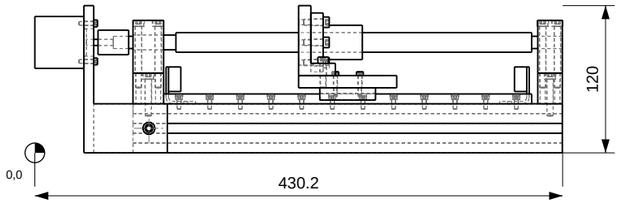
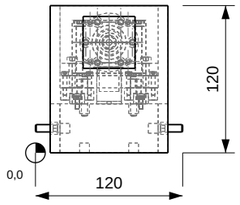
FRONT VIEW



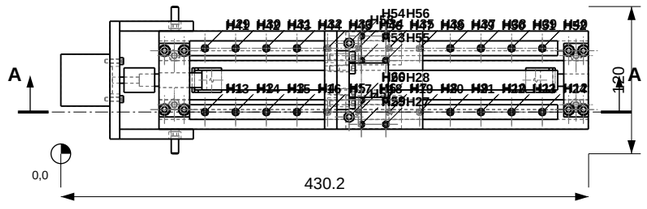
LEFT SIDE VIEW



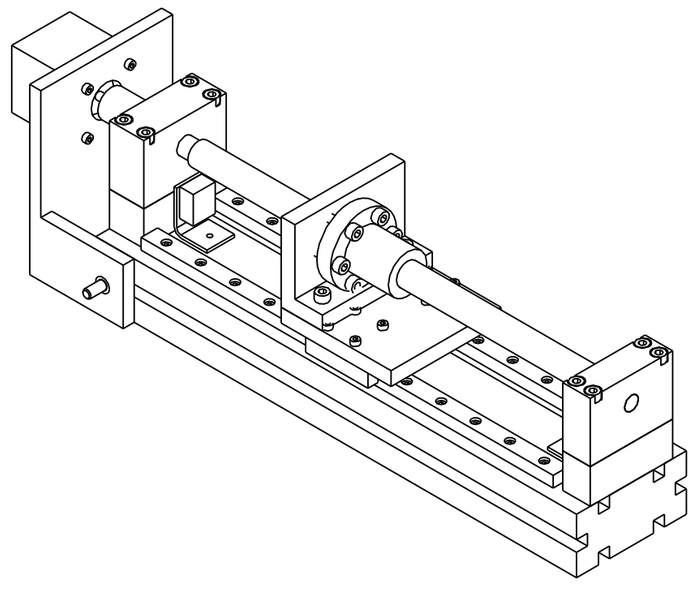
DRIVING DIMENSIONS

Parameter	Value	Unit
Stroke	200	mm
Base length	350	mm
Base w	80	mm
Base h	40	mm
Slot w	8	mm
Slot y	20	mm
Rail length	300	mm
Rail offset	26	mm
Rail pitch	25	mm
Block l	45.4	mm
Block w	27	mm
Block h	13	mm
Block pitch	20	mm
Carriage plate size	80	mm
Plate thickness	10	mm
Carriage position	0	mm
Bk l	25	mm
Bf l	20	mm

TOP VIEW



ISOMETRIC



PARTS LIST

Pos	Part	Qty	Standard / mass
1	base_extrusion	1	2661.1 g
2	rail_0	1	72.5 g
3	block_0	1	24.2 g
4	Socket head cap screw M3x8	24	rail_bolt_0
5	rail_1	1	72.5 g
6	block_1	1	24.2 g
7	carriage_plate	1	170.1 g
8	Socket head cap screw M3x16	8	plate_bolt
9	nut_bracket	1	145.5 g
10	Socket head cap screw M5x20	2	nb_bolt
11	Socket head cap screw M5x16	6	flange_bolt
12	ball_nut	1	75.1 g
13	riser_bk	1	93.0 g
14	support_bk12	1	152.8 g

NOTES

1. Riser wall between M5 counterbore and support bolts is thin (~2 mm)
2. Switch plunger is hit 3 mm before nominal end of stroke (acts as end stop)
3. Keep screw speed <= 600 rpm (Ø16 x 330 mm span)
4. Screw thread omitted; journals Ø12 (BK12) and Ø10 (coupling/BF12)
5. Purchased units (BK12, BF12, MGN12, MGN12H, nut, motor, switches) modelled as catalogue envelopes
6. T-slots simplified; T-nuts not modelled
7. Carriage shown at mid-stroke, travel ±100 mm
8. NEMA 17 0.4 Nm, 600 rpm -> ~450 N thrust

TITLE

Ball screw linear actuator 200 mm

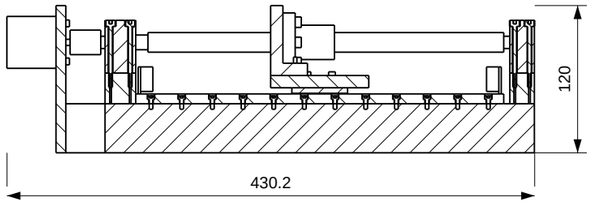
LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-14	PROJECTION ISO first angle [|O] -O
MATERIAL Aluminium (6061)	GENERAL TOLERANCE ISO 2768-m ± 0.2 mm	MASS (calc.) 4.51 kg
SCALE 1 : 5	SHEET 1 / 2 A3	DRAWING No. LX-D21651-v1

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

SECTION A-A



A-A (1 : 5) cutting plane y = -26 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	Ø6	117.5	34	THRU	T	Drilled
H2	Ø6	142.5	34	THRU	T	Drilled
H3	Ø6	167.5	34	THRU	T	Drilled
H4	Ø6	192.5	34	THRU	T	Drilled
H5	Ø6	217.5	34	THRU	T	Drilled
H6	Ø6	242.5	34	THRU	T	Drilled
H7	Ø6	267.5	34	THRU	T	Drilled
H8	Ø6	292.5	34	THRU	T	Drilled
H9	Ø6	317.5	34	THRU	T	Drilled
H10	Ø6	342.5	34	THRU	T	Drilled
H11	Ø6	367.5	34	THRU	T	Drilled
H12	Ø6	392.5	34	THRU	T	Drilled
H13	Ø3.5	117.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H14	Ø3.5	142.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H15	Ø3.5	167.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H16	Ø3.5	192.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H17	Ø3.5	217.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H18	Ø3.5	242.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H19	Ø3.5	267.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)
H20	Ø3.5	292.5	34	THRU	T	Ø3.4 H13 for M3 (ISO 273 medium)

+ 98 more holes - full list in the app

FITS & TOLERANCES (ISO 286)

Feature	Size	Max / min	Fit
BK12 seat	Ø12 k6	12.012 / 12.001	H7/k6 transition
nut bore	Ø28 H7	28.021 / 28.0	H7/h6 clearance
motor pilot	Ø22 H8	22.033 / 22.0	H8/h7 clearance

ENGINEERING CHECKS (simplified hand calculations)

OK ball screw: Ø16: T = 0.4 N·m, M = 0.8 N·m → σv = 2.2 MPa, safety 110.7 vs. Re 240 MPa (need 2.5), min. Ø4.5

Flat patterns: 2 DXF files (3 pcs) for laser cutting - download in the app.

TITLE

Ball screw linear actuator 200 mm

LUXXO

DRAWN BY Luxxo AI design engineer	DATE 2026-11-14	PROJECTION ISO first angle [|O] -O
MATERIAL Aluminium (6061)	GENERAL TOLERANCE ISO 2768-m ± 0.2 mm	MASS (calc.) 4.51 kg
SCALE 1 : 5	SHEET 2 / 2 A3	DRAWING No. LX-D21651-v1

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