



Koenigsegg

Jesko – Light Speed Gearbox

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The Koenigsegg Jesko features an all-new 9-speed, multi-clutch transmission - the second transmission to be 100% designed and built in-house at Koenigsegg, following the Direct Drive system designed for the Regera.

The Koenigsegg Light Speed Transmission (LST) represents a scale of evolution not seen since the development of modern dual-clutch technology at the turn of the century.

LST comprises nine forward gears and several wet multidisc clutches in a compact, ultra-light package. The LST is capable of upward and downward gear changes between gears at near light speed thanks to the simultaneous opening and closing of clutches that allow for totally seamless acceleration/deceleration.

That LST gear changes can occur in virtually zero time between adjacent gears is impressive. What takes LST from impressive to evolutionary, however, is that these shift-time benefits apply when changing between ANY forward gears.

UPOD - ULTIMATE POWER ON DEMAND

The key to this functionality is found in both the transmission's unique design and Koenigsegg's intelligent 'UPOD' technology - Ultimate Power On Demand. UPOD is the brain that instantly selects and engages optimum gearing for maximum acceleration.

While modern dual-clutch transmissions (DCT) enjoy millisecond shift times, they can only pre-select for a fast shift in one direction. DCT's are designed to predict and pre-select the next gear based on inputs from the driver. If that prediction is wrong - e.g the driver wants to shift from 5th gear to 4th, instead of the presumed and pre-selected 6th gear - the driver will experience G-force losses and a slow shift response.

In addition, DCT's only work in single-gear intervals. From 7th gear to 6th, to 5th, to 4th, for example. If the driver is in 7th gear and wants 4th for maximum power, the DCT cannot pre-select 4th gear directly. The driver has to pass through 6th and 5th gears, wasting time and power.

The Koenigsegg LST overcomes this via its unique multi-clutch design and UPOD technology, which selects the optimum gear for maximum power with a light speed gear change, regardless of whether that gear is 1, 2 or even 5 gears away.

UPOD uses vehicle speed and engine speed to determine the correct gear for maximum power and directs the LST to engage that gear, no matter its relationship to the current gear. If you are in 7th gear and 4th is the optimal gear for maximum acceleration, UPOD can bypass downshifts to 6th and 5th gear and put the car directly from 7th to 4th - in near light speed.

The effect is instant, prolific power that's always optimised and always available, allowing maximum acceleration for overtaking, corner exits, etc.

Koenigsegg has a long history of developing innovative, in-house solutions aimed at optimising vehicle performance. Near-enough is never good-enough. This no-compromise philosophy inspired the development of Aircore carbon fibre wheels, Koenigsegg Direct Drive, Triplex suspension geometry, the RocketCat catalytic converter, Autoskin technology, and much more. LST is the latest in a long line of Koenigsegg innovations.

DUAL-MODE SHIFT

The Koenigsegg LST uses shifting mechanisms with two modes to differentiate between 'normal' (single-increment) and UPOD gear changes. The gear selector paddles and central shifter both have notched mechanisms that allow for two types of shifting.

Press the desired paddle or central shifter to the first notch and the transmission instantly changes one gear, as normal.

Press the paddle or the central shifter beyond that first notch and you are actively making use of UPOD's jump capability. The transmission's intelligent UPOD system will instantly detect your optimum gear and engage that gear for you.

FLEXIBLE SHIFT

Many drivers miss the organic feeling of a manual shifter and how it makes you feel more engaged with the car. Jesko offers its unique LST shifting capability in two different forms - paddle shift and 'manual' shift.

Modern sports car drivers are already accustomed to steering wheel paddles. They will feel perfectly accustomed to shifting gear in Jesko with dual-notch paddles located in the customary position, behind the steering wheel.

Jesko also offers an old-school alternative, with a short-throw 'stick-shift' installed and fitted with the same dual-notch operation. A push to the first notch changes one gear. A harder push to the second notch initiates UPOD and maximises the Koenigsegg LST's full capabilities.

LIGHT | SPEED

The Koenigsegg LST represents a revolution in the way multi-clutch transmissions drive your vehicle.

Equally revolutionary is the size and weight of the system.

Where 'traditional' dual-clutch technology improved vehicle performance, this improvement came at a significant cost in terms of weight. Modern high-performance DCTs can easily weigh up to 140 kilograms, and DCT-equipped cars always weigh more than their manual-transmission counterparts.

Minimisation of weight lies at the heart of the Koenigsegg philosophy and the Koenigsegg LST is no exception.

It provides vastly improved performance and functionality, yet the 9-speed Koenigsegg LST transmission weighs just 90kg, including all fluids. The physical package is less than 50% of the length of Koenigsegg's previous-generation 7-speed CIMA transmission. This small size keeps weight closer to the center of the car, improving weight distribution and handling.

Koenigsegg's new Light Speed Transmission, coupled with Jesko's increased engine output and improved aerodynamics deliver the ultimate road-friendly track car. It continues Koenigsegg's tradition of innovation and advances the company's ongoing quest - the pursuit of automotive perfection.

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