

## Product overview 'RACING KITS' valid for 2023

### 2WD Inverter

Robust inverter technology including a firmware FSE developed for automobiles.



- 2 independently operating inverters with CAN and EtherCAT interface, mounted on a liquid cooled plate
- Torque control, dynamic speed limitation, field weakening operation, motor and recuperation operation
- Configurable torque derating at rising temperature, overload and over- and undervoltage
- Configurable CAN messages
- Parameterizable with AMKmotion commissioning software AIPEX PRO
- Standard functions (monitoring functions, diagnostic messages, scope function)
- Approx. 339 mm length, approx. 183 mm width, approx. 135 mm height, approx. 6,3 kg weight

### RACING KIT Motor DD5

The performance and weight-optimized motor is specially designed for the requirements in a Formula Student race car.



- 10-pole synchronous servo motor
- Rated torque 9.8 Nm
- Maximum torque 21 Nm for 1.24 s
- Operation in field weakening up to 20.000 rpm
- Integrated motor encoder and winding protection
- approx. 3.55 kg weight
- approx. 96 mm diameter
- approx. 135 mm length (without motor shaft)
- Shaft with shaft seal and splines according to DIN 5480

**The required liquid cooling jacket must be designed and built by the customer.**







### Commissioning Software AIPEX PRO



- - Device configuration
- - Parameterization
- - Support during commissioning
- - Diagnosis
- - Examples







## Available RACING KITS

### RACING KIT 2WD

Piece	Illustration	Description
1		2 independently operating inverters including the special firmware FSE, mounted on a liquid cooled plate.
2		Performance and weight optimized 10 pole synchronous servo motor with motor encoder system.
1		Commissioning and parameterization software AIPEX PRO (inclusive Company/Institute license)
1		USB cable with ferrite core
1		RACING KIT training for 2 people
1		10 hours support by phone or email

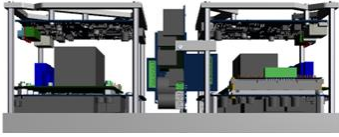





Version	Price
<b>RACING KIT 2WD</b>	20.300,00 €
<b>RACING KIT 2WD inclusive AMKmotion Sponsoring</b>  In order to purchase the Sponsoring Kit, all points must be accepted! The conditions for the Sponsoring Kit remain in place for as long as long as the devices in the Sponsoring Kit are used.  AMKmotion Sponsoring requires the following conditions: <ul style="list-style-type: none"> <li>• AMKmotion logo on the motor</li> <li>• AMKmotion logo on the car, in the front area (on both sides or on the top)</li> <li>• AMKmotion logo on the team-website</li> <li>• AMKmotion logo on the outer clothing</li> <li>• AMKmotion will may call itself as “Team Sponsor”</li> <li>• Naming AMKmotion as manufacturer of the motors and inverter as well as the motor and inverter description in the car description/program booklet</li> </ul>	15.650,00 €

## RACING KIT 4WD

Piece	Illustration	Description
2		2 x 2 independently operating inverters including the special firmware FSE, mounted on a liquid cooled plate.
4		Performance and weight optimized 10 pole synchronous servo motor with motor encoder system.
1		Commissioning and parameterization software AIPEX PRO (inclusive Company/Institute license)
1		USB cable with ferrite core
1		RACING KIT training for 2 people
1		10 hours support by phone or email

Version	Price
<b>RACING KIT 4WD</b>	30.500,00 €
<b>RACING KIT 4WD inclusive AMKmotion Sponsoring</b>  In order to purchase the Sponsoring Kit, all points must be accepted! The conditions for the Sponsoring Kit remain in place for as long as long as the devices in the Sponsoring Kit are used.  AMKmotion Sponsoring requires the following conditions: <ul style="list-style-type: none"> <li>• AMKmotion logo on the motor</li> <li>• AMKmotion logo on the car, in the front area (on both sides or on the top)</li> <li>• AMKmotion logo on the team-website</li> <li>• AMKmotion logo on the outer clothing</li> <li>• AMKmotion will may call itself as “Team Sponsor”</li> <li>• Naming AMKmotion as manufacturer of the motors and inverter as well as the motor and inverter description in the car description/program booklet</li> </ul>	23.500,00 €



## Special Promotion: RACING KIT 4WD + Spare/Test Bench KIT 2WD

Piece	Illustration	Description
3		3 x 2 independently operating inverters including the special firmware FSE, mounted on a liquid cooled plate.
6		Performance and weight optimized 10 pole synchronous servo motor with motor encoder system.
1		Commissioning and parameterization software AIPEX PRO (inclusive Company/Institute license)
1		USB cable with ferrite core
1		RACING KIT training for 2 people
1		10 hours support by phone or email

Version	Price
<b>RACING KIT 4WD + Spare/Test Bench KIT 2WD</b>	39.400,00 €
<b>RACING KIT 4WD + Spare/Test Bench 2WD inclusive AMKmotion Sponsoring</b>  In order to purchase the Sponsoring Kit, all points must be accepted! The conditions for the Sponsoring Kit remain in place for as long as long as the devices in the Sponsoring Kit are used.  AMKmotion Sponsoring requires the following conditions: <ul style="list-style-type: none"> <li>• AMKmotion logo on the motor</li> <li>• AMKmotion logo on the car, in the front area (on both sides or on the top)</li> <li>• AMKmotion logo on the team-website</li> <li>• AMKmotion logo on the outer clothing</li> <li>• AMKmotion will may call itself as “Team Sponsor”</li> <li>• Naming AMKmotion as manufacturer of the motors and inverter as well as the motor and inverter description in the car description/program booklet</li> </ul>	30.340,00 €


## Available Spare Parts

### Spare / Test Bench KIT 2WD

Piece	Illustration	Description
1		2 independently operating inverters including the special firmware FSE, mounted on a liquid cooled plate.
2		Performance and weight optimized 10 pole synchronous servo motor with motor encoder system.


Version	Price
Spare / Test Bench KIT 2WD	on request
Special promotion, valid for owners of a RACING KIT	

### Spare Inverter 2WD

Piece	Illustration	Description
1		2 independently operating inverters including the special firmware FSE, mounted on a liquid cooled plate.

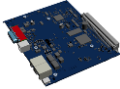
Version	Price
Spare Inverter 2WD	on request
Special promotion, valid for owners of a RACING KIT	

### Spare Motor

Piece	Illustration	Description
1		Performance and weight optimized 10 pole synchronous servo motor with motor encoder system.

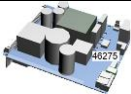
Version	Price
Spare Motor	on request
Special promotion, valid for owners of a RACING KIT	

## Spare Controller Card

Piece	Illustration	Description
1		KW-R25-CAN with CAN terminating resistor (Termination resistor can be desoldered)

Version	Price
Spare Controller Card KW-R25-CAN with CAN terminating resistor	on request
Special promotion, valid for owners of a RACING KIT	

## Spare Power Supply 24 VDC

Piece	Illustration	Description
1		KW-V24 Power Supply

Version	Piece
Spare Power Supply KW-V24	on request
Special promotion, valid for owners of a RACING KIT	