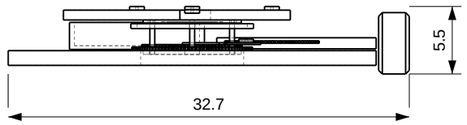
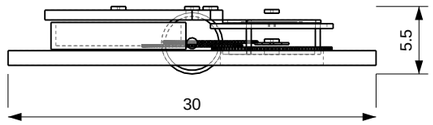
FRONT VIEW



LEFT SIDE VIEW



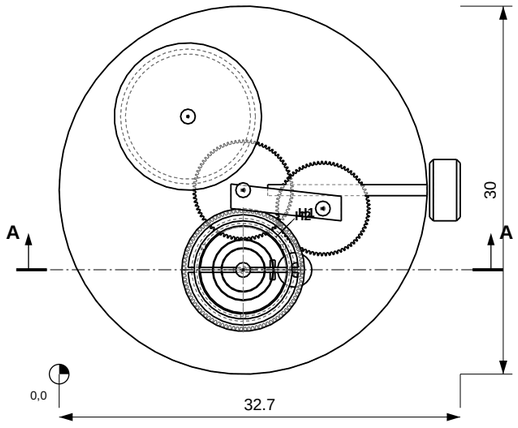
DRIVING DIMENSIONS

Parameter	Value	Unit
Movement diameter	30	mm
Main plate thickness	1.2	mm
Bridge t	0.8	mm
Module	0.1	mm
Fixed wheel teeth	96	teeth
Escape pinion teeth	8	teeth
Escape wheel teeth	15	teeth
Balance diameter	10	mm
Barrel diameter	11	mm
Barrel h	2.2	mm
Wheel t	0.2	mm
Cage x	0	mm
Cage y	-6.5	mm
Cage h	2.8	mm
Jewel d	1.2	mm
Crown d	5	mm

PARTS LIST

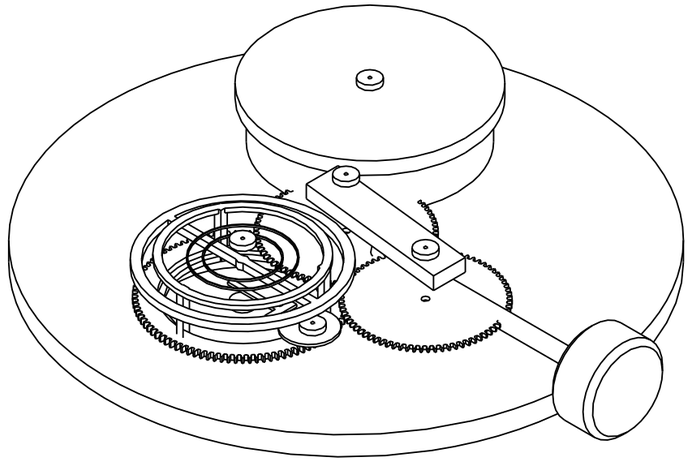
Pos	Part	Qty	Standard / mass
1	main_plate	1	6.1 g
2	barrel	1	0.4 g
3	barrel_bridge	1	0.7 g
4	centre_wheel	1	0.1 g
5	third_wheel	1	0.1 g
6	train_bridge	1	0.1 g
7	fixed_fourth_wheel	1	0.1 g
8	cage	1	0.1 g
9	balance_wheel	1	0.1 g
10	hairspring	1	0.0 g
11	escape_pinion	1	0.0 g
12	escape_wheel	1	0.0 g
13	pallet_fork	1	0.0 g
14	jewel_0	1	0.0 g

TOP VIEW



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

ISOMETRIC



Hidden lines omitted · not to scale

NOTES

1. Model is schematic: teeth, hairspring coils and lever geometry simplified
2. S235 unsuitable for watch parts; use CuZn39Pb3 brass, Ti Gr5 cage, 20AP steel pinions, Nivarox hairspring
3. Escape rate check: 12 esc turns/min x 15 teeth x 2 = 360 beats/min ≠ 21600 vph (360/min needed 360x60=21600 vph → OK only if counting per tooth: 12*15*2*60=21600 ✓)
4. Gear teeth modelled as simplified spoke-free discs with tooth count in specs; true involute/cycloidal profiles omitted at module 0.1 for build speed
5. Escape pinion 8T on fixed 96T gives 12 escape turns per cage turn (96/8)
6. Barrel Ø11 x 2.2 mm, centre wheel 80T, third wheel 75T, cage pinion 10T (simplified train)
7. Jewels modelled as Ø1.2 x 0.3 ruby discs pressed into plates
8. Movement height ~5 mm
9. Plates in brass/titanium in reality; S235 given as default material

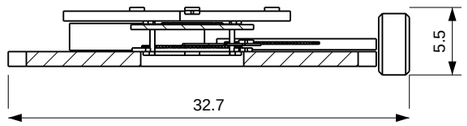
TITLE

Flying tourbillon movement Ø30

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-15	PROJECTION ISO first angle [|O] -O
MATERIAL Steel (S235)	GENERAL TOLERANCE ISO 2768-m ± 0.2 mm	MASS (calc.) 8.2 g
SCALE 2 : 1	SHEET 1 / 3 A3	DRAWING No. LX-38FE39-v1

SECTION A-A



A-A (2 : 1) cutting plane y = -6.5 mm, viewed from the front

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	Ø8.4	15	8.5	THRU	T	M10-6H, tap drill Ø8.5
H2	Ø7.6	15	8.5	THRU	T	Drilled

ENGINEERING CHECKS (simplified hand calculations)

Flat patterns: 5 DXF files (5 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

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MEASURED REPORT

Taken from the delivered geometry, not from the description.

RESULT

Every stated value (1) matches the geometry.

WHAT WAS ASKED FOR

One-minute flying tourbillon watch movement, Ø30 mm. Balance wheel Ø10 with hairspring, 21,600 vph (3 Hz). Swiss lever escapement: 15-tooth club-tooth escape wheel, pallet fork with ruby pallets. The escapement sits in a titanium cage rotating once per minute, supported only from below. Fixed fourth wheel 96T module 0.1; escape pinion 8T orbits it → 12 escape-wheel turns per cage turn. Barrel (40 h reserve) → centre wheel → third wheel → cage pinion. Main plate, bridges, jewel bearings at every pivot, keyless works with crown and winding stem.

Understood as: A simplified parametric assembly of a Ø30 mm one-minute flying tourbillon movement: main plate, barrel, centre/third wheels, cantilevered titanium cage carrying balance Ø10, hairspring, 15T escape wheel with 8T pinion orbiting a fixed 96T wheel, pallet fork, jewels, bridges and keyless works.

STATED VALUE vs MEASURED MODEL

Item	Stated	Model	Result
Diameter	30 mm	7.6 mm, 8.4 mm	matches

MEASUREMENTS

Measured	Value
Overall size	32.7 × 30 × 5.5 mm
Parts	20 (20 custom)
Mass	8.2 g
Volume	1 cm³
Holes	2

CHECKS

- All 20 part(s) are closed, valid solids.
- Parts share the same space where they meet: barrel / centre_wheel (0.981 mm³); centre_wheel / winding_stem (0.313 mm³); third_wheel / winding_stem (1.176 mm³); fixed_fourth_wheel / cage (0.053 mm³). Check these fits before manufacture.
- 2 hole(s) found in the geometry, diameters 7.6, 8.4 mm.
- Dimensions are nominal; general tolerance ±0.2 mm unless the drawing says otherwise.

Measured from the delivered geometry. Strength, stiffness, fatigue, heat, assembly order and manufacturability are not assessed here.

TITLE **Flying tourbillon movement Ø30**		LUXXO
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