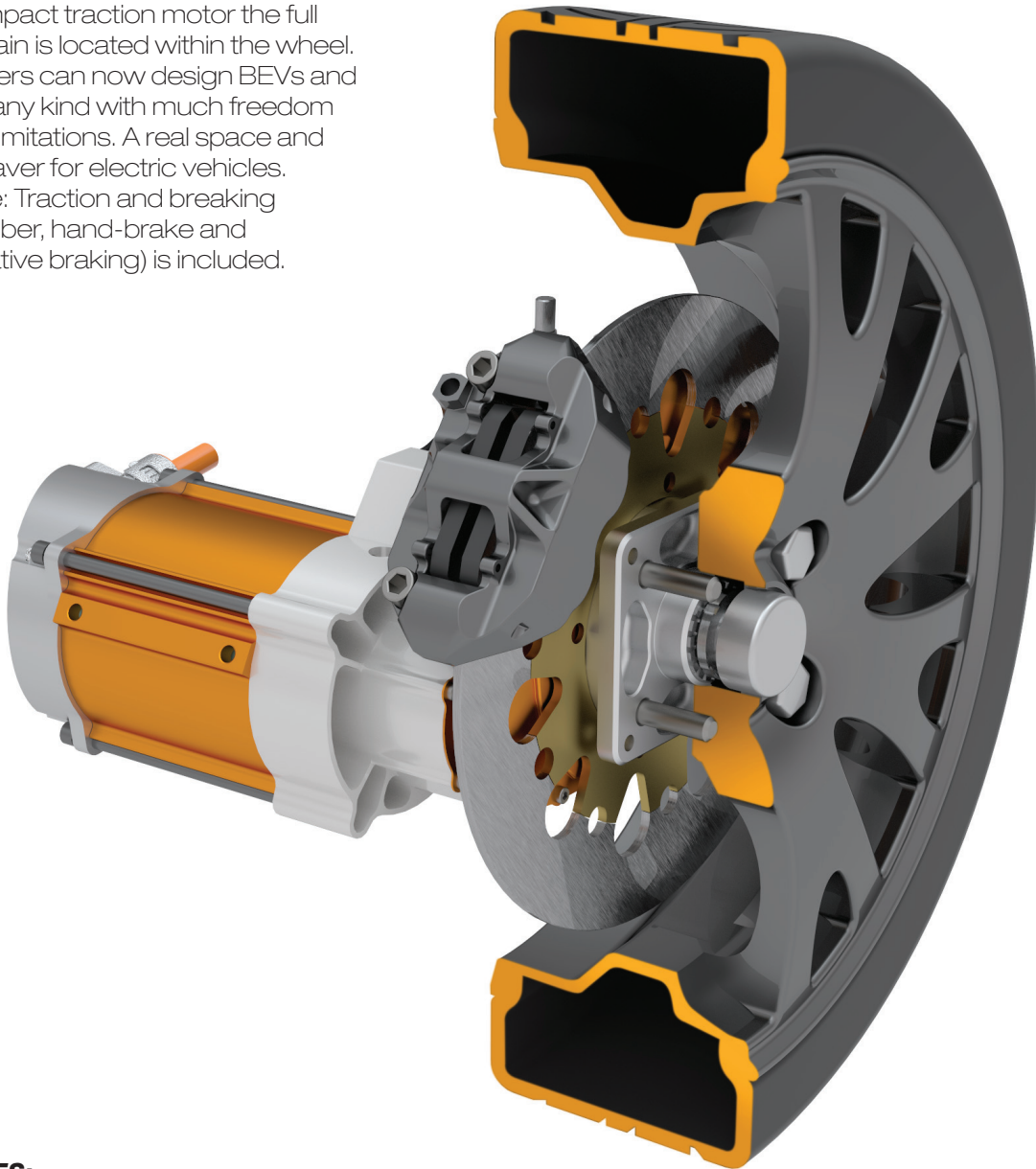


ELECTRIC POWERTRAIN

ELECTRIC POWERTRAIN

The ECOMove InWheel electric Powertrain is powerful and compact. Based on a compact traction motor the full power-train is located within the wheel. Car builders can now design BEVs and HEVs of any kind with much freedom and few limitations. A real space and weight saver for electric vehicles. All-in-one: Traction and breaking (disc+caliber, hand-brake and regenerative braking) is included.



FEATURES:

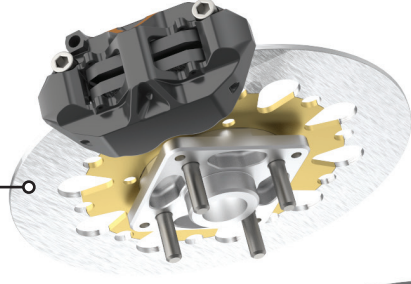
- Faster and simpler car design
- Rapid prototype driving
- Free up vehicle space and save weight
- Open to various requirements for torque, acceleration, speed, wheelbase and steering.
- Support 2 and 4-wheel drive with torque vectoring.
- Unsprung weight is low - best weight:power ratio in the market.
- Flexible adaption plates for implementation in suspension systems.
- Optional controllers and implementation support available

ELECTRIC POWERTRAIN

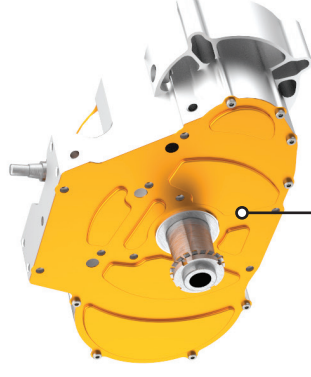
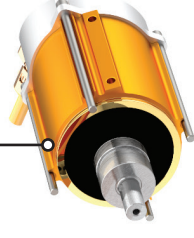
Conventional 16 inch wheel



Stainless steel Brake disc
4x34 piston fixed caliber



44 kW synchronous 3 phase
Encoder output
Temperature sensor output
Liquid cooled



Upright and Speed reducer (configurable ratio 1:11 - 1:16)
ABS output
Parking brake
Configurable suspension pickup points
Configurable steering and tracking rod pickup points.

ELECTRIC POWERTRAIN

TECHNICAL SPECIFICATIONS:

Motor

Motor type:	PMAC
Nominal Voltage:	110 V
Power max/ continuous:	44kW/24,5kW
Max. Speed:	18000 rpm
Efficiency:	97,1 %

Transmission

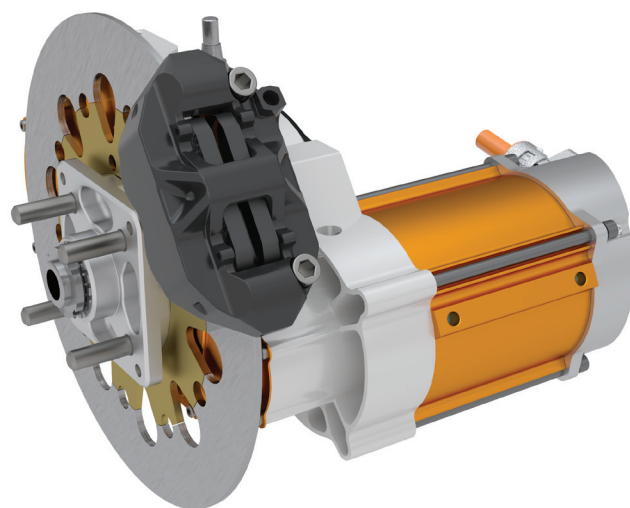
Configurable gear ratio	1:11 - 1:16
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Weight

Complete unit (excl. rim and tire)	21 kg
Motor	8,2 kg
Upright and Speed Reducer	10,2 kg
Hub and Braking system	2,6 kg

Drive Line

Wheel Torque:	Up to 384 Nm
Efficiency:	up to 91 %



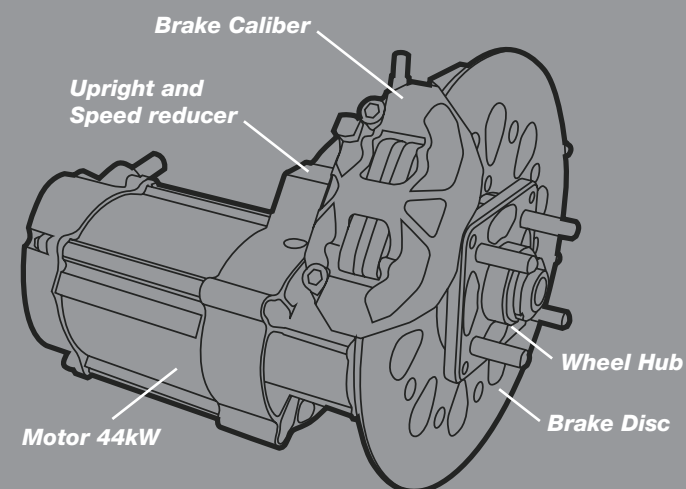
Brakes

Stainless steel brake disc
4x34 piston fixed Caliber
Hand brake intergrated

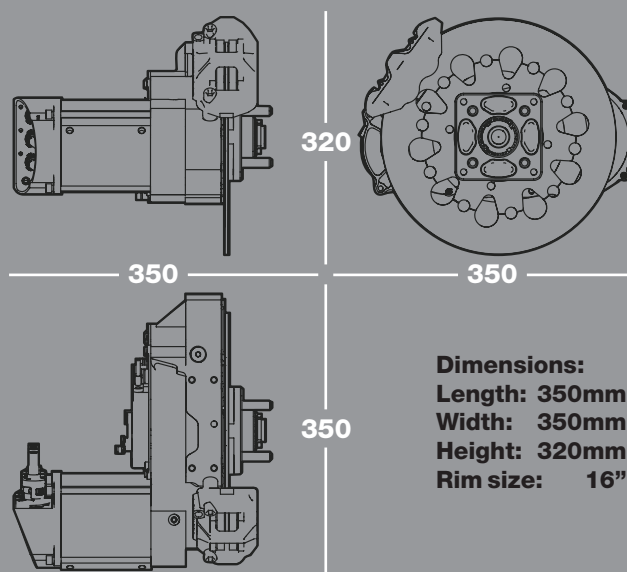
Protection:

Protection (dust, solid foreign objects, and water Ingress)
IP 55 (disc brakes and hub excluded)

Overview



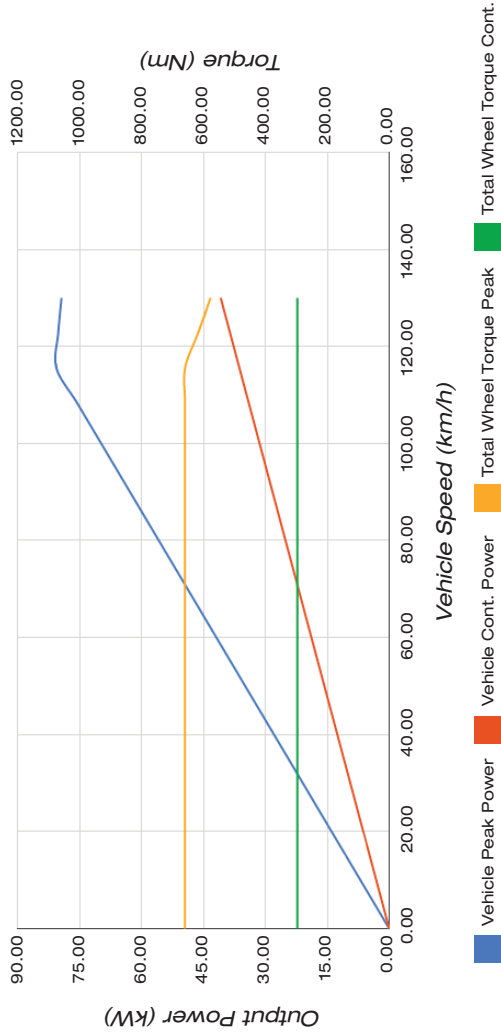
Dimensions



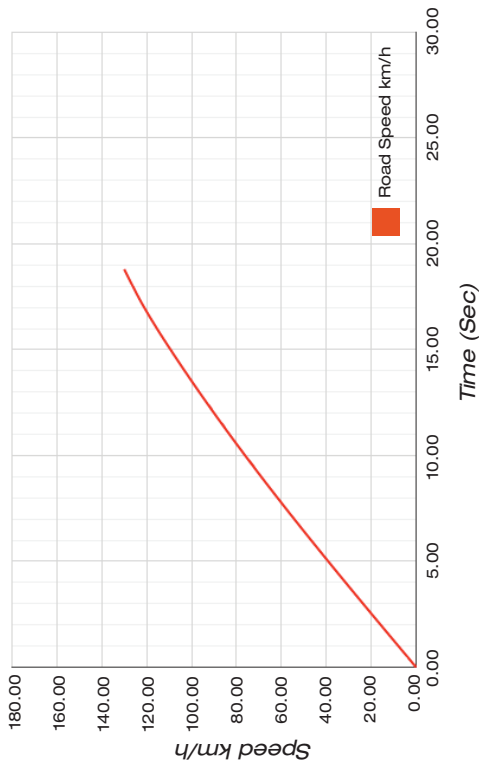
EXAMPLE:1 - 2WD

Vehicle Characteristics 2WD

Typical compact car;
CdA 0,96
Weight: 1100kg



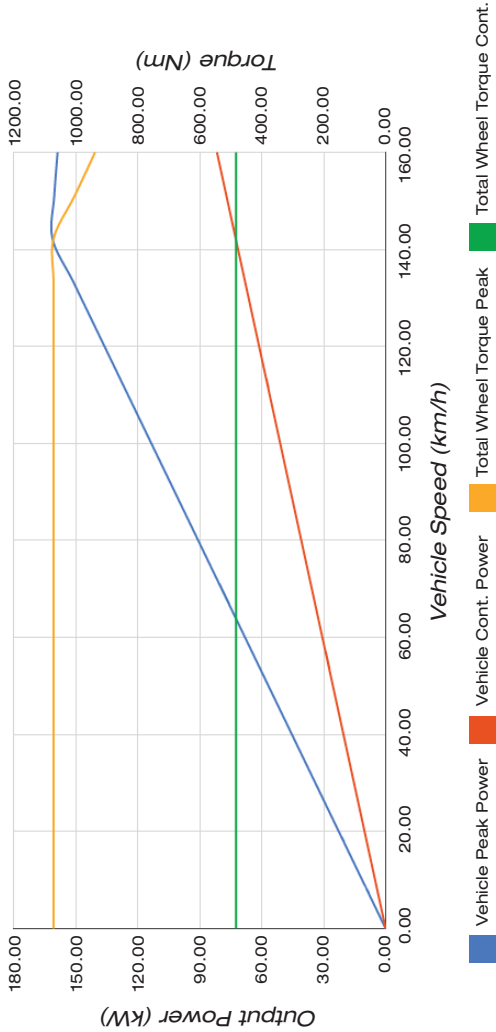
Vehicle Acceleration 2WD



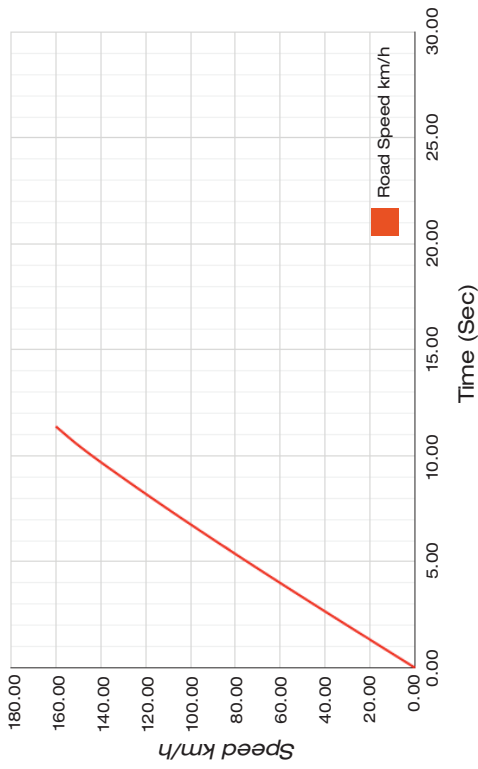
EXAMPLE:2 - 4WD

Vehicle Characteristics 4WD

Typical sports car;
CdA 0,6
Weight: 950kg



Vehicle Acceleration 4WD



2WD - Grade Ability

Vehicle Max Speed (ratio)	kmh	120																	
Total Vehicle Weight	kg	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800					
Grade Ability	%	57.4	47.2	40.2	35.2	31.3	28.2	25.7	23.6	21.8	20.3	19.0	17.8	16.8					

4WD - Grade Ability

Vehicle Max Speed (ratio)	kmh	160																	
Total Vehicle Weight	kg	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000					
Grade Ability	%	67.7	57.5	50.2	44.7	40.3	36.8	33.8	31.3	29.2	27.4	25.7	24.3	23.0					

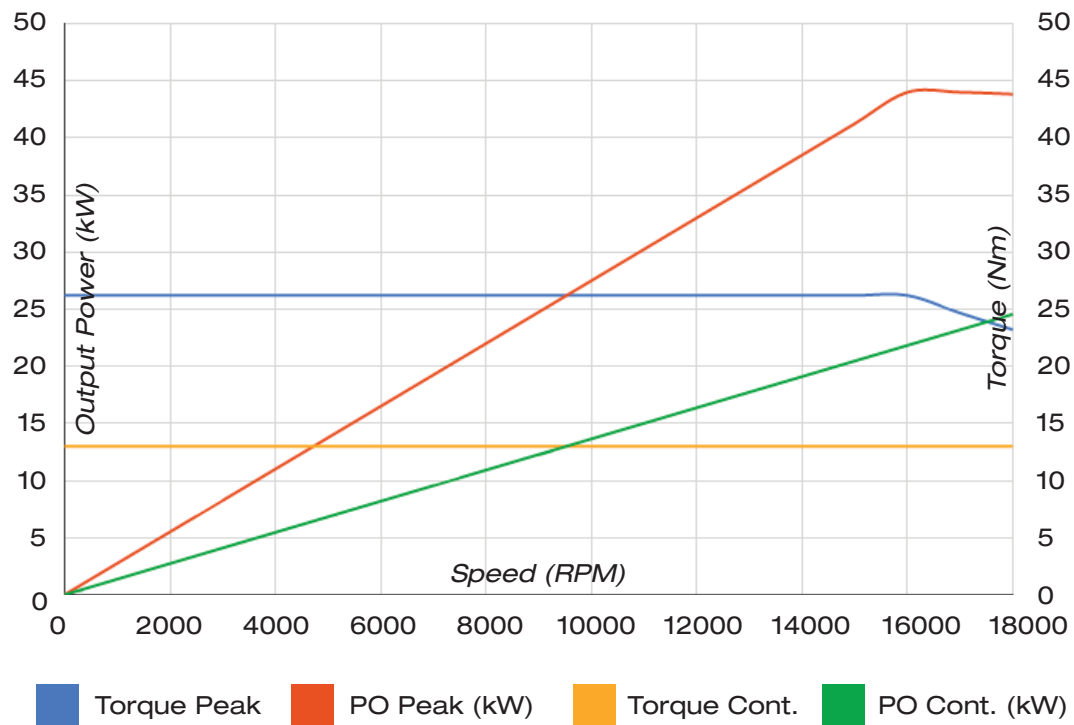
1WD (motorcycle) Grade Ability

Vehicle Max Speed (ratio)	kmh	160																	
Total Vehicle Weight	kg	250	300	350	400	450	500	550	600	650	700	750	800	850					
Grade Ability	%	39.4	32.1	27.2	23.6	20.8	18.7	16.9	15.5	14.3	13.2	12.3	11.5	10.9					

ELECTRIC POWERTRAIN

MOTOR CHARACTERISTICS:

Power & Torque



Efficiency Map

