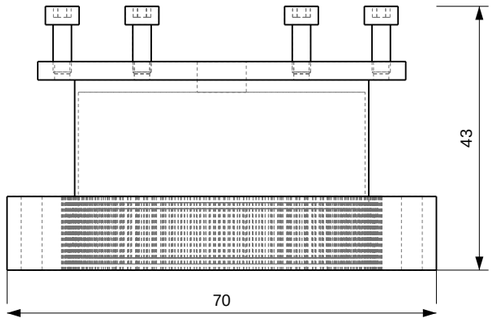
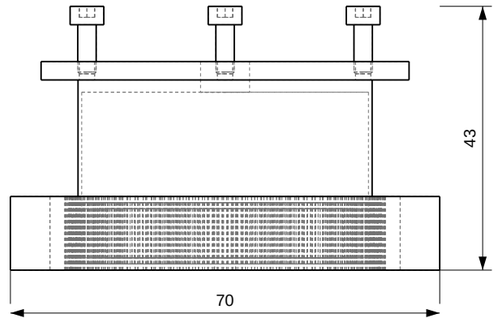
FRONT VIEW



LEFT SIDE VIEW



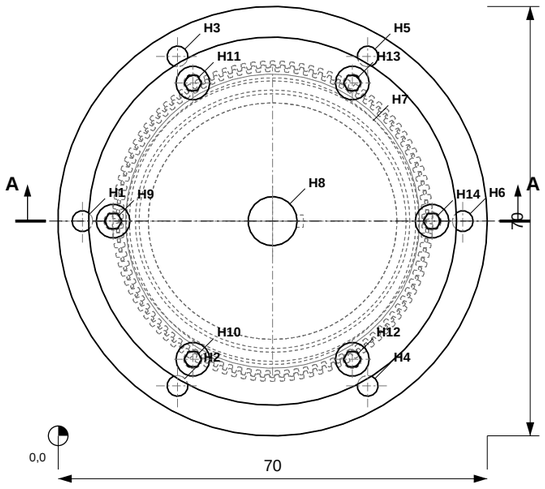
DRIVING DIMENSIONS

Parameter	Value	Unit
Module	0.5	mm
Circular spline teeth	102	teeth
Flexspline teeth	100	teeth
Circular spline OD	70	mm
Circular spline thickness	12	mm
Cs hole pcd	62	mm
Flexspline wall	0.6	mm
Cup length	30	mm
Fs tooth w	10	mm
Fs bottom	2	mm
Flange Ø	60	mm
Fl th	3	mm
Bolt circle	52	mm
Bolt count	6	
Radial deflection	0.5	mm
Brg w	8	mm
Brg ring	1.5	mm
Input bore	8	mm

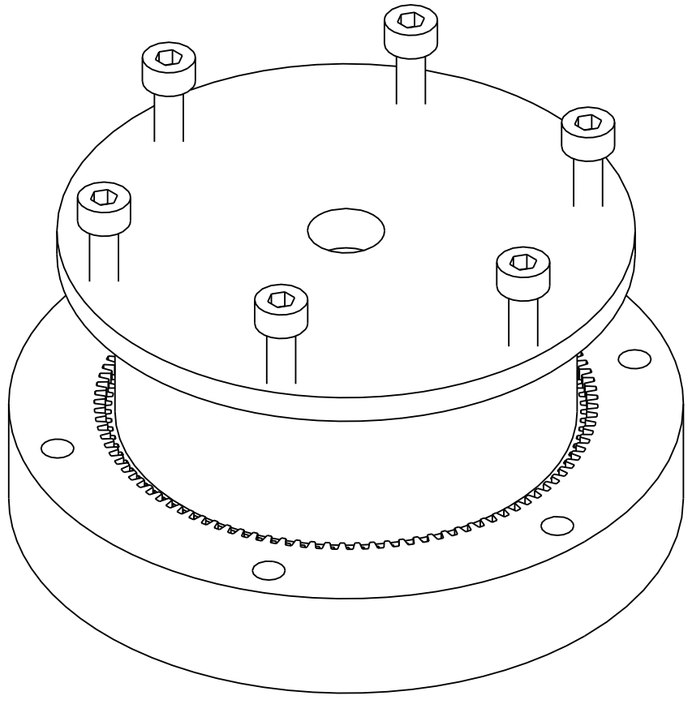
PARTS LIST

Pos	Part	Qty	Standard / mass
1	circular_spline	1	163.3 g
2	flexspline	1	122.7 g
3	wave_generator_cam	1	73.8 g
4	flex_bearing_inner	1	12.2 g
5	flex_bearing_outer	1	13.3 g
6	Socket head cap screw M3x8	6	flange_bolt

TOP VIEW



ISOMETRIC



NOTES

1. Gear flexspline: tooth bending stress 183.6 MPa too high - increase module or face width
2. Gear flexspline: contact stress 610 MPa above ~470 MPa - wider face, larger gears or hardened steel (e.g. 42CrMo4 induction hardened)
3. Gear flexspline: face width 10 = 20 × module (usual range 8-12 × m)
4. Flexspline in S235 will fatigue quickly; use alloy steel 42CrMo4 or 17-4PH, Q&T, shot-peened
5. 0.6 mm wall needs precision turning with support mandrel
6. Flexible bearing is a special part (not ISO 15 catalogue); source from harmonic drive supplier
7. Teeth modelled as simplified involute-like trapezoid profiles (20 deg pressure angle approximation) for robustness
8. Flexspline modelled in undeformed round state; the elliptical cam is shown with its ±0.5 mm radial deflection
9. Flexible bearing modelled as a thin outer/inner ring pair 3 mm radial section, 8 mm wide (non-catalogue flexible bearing, simplified)

Dimensions in mm · unspecified tolerances ISO 2768-m · surface Ra 3.2 unless noted · break sharp edges 0.5 × 45° · machining

Hidden lines omitted · not to scale

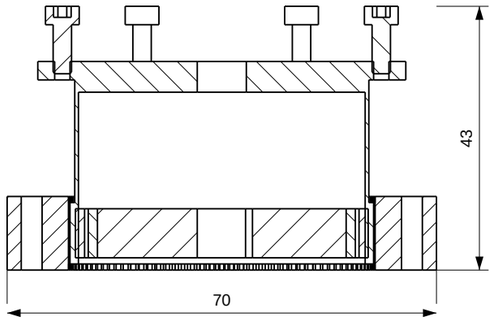
TITLE

Strain Wave Gear 50:1

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-14	PROJECTION ISO first angle [|O] -O
MATERIAL Steel (S235)	GENERAL TOLERANCE ISO 2768-m ± 0.1 mm	MASS (calc.) 390.8 g
SCALE 1 : 1	SHEET 1 / 2 A3	DRAWING No. LX-38FE31-v1

SECTION A-A



A-A (1 : 1) cutting plane y = 0 mm, viewed from the front

Section hatching per ISO 128-50 · hole coordinates from the datum symbol · fits ISO 286-2 · weld symbols ISO 2553 · weld preparation EN ISO 9692-1

HOLE TABLE (X / Y from datum 0,0 of the view F / S / T on sheet 1)

Tag	Ø	X	Y	Depth	View	Thread / fit / note
H1	Ø3.4	4	35	THRU	T	M4-6H, tap drill Ø3.3
H2	Ø3.4	19.5	8.1	THRU	T	M4-6H, tap drill Ø3.3
H3	Ø3.4	19.5	61.8	THRU	T	M4-6H, tap drill Ø3.3
H4	Ø3.4	50.5	8.1	THRU	T	M4-6H, tap drill Ø3.3
H5	Ø3.4	50.5	61.8	THRU	T	M4-6H, tap drill Ø3.3
H6	Ø3.4	66	35	THRU	T	M4-6H, tap drill Ø3.3
H7	Ø46.8	35	35	THRU	T	Bored
H8	Ø8	35	35	THRU	T	Drilled
H9	Ø2.5	9	35	THRU	T	M3-6H, tap drill Ø2.5
H10	Ø2.5	22	12.5	THRU	T	M3-6H, tap drill Ø2.5
H11	Ø2.5	22	57.5	THRU	T	M3-6H, tap drill Ø2.5
H12	Ø2.5	48	12.5	THRU	T	M3-6H, tap drill Ø2.5
H13	Ø2.5	48	57.5	THRU	T	M3-6H, tap drill Ø2.5
H14	Ø2.5	61	35	THRU	T	M3-6H, tap drill Ø2.5

FITS & TOLERANCES (ISO 286)

Feature	Size	Max / min	Fit
input bore	Ø8 H7	8.015 / 8.0	H7/k6 transition

ENGINEERING CHECKS (simplified hand calculations)

!! flexspline: m0.5 z100 b10: Ft = 400 N, tooth root σF = 183.6 MPa (allow ~120), contact σH = 610 MPa (limit ~470)

Flat patterns: 4 DXF files (4 pcs) for laser cutting - download in the app.

TITLE

Strain Wave Gear 50:1

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-14	PROJECTION ISO first angle [|O] -O
MATERIAL Steel (S235)	GENERAL TOLERANCE ISO 2768-m ± 0.1 mm	MASS (calc.) 390.8 g
SCALE 1 : 1	SHEET 2 / 2 A3	DRAWING No. LX-38FE31-v1