

## BLDC-Motors



# WE GET IDEAS MOVING

The spirit of innovation and a sense of ideas beyond the familiar has made us into a pioneering company over more than 185 years.

For a quarter of a century, we have been offering customized drive solutions for office and workplace workstations, as well as for shading systems and building technology.

Through our tradition of innovation, we have succeeded in establishing ourselves as a specialist and problem-solver in numerous areas.

# THE RIGHT PRODUCT FOR EACH APPLICATION

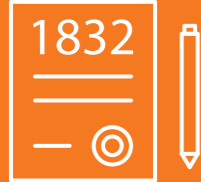
## BLDC-Motors

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Over 185 years' experience



More than 60 standard solutions for four different market segments



100% Made in Black Forest



# t-Rex-I-44-89 3200



## Description

14-pol BLDC engine with high-performance neodymium magnets, also equipped with two analog hall sensors to detect the rotor position. The electrical connections are designed as a plug-in system, while additional power electronics are required to operate the motor. One model has a hollow shaft. That gives you the chance to bring some media (liquid, air, ...) through the motor to the front side. The second model is equipped with a shaft, with the chance to adapt the movement on both sides of the motor.

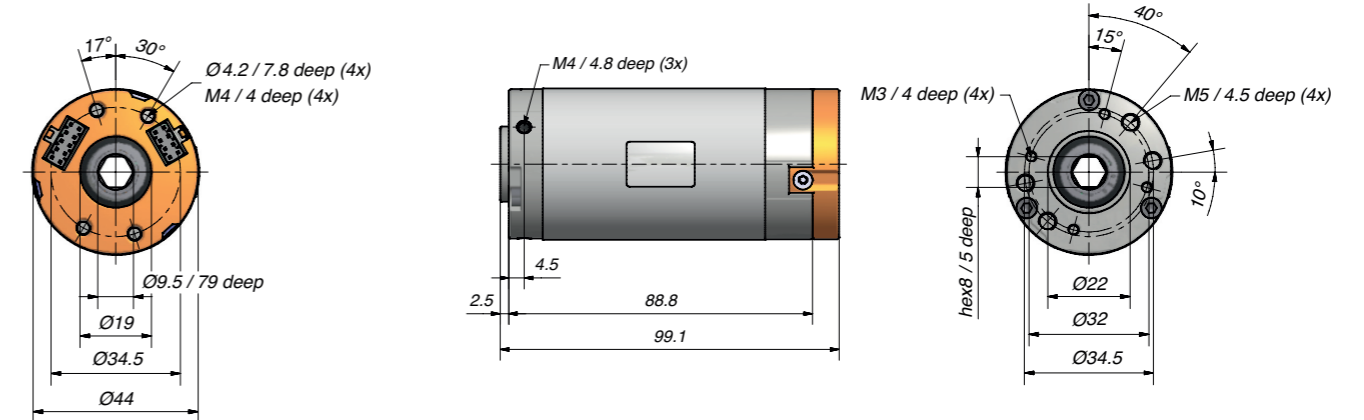
## Special features

- Designed for high torque
- Excellent overload resistance
- Optimal as a direct-drive system or a generator for gearless applications
- On request, can be manufactured with other windings
- A precise design and production of the engine at a given operating point is also possible

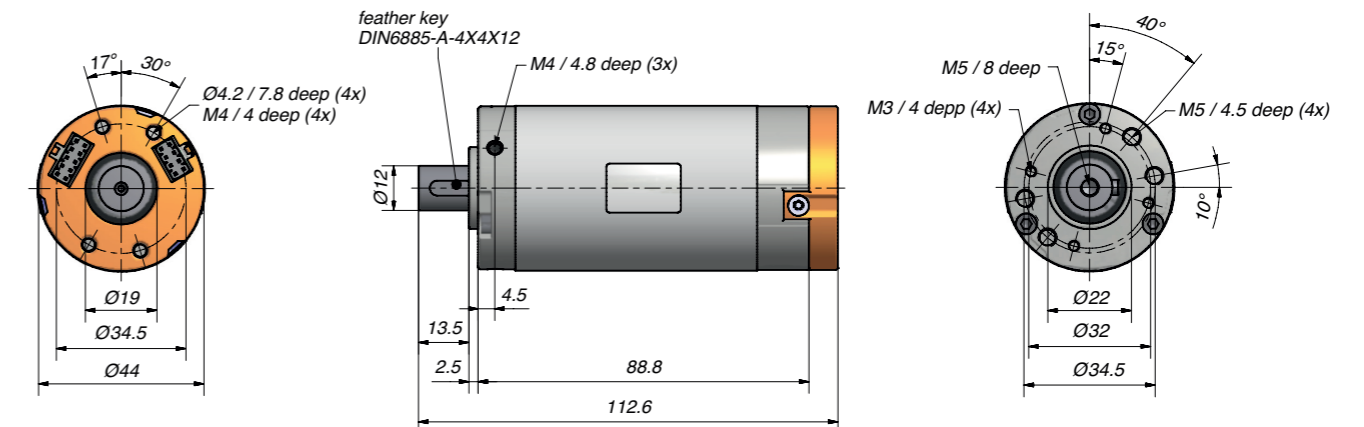
## Technical data

Model	3200.00-0002/0003
<b>Voltage range</b>	12 V to 48 V
<b>Rated voltage</b>	36 V
<b>Rated current</b>	2.5 A
<b>Rated torque</b>	0.55 Nm
<b>Rated speed</b>	1,100 rpm
<b>Rated power (output)</b>	65 W
<b>Max. efficiency</b>	74 %
<b>Idle speed</b>	1,350 rpm
<b>Starting torque</b>	2.1 Nm

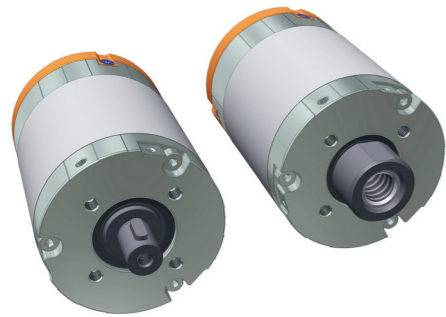
3200.00-0002



3200.00-0003



# t-Rex-I-65-86 3206



## Description

14-pol BLDC engine with high-performance neodymium magnets, also equipped with two analog hall sensors to detect the rotor position. The electrical connections are designed as a plug-in system, while additional power electronics are required to operate the motor. The motor axis is alternatively designed as a hollow shaft or as a normal motor shaft. Type 0002 is equipped with a Tr14x3 RH nut, which allows a spindle to be guided linearly through the motor.

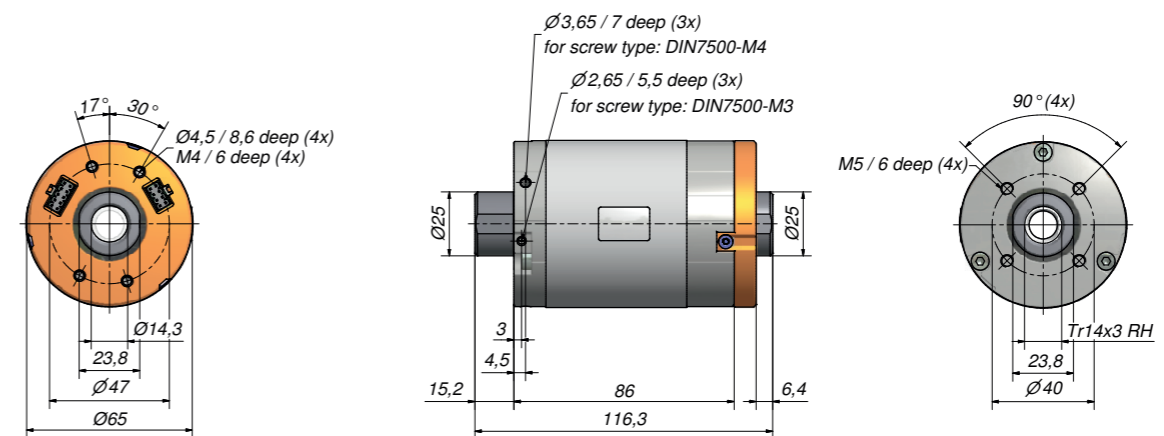
## Special features

- Designed for high torque
- Excellent overload resistance
- Optimal as a direct-drive system or a generator for gearless applications
- On request, can be manufactured with other windings
- A precise design and production of the engine at a given operating point is also possible

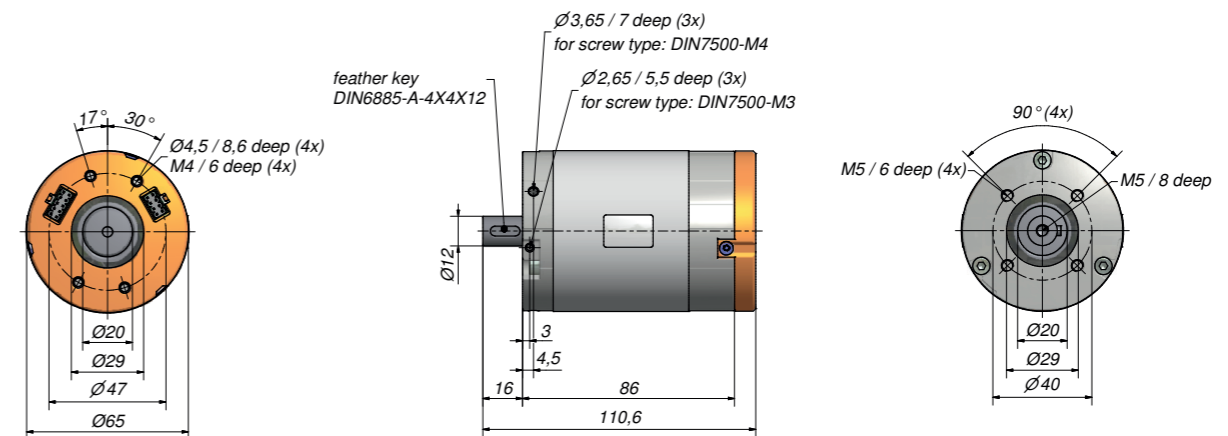
## Technical data

Model	3206.00-0001	3206.00-0002
<b>Voltage range</b>	12 V to 48 V	12 V to 48 V
<b>Rated voltage</b>	36 V	36 V
<b>Rated current</b>	4.5 A	4.5 A
<b>Rated torque</b>	1.5 Nm	1.5 Nm
<b>Rated speed</b>	900 rpm	900 rpm
<b>Rated power (output)</b>	140 W	140 W
<b>Max. efficiency</b>	89%	89 %
<b>Idle speed</b>	1,050 rpm	1.050 rpm
<b>Starting torque</b>	6.2 Nm	6.2 Nm
<b>Spindle nut</b>	Tr14x3 RH	-
<b>Infeed of the nominal point</b>	45 mm/s	-
<b>Feed force</b>	1,000 N	-

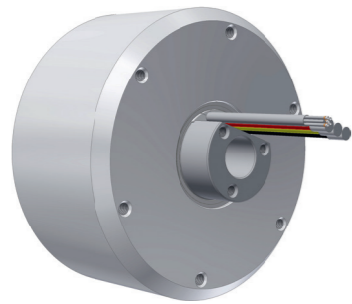
3206.00-0001 with spindle nut



3206.00-0002 with shaft



# i-Rex-A-130-70 3207



## Description

The 32-pole BLDC outrunner motor with its compact design is perfectly suited for a direct drive. It can achieve torques of up to 13 Nm, even in continuous operation. The stable bearing allows for high radial loads.

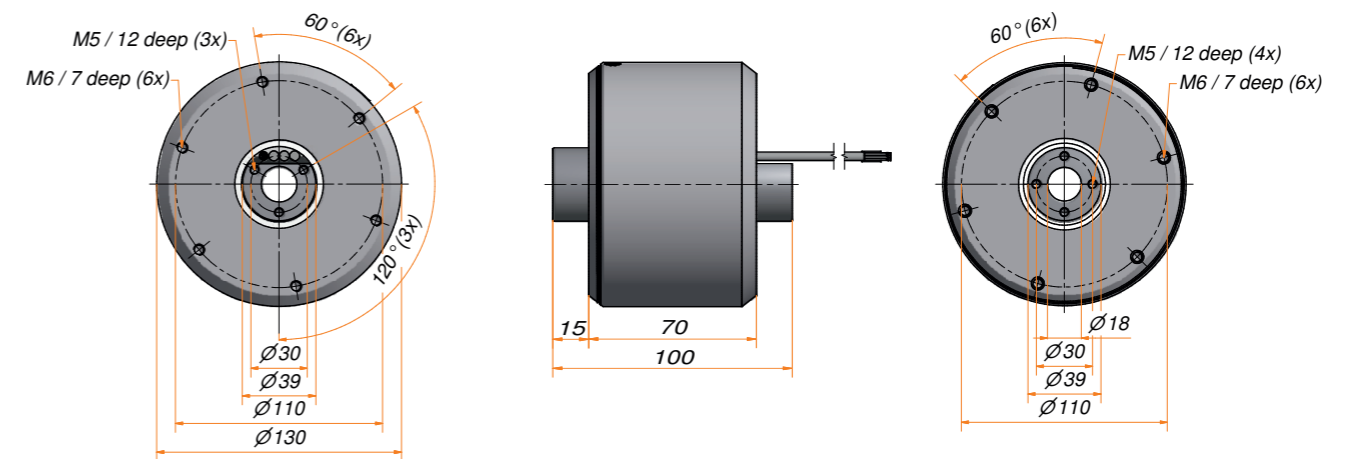
## Special features

- The motor is attached via the fixed center axle, which protrudes from one or both sides
- The continuous hollow axle allows for media and lines to be passed through the motor
- With a coating that is applied directly on the outer diameter, a wheel hub drive with a diameter of 170 mm can be achieved

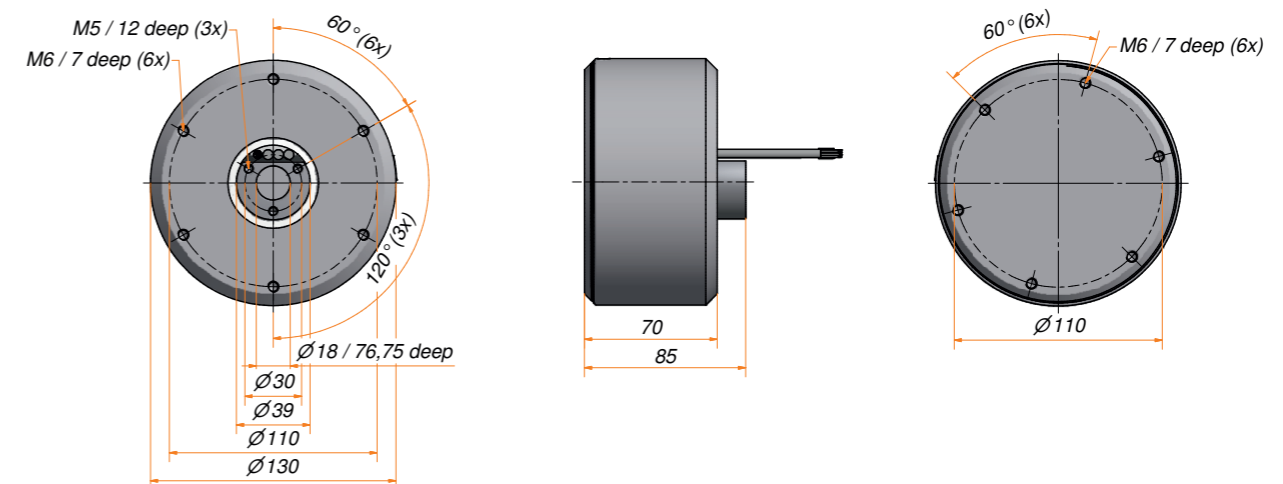
## Technical data

Model	3207.48-0001/-0010		
<b>Voltage range</b>	12 V to 48 V	12 V to 48 V	12 V to 48 V
<b>Rated voltage</b>	24 V	36 V	48 V
<b>Rated current</b>	14 A	14 A	14 A
<b>Rated torque</b>	6 Nm	6 Nm	6 Nm
<b>Rated speed</b>	460 rpm	700 rpm	960 rpm
<b>Rated power (output)</b>	290 W	450 W	600 W
<b>Max. efficiency</b>	94 %	90 %	90 %
<b>Idle speed</b>	680 rpm	1.000 rpm	1.350 rpm
<b>Starting torque</b>	18 Nm	18 Nm	18 Nm

3207.48-0001



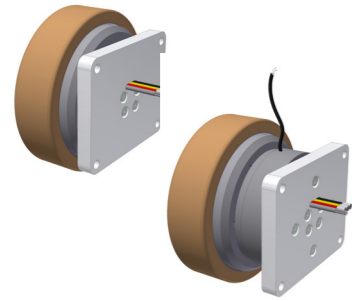
3207.48-0001



# i-Wheel-A-170-73 3213

## Description

The gearless external rotor motor guarantees smooth running and cuts an impressive figure with its small size. The high-torque external rotor motor is fully integrated into the hub. The Vulkollan coating is suitable for heavy-duty applications.



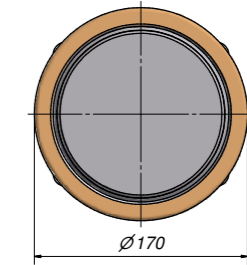
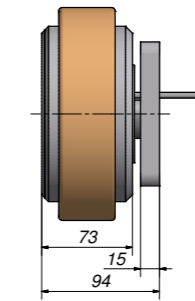
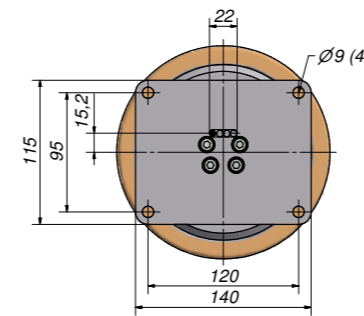
## Special features

- The drive has a very small overall depth, allowing users a tremendous amount of creative freedom when designing the layout of vehicles
- The wheel drive is available with or without a brake
- The flange plate can be individually adapted to suit your requirements
- It is possible to customize the drive

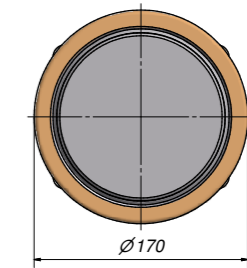
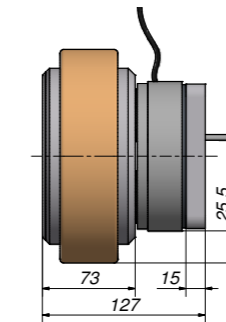
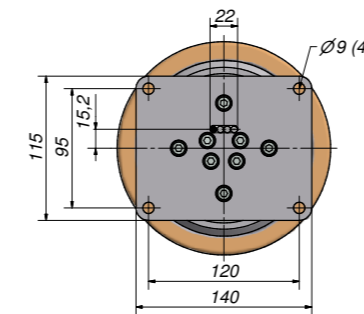
## Technical data

Model	3213		
Rated voltage	24 V	36 V	48 V
Rated current	14 A	14 A	14 A
Rated torque	6 Nm	6 Nm	6 Nm
Rated speed	460 rpm	700 rpm	960 rpm
Rated power (output)	290 W	450 W	600 W
Max. efficiency	94 %	90 %	90 %
Idle speed	18 Nm	18 Nm	18 Nm
Coating of tyres	Vulkollan 93° Shore A	Vulkollan 93° Shore A	Vulkollan 93° Shore A
Max. radial axle load $F_r$	2,500 N	2,500 N	2,500 N
Max. axial axle load $F_a$	800 N	800 N	800 N
Weight	5.7 Kg	5.7 Kg	5.7 Kg
<b>Brake optional</b>			
Braking force	36 N	36 N	36 N
Power supply	24 V / 22 W	24 V / 22 W	24 V / 22 W
Weight	2.5 Kg	2.5 Kg	2.5 Kg

3213



3213 with brake



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