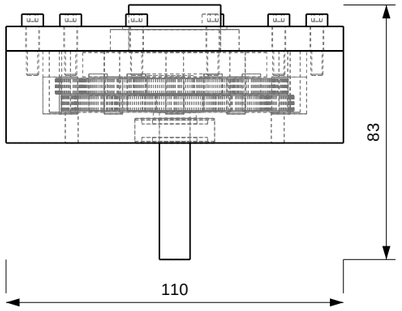
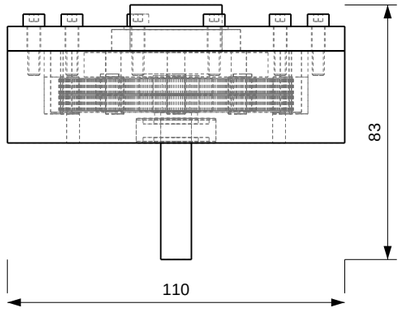
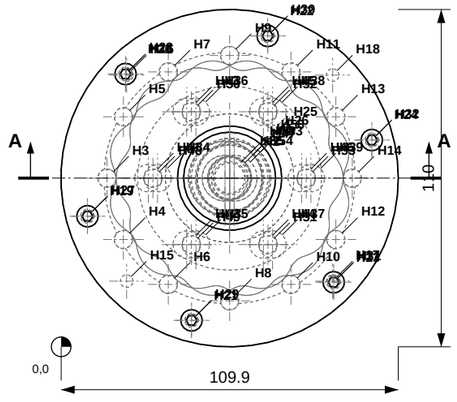
FRONT VIEW



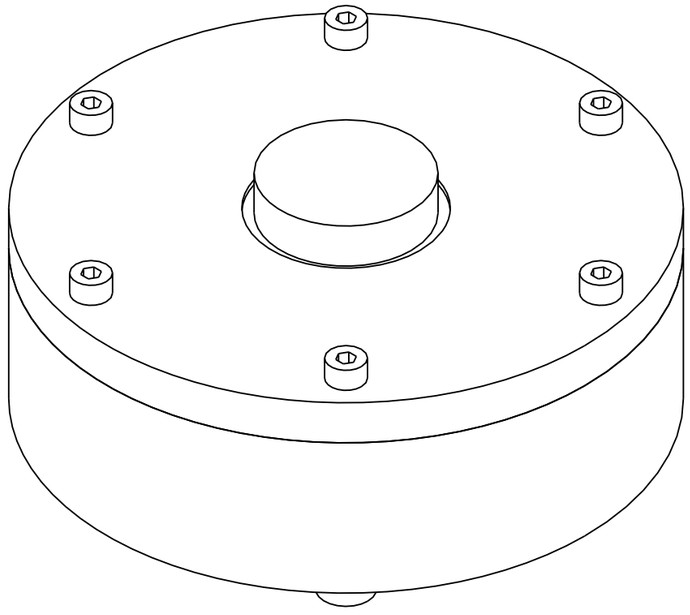
LEFT SIDE VIEW



TOP VIEW



ISOMETRIC



Hidden lines omitted · not to scale

DRIVING DIMENSIONS

Parameter	Value	Unit
Ring pin circle radius	40	mm
Ring pin radius	3	mm
Eccentricity	1.5	mm
Number of ring pins	12	
N pts	396	mm
Disc thickness	5	mm
Disc bore	24	mm
Output pin circle radius	25	mm
Out hole d	9	mm
Output pin diameter	6	mm
Pin l	12	mm
Housing diameter	110	mm
Housing length	30	mm
Back t	10	mm
Cav d	82	mm
Seat d	26	mm
Seat depth	8	mm
Pass d	14	mm

PARTS LIST

Pos	Part	Qty	Standard / mass
1	housing	1	1348.3 g
2	front_cover	1	507.6 g
3	input_shaft	1	46.2 g
4	cyclo_disc_1	1	137.9 g
5	cyclo_disc_2	1	137.9 g
6	output_flange	1	259.2 g
7	ring_pin_0	1	2.7 g
8	ring_pin_1	1	2.7 g
9	ring_pin_2	1	2.7 g
10	ring_pin_3	1	2.7 g
11	ring_pin_4	1	2.7 g
12	ring_pin_5	1	2.7 g
13	ring_pin_6	1	2.7 g
14	ring_pin_7	1	2.7 g

NOTES

1. Shaft input shaft: safety 2.33 below 2.5 - increase to at least Ø11 mm or use a stronger steel (C45 / 42CrMo4)
2. 6802 and 6806 are not in the standard library list. If std does not provide them they are modelled as plain rings of the correct size and must be bought as ISO 15 thin-section bearings.
3. Press depth of the output pins (1 mm) and ring pins (0.5 mm) is very short. Longer pins or blind holes in the flange and back wall are recommended for production.
4. Wall between the M4 tapped holes and the pin grooves is only about 3.3 mm.
5. Hardened pins and discs (e.g. 100Cr6, 58-62 HRC) are needed for wear life. S235 is suitable only for a prototype or demonstrator.
6. The input shaft is supported by a single 6000 bearing; the eccentric end is overhung. A small pilot bearing in the output flange would improve stiffness.

TITLE

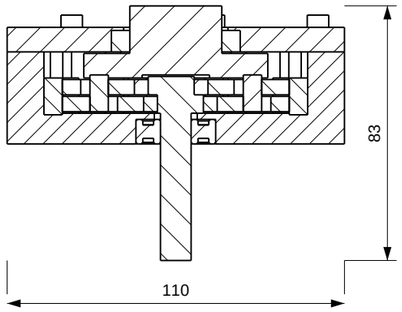
11:1 Cycloidal Speed Reducer

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-13	PROJECTION ISO first angle [|O] -O
MATERIAL Steel (S235)	GENERAL TOLERANCE ISO 2768-m ± 0.2 mm	MASS (calc.) 2.58 kg
SCALE 1 : 2	SHEET 1 / 2 A3	DRAWING No. LX-84348C-v1

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

SECTION A-A



A-A (1 : 2) 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	Ø26	54.9	55	THRU	T	Ø26 H13 for M24 (ISO 273 medium)
H2	Ø14	54.9	55	THRU	T	M16-6H, tap drill Ø14
H3	Ø6	14.9	55	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H4	Ø6	20.3	35	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H5	Ø6	20.3	75	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H6	Ø6	34.9	20.3	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H7	Ø6	34.9	89.6	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H8	Ø6	54.9	15	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H9	Ø6	54.9	95	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H10	Ø6	74.9	20.3	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H11	Ø6	74.9	89.6	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H12	Ø6	89.6	35	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H13	Ø6	89.6	75	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H14	Ø6	94.9	55	20.5	T	Ø6 H7 (+0.012 / 0) ring pin seat
H15	Ø4.2	21.3	21.4	10	T	M5-6H, tap drill Ø4.2
H16	Ø4.2	21.3	88.6	10	T	M5-6H, tap drill Ø4.2
H17	Ø4.2	88.5	21.4	10	T	M5-6H, tap drill Ø4.2
H18	Ø4.2	88.5	88.6	10	T	M5-6H, tap drill Ø4.2
H19	Ø3.3	8.6	42.6	8	T	M4-6H, tap drill Ø3.3
H20	Ø3.3	21	88.9	8	T	M4-6H, tap drill Ø3.3

+ 36 more holes - full list in the app

FITS & TOLERANCES (ISO 286)

Feature	Size	Max / min	Fit
6000 seat	Ø26 H7	26.021 / 26.0	H7/h6 clearance
6000 journal	Ø10 js6	10.005 / 9.995	H7/js6 transition
eccentric lobes	Ø15 js6	15.005 / 14.995	H7/js6 transition
disc bore	Ø24 H7	24.021 / 24.0	H7/h6 clearance
6806 seat	Ø42 H7	42.025 / 42.0	H7/h6 clearance
output hub	Ø30 k6	30.015 / 30.002	H7/k6 transition
output pin seat	Ø6 H7	6.012 / 6.0	H7/p6 interference
ring pin seat	Ø6 H7	6.012 / 6.0	H7/p6 interference

ENGINEERING CHECKS (simplified hand calculations)

OK input, back wall: 6000: P = 300 N, C = 4.75 kN → L10 = 3969.3 mil. rev = 44,104 h at 1500 rpm (need 10,000.0 h)

!! input shaft: Ø10: T = 1.6 N·m, M = 9.8 N·m → σv = 100.8 MPa, safety 2.33 vs. Re 235 MPa (need 2.5), min. Ø10.2

OK output hub: Ø30: T = 17 N·m, M = 4 N·m → σv = 5.8 MPa, safety 40.83 vs. Re 235 MPa (need 2.5), min. Ø11.8

Flat patterns: 3 DXF files (5 pcs) for laser cutting - download in the app.

TITLE

11:1 Cycloidal Speed Reducer

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-13	PROJECTION ISO first angle [|O] -O
MATERIAL Steel (S235)	GENERAL TOLERANCE ISO 2768-m ± 0.2 mm	MASS (calc.) 2.58 kg
SCALE 1 : 2	SHEET 2 / 2 A3	DRAWING No. LX-84348C-v1