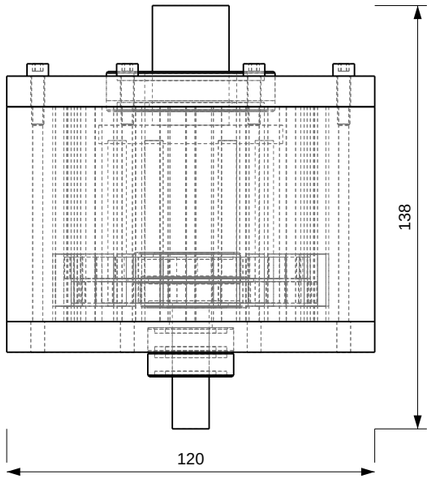
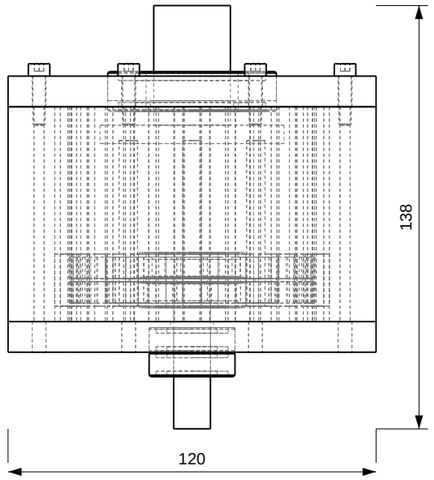
FRONT VIEW



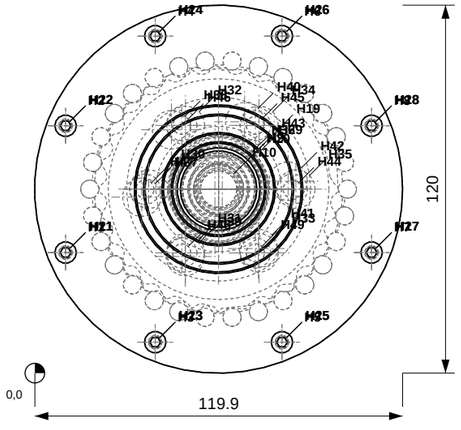
LEFT SIDE VIEW



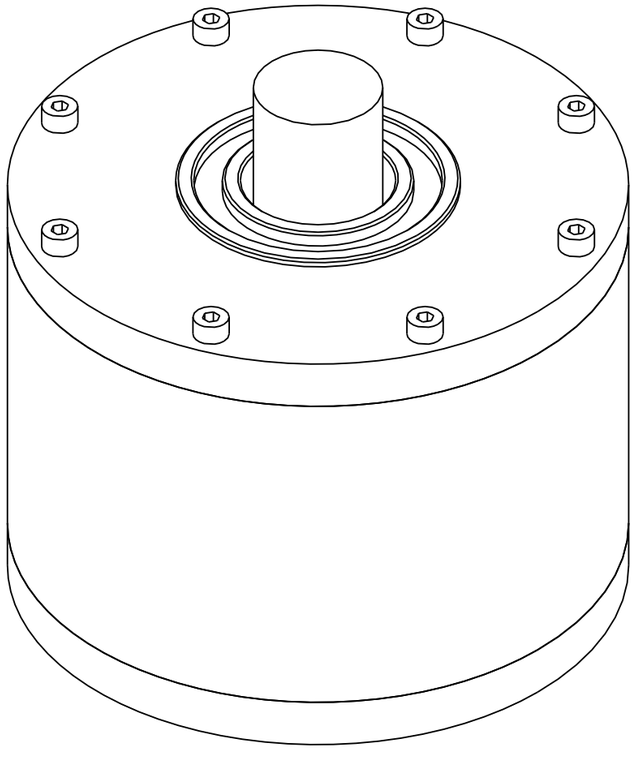
DRIVING DIMENSIONS

Parameter	Value	Unit
Ring rollers	30	
Roller pitch radius	42	mm
Roller radius	3	mm
Eccentricity	1.2	mm
Backlash	0.05	mm
Disc thickness	7	mm
Sep t	1	mm
Output pins	6	
Rw	24	mm
Pin d	6	mm
Sleeve d	10	mm
Hole clr	0.2	mm
Housing d	120	mm
Housing l	90	mm
Cover t	10	mm
In d	12	mm
Out d	25	mm
Input angle	0	deg

TOP VIEW



ISOMETRIC



Hidden lines omitted · not to scale

PARTS LIST

Pos	Part	Qty	Standard / mass
1	housing_ring	1	2968.2 g
2	input_cover	1	836.7 g
3	output_cover	1	719.6 g
4	input_shaft	1	62.2 g
5	cycloid_disc_a	1	176.8 g
6	cycloid_disc_b	1	176.8 g
7	separator	1	21.6 g
8	ring_pin_0	1	3.8 g
9	ring_pin_1	1	3.8 g
10	ring_pin_2	1	3.8 g
11	ring_pin_3	1	3.8 g
12	ring_pin_4	1	3.8 g
13	ring_pin_5	1	3.8 g
14	ring_pin_6	1	3.8 g

NOTES

1. Bearing 6003 (eccentric): life 492 h is below 10,000.0 h - choose a larger bearing or reduce the load
2. Shaft input shaft: safety 1.76 below 2.5 - increase to at least Ø14 mm or use a stronger steel (C45 / 42CrMo4)
3. Ø120 limit forces small rollers (Ø6). These rollers carry a high Hertzian stress, so hardened pins (100Cr6) are recommended instead of S235.
4. S235 is not suitable for the cycloid discs. Use 16MnCr5 case-hardened or 42CrMo4 instead.
5. Kinematic check (one input revolution gives output -360/29 = -12.41°) is computed in code. The interference check is analytic only.
6. 35:1 variant: e must reduce to 1.0 mm to keep K1 < 1. The rollers, discs, housing roller-pin holes and output-hole Ø (because of e) change. Shafts, bearings, pins and covers can stay.

TITLE

Dual-disc cycloidal reducer 29:1

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 ± 0.2 mm	MASS (calc.) 5.76 kg
SCALE 1 : 2	SHEET 1 / 2 A3	DRAWING No. LX-38FE3F-v1

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

Section view not available for this model.

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	Ø3.3	10	39.3	THRU	T	M4-6H, tap drill Ø3.3
H2	Ø3.3	10	80.6	THRU	T	M4-6H, tap drill Ø3.3
H3	Ø3.3	39.2	10.1	THRU	T	M4-6H, tap drill Ø3.3
H4	Ø3.3	39.2	109.9	THRU	T	M4-6H, tap drill Ø3.3
H5	Ø3.3	80.6	10.1	THRU	T	M4-6H, tap drill Ø3.3
H6	Ø3.3	80.6	109.9	THRU	T	M4-6H, tap drill Ø3.3
H7	Ø3.3	109.8	39.3	THRU	T	M4-6H, tap drill Ø3.3
H8	Ø3.3	109.8	80.6	THRU	T	M4-6H, tap drill Ø3.3
H9	Ø28	59.9	60	THRU	T	Ø28 H7 (+0.021 / 0) Housing bore for bearing 6001 (H9)
H10	Ø14	59.9	60	THRU	T	M16-6H, tap drill Ø14
H11	Ø4.5	10	39.3	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H12	Ø4.5	10	80.6	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H13	Ø4.5	39.2	10.1	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H14	Ø4.5	39.2	109.9	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H15	Ø4.5	80.6	10.1	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H16	Ø4.5	80.6	109.9	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H17	Ø4.5	109.8	39.3	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H18	Ø4.5	109.8	80.6	THRU	T	Ø4.5 H13 for M4 (ISO 273 medium)
H19	Ø55	59.9	60	THRU	T	Ø55 H7 (+0.030 / 0) Housing bore for bearing 6006 (H19)
H20	Ø27	59.9	60	THRU	T	Drilled

+ 29 more holes - full list in the app

FITS & TOLERANCES (ISO 286)

Feature	Size	Max / min	Fit
eccentric bearing seat	Ø17 k6	17.012 / 17.001	H7/k6 transition
disc bearing bore	Ø35 H7	35.025 / 35.0	H7/k6 transition
output bearing	Ø55 H7	55.03 / 55.0	H7/k6 transition
Housing bore for bearing 6001 (H9)	Ø28 H7	28.021 / 28.0	H7/h6 clearance
Housing bore for bearing 6006 (H19)	Ø55 H7	55.03 / 55.0	H7/h6 clearance
Housing bore for bearing 6003 (H36)	Ø35 H7	35.025 / 35.0	H7/h6 clearance
Bearing seat 6001 on input_shaft	Ø12 js6	12.005 / 11.995	H7/js6 transition

ENGINEERING CHECKS (simplified hand calculations)

!! eccentric: 6003: P = 1800 N, C = 6.37 kN → L10 = 44.3 mil. rev = 492 h at 1500 rpm (need 10,000.0 h)

OK output: 6006: P = 800 N, C = 13.8 kN → L10 = 5133 mil. rev = 1,645,177 h at 52 rpm (need 10,000.0 h)

!! input shaft: Ø12: T = 2.4 N·m, M = 22.5 N·m → σv = 133.2 MPa, safety 1.76 vs. Re 235 MPa (need 2.5), min. Ø13.5

OK output shaft: Ø25: T = 60 N·m, M = 15 N·m → σv = 35.3 MPa, safety 6.67 vs. Re 235 MPa (need 2.5), min. Ø18

Flat patterns: 1 DXF files (1 pcs) for laser cutting - download in the app.

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

TITLE

Dual-disc cycloidal reducer 29:1

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 ± 0.2 mm	MASS (calc.) 5.76 kg
SCALE 1 : 2	SHEET 2 / 2 A3	DRAWING No. LX-38FE3F-v1