	mm	Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 80; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 80; Wave Generator Option: wave-generator-fd26f6670d9b
Wave Generator Bore U	φ8H7 / φ11H7		Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 80; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 80; Wave Generator Option: wave-generator-fd26f6670d9b
Wave Generator Keyway W	3JS9/P9 / 4JS9/P9		Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 80; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 80; Wave Generator Option: wave-generator-fd26f6670d9b
RELIABILITY			
Design Life	15000	h	Frame Size: 17; Reduction Ratio: 80
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	80		Frame Size: 17; Reduction Ratio: 80
Maximum Input Speed	7300	r/min	Frame Size: 17; Reduction Ratio: 80
Average Input Speed	3500	r/min	Frame Size: 17; Reduction Ratio: 80

Dimensional & Integration Overview

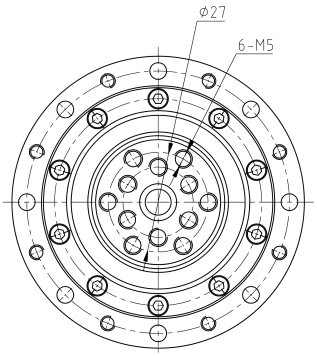
Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	17	
Weight	0.67	kg
Wave Generator Dimension T	9.4+0.10 / 12.8+0.10	mm
Wave Generator Bore U	φ8H7 / φ11H7	
Wave Generator Keyway W	3JS9/P9 / 4JS9/P9	

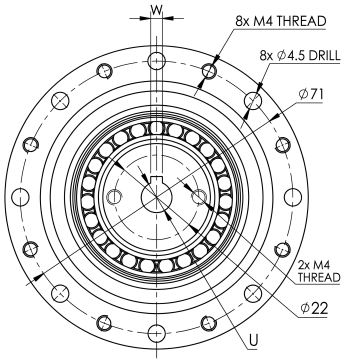
Dimensional Drawings



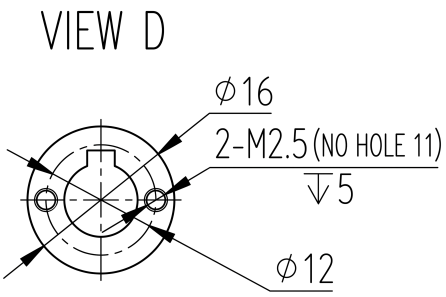
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall width	39 mm
	Inner width	37 mm
	Right section length	8 mm
	Left boss height	4.5 mm
	O-ring specification	O-56x2
	Central section width	12 mm
	Left lower section height	0.5 mm
	Left shaft diameter with tolerance	Φ63 h7
	Left secondary shaft diameter	Φ62 mm
	Center shaft diameter	Φ38 mm
	Center hole diameter with tolerance	Φ10 H7
	Small hole diameter	Φ7 mm
	Middle section height	9.5 mm
	Right boss height	3.9 mm
	Datum D	
	Right inner diameter	Φ28 mm
	Right shaft diameter with tolerance	Φ48 h7
	Right end outer diameter	Φ79 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	O-ring specification	O-34.5x0.8
	Bottom section width	23.5 mm
	Bottom boss height	2.4 mm
	Lower right section height with tolerance	11.1±0.2 mm
	Lower right section width with tolerance	12.5 0/-0.1 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Mounting hole pitch circle diameter	Pitch circle diameter Φ27
	Threaded hole quantity and thread size	6 × M5 threaded holes
Mechanical View 3	Width designation W	W; numeric value not specified in this crop
	8x M4 threaded holes	8x M4 thread
	8x diameter 4.5 drilled holes	8x Ø4.5 drill
	Diameter 71	Ø71
	2x M4 threaded holes	2x M4 thread
	Diameter 22	Ø22
	Callout U	U label; associated feature not fully specified in this crop
Mechanical View 4	View identifier	View D
	Local hole diameter	Diameter 16
	Threaded hole quantity and size	2 × M2.5 threaded holes; no hole 11
	Depth-style callout value	Depth-style value 5
	Local hole diameter	Diameter 12

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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.