

## Single stage Variable Transmission: spec SVT230

prototype successfully tested and validated in E-truck

### AUTOMATIC VARIABLE TRANSMISSION: FEATURES

Compact transmission offering variable ratios (all output speeds in the same driving direction, no neutral)

Fast & accurate control of speed ratio by electronic control unit

Control unit manages continuously optimal driveline efficiency

Exceptionally high overall transmission efficiency

No torque or efficiency dip during ratio variation

Unnoticeable delay on request for ratio change

Very few components, robust construction

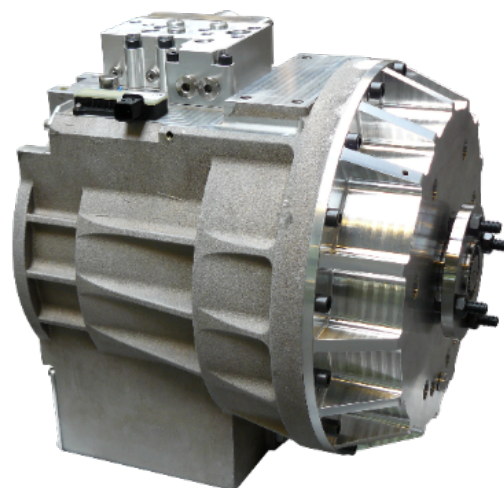
Nearly silent operation

Input and output shafts are in line, output rotates in opposite direction relative to input

Equally functioning in 4 quadrants: driving & braking, both directions

Adapter at input side enables direct fit onto the electric motor; adapter is customized  
Output flange and bolts are customized

Hydraulic pump driven by separate motor



### TECHNICAL SPECIFICATIONS

Model name	SVT230
Design application	Driving electric vehicles Driving vehicle auxiliaries at variable defined speeds, independent from input speed
Transmission length	401 mm (excl. adapter)
Transmission outer diameter	390 mm
Transmission height incl. hydraulic controls	454 mm
Transmission weight	99 kg (prototype version, less in series)
Highest speed ratio	0.972 (torque ratio 1.029)
Lowest speed ratio	0.360 (torque ratio 2.778)
Ratio spread	2.7 (more on request)
Max input torque	400 Nm
Max input speed	8000 RPM (more on request)
Max output torque	1060 Nm
Max output speed	3000 RPM (more on request)
Rated power	80 kW (tested up to 110 kW)
Overall efficiency excl. / incl. hydraulic pump	95.5 % excl.; 94.6 % incl.
Reaction time on ratio change request	57 ms
Typical inaccuracy on dynamic ratio request	0.15 % = 1.5 RPM output error on 1000 RPM input
Typical inaccuracy on static ratio request	0.00 to 0.05 %
Design life driving Light Commercial Vehicle 3.5 ton	Heavy duty cycle: 18 000 hours or 400 000 km Urban cycle: 30 000 hours or 675 000 km