

# Advantages and disadvantages of the K-IVT technology



*(K-IVT technology = continuously variable gear arrangement)*

**compared to previous automatic transmissions  
(converter, double-clutch and continuously variable transmissions)**

**K-IVT Tech**  
The gearbox of the future

- (+) backwards to forwards absolutely stepless gear change
- (+) an infinite number of translation ratios.
- (+) absolutely no interruption of tractive effort when changing the gear even under full load over the entire area.
- (+) No change of driving range.
- (+) fast and absolutely jerk-free stepless gear change.
- (+) high efficiency due to lower hydrostatic content thanks to "closed" gear arrangement.
- (+) unsurpassed acceleration, as the motor can always work in the largest power range.
- (+) minimum fuel consumption, as the engine can always operate in the optimum torque range.
- (+) maximum environmental relief, as the motor can always operate in the optimum torque range.
- (+) smooth and wear-free starting.
- (+) highest driving comfort in general.
- (+) no wear of mechanical couplings
- (+) no shifting, no clutching, no shifting of gears. The gears remain permanently in their designed arrangement. This reduces wear to the minimum possible. Gear use with prime numbers is also useful.
- (+) compact design due to planetary gear sets.
- (+) Towing and tow-start possible.
- (+) Construction for high transmittable starting / tractive force possible.
- (+) No additional pump required for printer setting. The speed of a gear wheel is only reduced. On the other hand, this energy is used for acceleration. This means less power loss than with other gearboxes.
- (+) Design for high torques during start-up possible.
- (+) Field of application: for all devices and vehicles which require different transmission ratios, e.g. also for wind power plants and electric vehicles.
- (+) Virtual switches freely programmable for manual shifting.  
Shift freaks are not neglected. Circuit programming for any vehicle make/type/model possible. The clutch is replaced here by controlled opening of a hydraulic valve in real time. Attention: the fuel consumption is of course inevitably higher.
- (-) Character that needs getting used to due to constant speed during acceleration. This is a potentially undesirable property - generally known and system-inherent in optimised gearboxes.  
Remedy if necessary - see point before virtual switches.