

High Compact Torque Vectoring EDU



GENERAL FUNCTION

The torque vectoring EDU is built up with two similar single EDUs. Due to the fact that each of the single EDUs is controlled like a standalone EDU active torque vectoring is possible. This means that each wheel of the vehicle can accelerate or slow down its speed according to the driving situation. The smart combination of a planetary and a spur gear set allows a very compact EDU design with a high-power density. Thanks to its compact design, the EDU can be easily integrated into various vehicle platforms. This EDU version is primarily used in high-powered vehicles or all-wheel drive systems.



SPECIFICATIONS

PERFORMANCE

ELECTRIC MOTOR	ELECTRIC MOTOR		2x EM160-180	[-]
	TYPE OF EM		2x PMSM	[-]
	MAX. EM POWER (30s)	P_{max}	2x 125	[kW]
	CONT. EM POWER	P_{cont}	2x 60	[kW]
	MAX. EM TORQUE (30s)	M_{max}	2x 250	[Nm]
	CONT. EM TORQUE	M_{cont}	2x 120	[Nm]
	MAX. EM SPEED	n_{opmax}	18.000	[rpm]
GEARBOX	PEAK AXLE TORQUE	M_{axle}	2x 2.500	[Nm]
	MAX. AXLE SPEED	n_{axle}	1.800	[rpm]
	TRANSMISSION RATIO	i_{total}	10	[-]
	VOLTAGE RANGE	$U_{min-max}$	260-450	[V]
	MAX. EFFICIENCY EDU	η_{max}	97	[%]
POWER ELECTRONICS	POWER ELECTRONICS		PE250	[-]
	VOLTAGE CLASS		LV123 HV_2b	[-]
	PEAK PERFORMANCE (30s)	I_{max}	500 @60 to 450V	[A _{rms}]
	CONT. PERFORMANCE	I_{cont}	250 @60 to 450V	[A _{rms}]



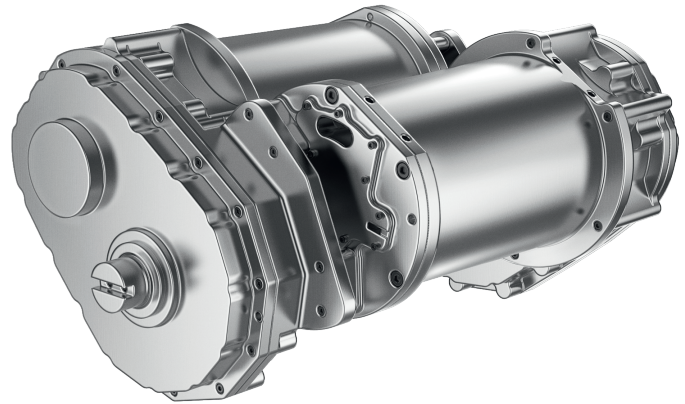
PARAMETERS

- Active Torque Vectoring EDU
- 2x 125 kW peak power
- 2x 2.500 Nm peak axle torque



BENEFITS

- Active Torque Vectoring
- Very compact EDU design with a high-power density
- High system performance and efficiency
- Experience with system integration at hofer powertrain for many years
- Long durability
- Software inhouse
- Testing capacity



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