

KANTE



PL. 01 Kante 01, Graphite, size M. Closed diamond, level top tube, four machined 6061-T6 nodes, 6061-T6 tubes. 700c x 50 mm.

What wears is sealed. What holds is shown.

A city asks a bicycle to do the same few things thousands of times: start at a light, climb a ramp, stand in the rain, start again. The Kante 01 is built around that repetition.

Its motor and its twelve gears share one sealed housing at the bottom bracket. From there a carbon belt runs straight to a single rear sprocket. There is no chain to oil, no derailleur to knock out of line, no cassette for winter salt to eat. The moving parts live behind seals and ask for one oil change every 10,000 km.

What carries load stays in view: four machined nodes, the straight tubes between them, six bolts holding the

drive in its cradle. The battery is inside the down tube. The lights are cut into the nodes. The frame is hard-anodised matte black, and on every node the edges are cut back to bright aluminium.

Those edges are the only bright metal on the bike. They show how it was made, and they gave it its name.

21.5 kg

~670 Wh

60–120 km

85 Nm

12 speeds

belt drive

700c × 50

Named for the one detail you can touch.

Kante is German for edge. The word comes from the drawing office,
not the showroom.

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Eight plates. One specification. Every image in this book
is the same machine.



PL. 02 Front three-quarter, non-drive side. Head-tube node with flush light slot; rigid fork with straight tapered blades and a machined crown.

Four nodes, and the straight tubes between them.

The Kante 01 is a closed diamond, the shape the bicycle settled on more than a century ago. A triangle does not fold.

Each junction of the frame is a single block of 6061-T6 aluminium, milled on a CNC machine: the head-tube node, the seat cluster, the cradle that holds the drive unit, and the rear dropouts. Between them run straight tubes of the same 6061-T6. The top tube is level. The down tube is a rounded rectangle of roughly 70 × 58 mm, large because the battery lives inside it.

This is not a monocoque, and it does not dress as one. A monocoque hides its

structure inside a shell. Here the structure is the shape: the eye can follow every load path from the head tube to the dropouts.

The welds at the nodes are dressed smooth. Frame and fork are hard-anodised and fine bead-blasted to a black that does not shine under a streetlight. Then the edges of each node are diamond-cut, taking the anodise off a thin line of the metal beneath. That line is the only bright surface on the frame.

6061-T6

Machined nodes · drawn tubes. One alloy throughout, so the welds hold and the frame heat-treats as a whole.

Where a bolt does work, it is shown: six on the drive cradle, two on the belt split, one on each dropout tensioner, and the stem clamp. Stainless, hex socket, black oxide. No bolt is there for show.

Threaded bosses for fenders, a rack and a stand are hidden in the frame. The Kante 01 as drawn here carries none of them.

COLOURWAY B · RAW

The same frame, clear-anodised and bead-blasted to a satin grey. Against it the diamond-cut edges take a higher polish. The drive cradle, bar-stem, cranks, rims, tyres and belt stay matte black on both colourways, and the fasteners stay black oxide. Neither carries a stripe, a graphic or a decal.

PL. 03 Kante 01, Raw. Clear anodise, bead-blasted satin. Chamfers diamond-cut to bright aluminium.



A · GRAPHITE
Hard-anodised matte black, fine bead-blast. Chamfers diamond-cut to bright aluminium.



B · RAW
Clear-anodised natural aluminium, bead-blasted satin. Chamfers diamond-cut, high polish.

600 %

Gear range. Twelve steps of ~17.7%, all inside one housing.

Twelve gears in a sealed case. One belt.

The gearbox moves to the bottom bracket, so the back of the bike carries nothing but a sprocket.

A derailleur is a precise mechanism left out in the weather. Chain, cassette and jockey cage sit open to grit, kerbs and salt, and keep their precision only with oil and adjustment. The Kante O1 takes all of it inside.

At the bottom bracket sits a Pinion MGU E1.12: a motor and a twelve-speed gearbox in one sealed housing, held in a two-piece machined cradle by six exposed bolts. It spans a 600 % range in twelve even steps of about 17.7 %, shifted electronically from the right thumb. The motor gives 85 Nm, and up to 160 Nm reaches the rear wheel in the lowest gears. Assist ends at 25 km/h, as the EU pedelec rule requires.

From the drive unit a Gates Carbon Drive CDX belt runs straight to a single sprocket on a plain rear hub. It needs no lubrication, and it leaves nothing on a trouser leg.

A belt cannot be split like a chain, so the frame opens for it instead: a machined link in the drive-side seat stay, held by two exposed bolts. Sliding dropouts with a tension bolt set the belt's tension. Both are left in view, because both are the reason the drivetrain works.

The service schedule is one line long: an oil change in the drive unit every 10,000 km.

No chain.
No derailleur.
No cassette.
No chain guard.

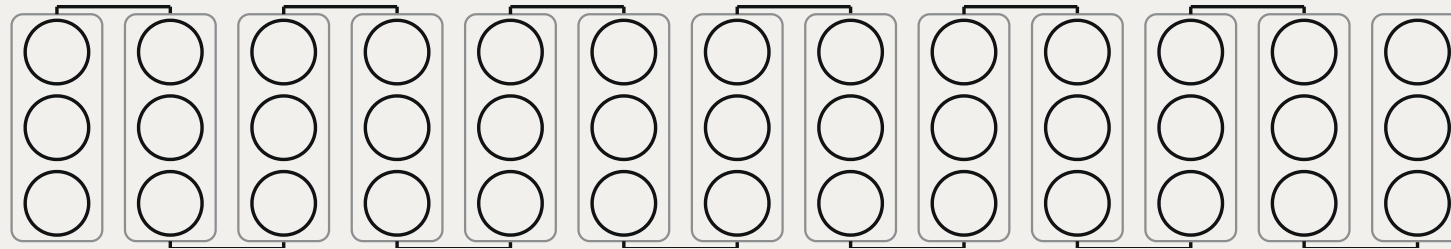
PLATE 04

Drive unit and belt. Pinion MGU E1.12 in a two-piece machined cradle, six exposed bolts. Gates Carbon Drive CDX belt to a single rear sprocket.



Inside the down tube, not on it.

A battery bolted to a frame is a box you see. The Kante 01's battery is a tube you have already seen.



Cell arrangement, schematic. 39 × 21700 lithium-ion: thirteen groups in series (13s), three cells in parallel in each (3p). 48V class, ~670Wh nominal (target).

Thirty-nine 21700 lithium-ion cells, arranged 13s3p, ride inside the down tube. Capacity is targeted at ~670 Wh nominal. Nothing is fixed to the outside of the frame.

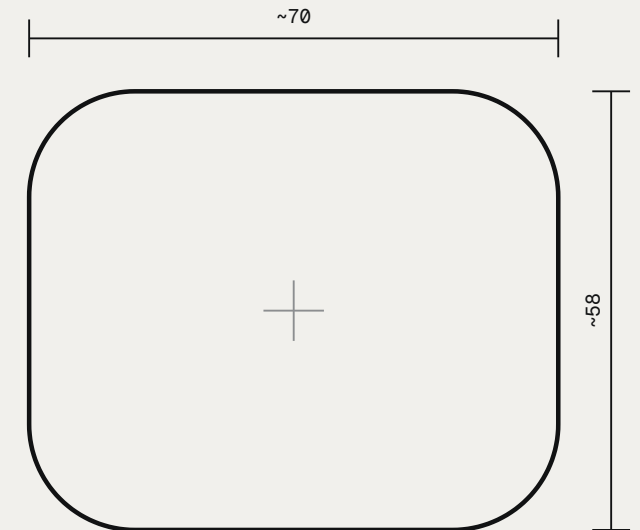
To remove the pack, unlock the milled end cap and it drops out of the underside of the tube, ahead of the drive unit. On the frame the only trace is a fine machined split line and that end cap. The head of the key carries the K.

The charge port sits on the non-drive side of the down tube, just above the drive cradle, under a machined aluminium cover. On a 4 A charger the design target is about 4.5 hours from empty to full.

Range is targeted at 60–120 km. The spread is honest: it depends on the assist level, the hills and the rider, and works out at roughly 5.5 to 11 Wh per kilometre.

60–120 km

Range, design target. Mode and terrain dependent.



Down-tube section, drawn at 1 : 1. Rounded rectangle, roughly 70 × 58mm, 6061-T6. The pack rides inside it.



04 · COCKPIT

Two buttons a side. One disc of glass.

The rider's view of the Kante O1 is one machined part with a display set into it.

Bar and stem are a single piece of machined aluminium, matte black: a flat bar 640 mm wide with 8° of backsweep. Every line enters the frame at the head-tube node and runs inside, so no cable crosses the rider's view.

Set flush into the top of the stem is a circular display, 32 mm across, its glass level with the metal. It shows speed, assist

level, gear and charge, white on black. Switched off, it is a black disc. When the system wakes, it shows the K.

Under each thumb sits a small machined aluminium block with two backlit buttons. The left sets assist, up and down. The right shifts, up and down. There is no twist shifter and no shift cable, because the gearbox shifts electronically.

The brakes are hydraulic discs, two-piston, on 180 mm rotors at the front and 160 mm at the rear. The bell is a tone from the display unit. The grips are plain black rubber with a machined aluminium collar.

PL. 05 Cockpit, rider's view. One-piece machined bar-stem, 640 mm, 8° backsweep. 32 mm display flush in the stem. Thumb remotes: assist left, shift right.

Light, cut into the metal.

No lamp, no bracket, no housing. Each light is a slot milled into a node.

At the front, a white LED slot about 60 mm long crosses the face of the head-tube node and turns down both of its flanks. Head-on it reads as a bar of light. From the side, at a junction, it is still there.



PL. 06 Head-tube node. White LED slot milled flush into the front face, turning onto both flanks. Internal routing enters at the node.



At the rear, a red slot about 40 mm wide is milled into the back face of the seat-cluster node, under the saddle.

Both sit flush with the metal and both draw from the main battery. They are on whenever the system is on, so there is no switch to forget.

The rear light is red because the road requires it. It is a signal, not a brand colour, and the bike uses red nowhere else.

PL. 07 Seat-cluster node. Milled facets, diamond-cut chamfer, flush red light slot. 30.9mm seatpost.

Kante brechen.

German for “break the edge”: the note on a shop drawing that tells the machinist to finish a sharp corner.

Kante is the German word for edge, the line where two faces of a solid meet. Say it KAHN-tuh: two syllables, a hard K and a hard T.

On a German engineering drawing, *Kante brechen* tells the machinist to take a sharp corner off a part, to deburr it and chamfer it. Every node on this bike carries out that instruction. Its edges are cut at an angle, back through the black anodise to bright aluminium. They are the only bright metal on the frame, and the name comes from them. Ask why the bike is

called Kante and the answer can be shown with one finger.

The wordmark is drawn the same way: five capitals, straight strokes only, every square corner of every letter cut at 45°. The A has no point. Its apex is cut flat, as a milled part would be. On the bike the mark is laser-marked into the anodise on both flanks of the down tube, a grey one step off the black. It is not paint and it is not a sticker. It is the only mark the frame carries.

The brand is KANTE. The first machine is the Kante 01.

THE MARK, DRAWN · UNITS ON A 100-UNIT CAP HEIGHT



PL. 08 The mark on the frame. Laser-marked into the hard anodise on the down tube's flank, tonal grey on black, reading from the bottom bracket toward the head tube.

KANTE

21.5 kg

~670 Wh

60–120 km

85 Nm

12

Belt

700c × 50

WEIGHT (TARGET)

BATTERY (TARGET)

RANGE (TARGET)

MOTOR TORQUE

SPEEDS, SEALED

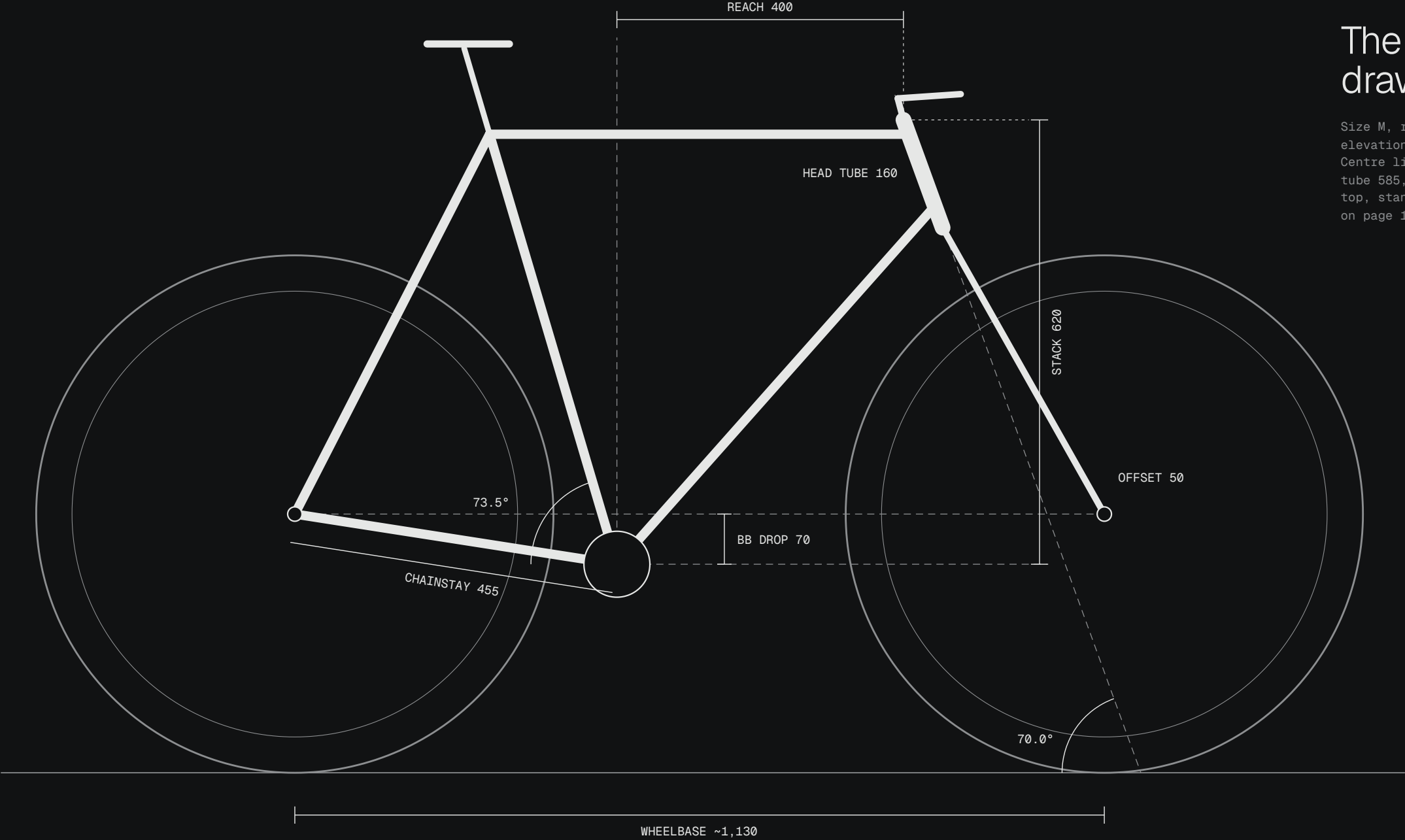
GATES CDX

WHEELS

MACHINE		DRIVE		BATTERY	
Type	Electric city bike, EU pedelec	Drive unit	Pinion MGU E1.12. Motor and gearbox in one sealed housing at the bottom bracket	Position	Concealed inside the down tube
Sizes	S · M · L. Figures for size M	Gears	12, electronic shifting	Cells	39 × 21700 lithium-ion, 13s3p
Weight, complete	21.5 kg (target)	Gear range	600%, steps ~17.7%	Voltage	48 V class (13s ≈ 46.8 V nominal)
Assist cut-off	25 km/h	Torque	85 Nm. Up to 160 Nm at the rear wheel in the lowest gears	Capacity	~670 Wh nominal (target)
FRAME AND FORK		Peak power	600 W	Removal	Drops from the underside of the down tube. Keyed, milled end cap
Architecture	Closed diamond, level top tube, straight tubes	Drive unit mass	~4,100 g	Charge port	Non-drive side of the down tube, above the drive cradle. Machined cover
Tubes	6061-T6 aluminium. Down tube ~70 × 58 mm rounded rectangle	Q-factor	174 mm	Charge time	~4.5 h, 0–100%, 4 A charger (target)
Nodes	Four, CNC-machined 6061-T6: head tube, seat cluster, drive cradle, rear dropouts	Final drive	Gates Carbon Drive CDX belt	Range	60–120 km, mode and terrain dependent (target)
Joining	TIG-welded, welds dressed smooth	Sprockets	24T / 28T (target)		
Belt split	Machined bolted link, drive-side seat stay, two exposed bolts	Cranks	Forged aluminium, 170 mm, matte black		
Rear dropouts	Machined, sliding, exposed tension bolt. 12 × 142 mm thru-axle	Pedals	Flat aluminium, black		
Fork	Rigid aluminium, straight tapered blades, machined crown. 12 × 100 mm thru-axle, flat-mount disc	Service	Drive-unit oil change every 10,000 km. Belt: no lubrication		
Fasteners	Stainless hex socket, black oxide				
Mounts	Concealed bosses for fender, rack, stand. None fitted				

COCKPIT		WHEELS AND CONTACT POINTS		GEOMETRY · SIZE M · RIDER 172-184 CM	
Bar-stem	One-piece machined aluminium. Flat bar, 640mm, 8° backsweep	Wheel size	700c (ISO 622)	Seat tube, c-t	520 mm
Display	32mm circular, flush in the stem top. Speed, assist, gear, charge	Rims	Aluminium, 25mm internal, 28 spokes, black	Effective top tube	585 mm
Controls	Two machined thumb remotes. Left: assist up/down. Right: shift up/down	Tyres	700 × 50 mm (ISO 50-622), smooth city tread, black sidewall	Reach	400 mm
Brakes	Hydraulic disc, two-piston. Rotors 180 mm front, 160 mm rear	Hubs	Front 12 × 100 mm. Rear single-sprocket 12 × 142 mm	Stack	620 mm
Routing	All lines internal, entering at the head-tube node	Seatpost	30.9 mm aluminium, matte black	Head-tube angle	70.0°
Bell	Tone from the display unit	Saddle	Slim, flat profile, black	Seat-tube angle	73.5°
Grips	Black rubber, machined aluminium collar			Head tube	160 mm
LIGHT		FINISH		Chainstay	455 mm
Front	White LED slot, ~60 mm, milled into the head-tube node. Wraps onto both flanks	A · Graphite	Hard-anodised matte black, fine bead-blast. Chamfers diamond-cut to bright aluminium	BB drop	70 mm
Rear	Red LED slot, ~40 mm, milled into the seat-cluster node	B · Raw	Clear-anodised natural aluminium, bead-blasted satin. Chamfers diamond-cut, high polish	Fork offset	50 mm
Power	Main battery. On with the system	Both	Drive cradle, bar-stem, cranks, rims, tyres, belt matte black. No graphics, no decals	Wheelbase	~1,130 mm
		Mark	KANTE, laser-marked into the anodise on both down-tube flanks	Standover	~810 mm
(target) marks a design target. See Notes, page 19.					

600 %	160 Nm	600 W	25 km/h	10,000 km	640 mm	32 mm
GEAR RANGE	AT THE REAR WHEEL	PEAK POWER	ASSIST CUT-OFF	OIL-CHANGE INTERVAL	BAR, 8° SWEEP	FLUSH DISPLAY



The frame as drawn.

Size M, rider 172-184 cm. Side elevation, all dimensions in mm. Centre lines dashed. Effective top tube 585, seat tube 520 centre to top, standover ~810: see the table on page 17.

NOTES

The Kante 01 is a concept. The machine in these pages has been designed, specified and rendered; it has not yet been built. Every image of it is a rendering of one specification, and every figure in the book is drawn from that same specification.

Weight, battery capacity, range, charge time and sprocket sizes are design targets: the figures the machine is engineered toward, not results from testing. They are marked (*target*) in the specification. Drive-unit figures (gearing, torque, peak power, mass, Q-factor and service interval) are the published figures of the drive unit's maker, Pinion. The 25 km/h assist limit is the EU pedelec rule. Battery voltage is to be confirmed against the drive-unit maker's documentation.

KANTE is the working name of the brand. Trademark clearance has not been completed.

PLATES

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All plates are renderings of the one specification on pages 16-17. Drawings on pages 10, 14 and 18 are to the stated dimensions.

TYPE	EDITION
Set in Geist and Geist Mono. The wordmark is drawn, not set.	KANTE 01 · Concept · 2026

KANTE

KANTE 01 · ELECTRIC CITY BIKE

21.5 kg

~670 Wh

60-120 km

85 Nm

12 speeds

belt drive

700c × 50