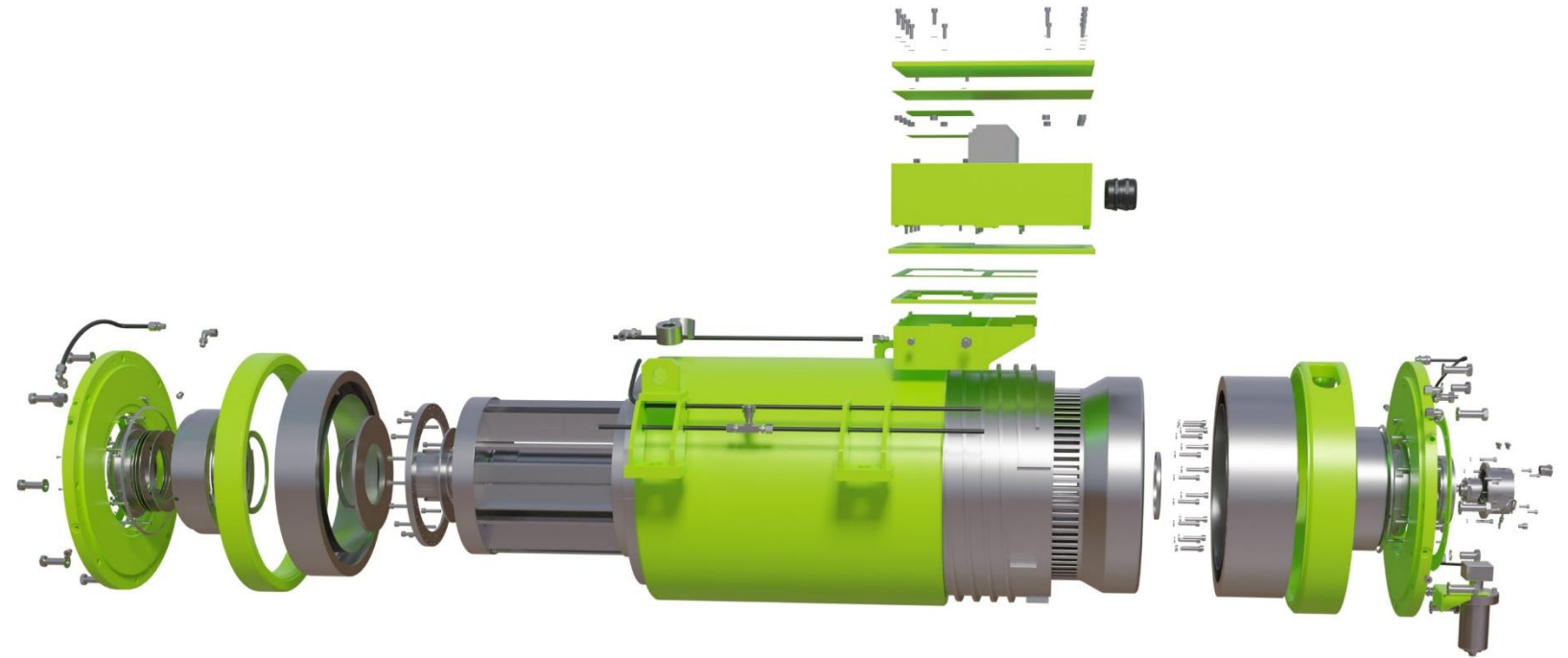


***Drives for a
Green Future***

From Prototype to Series

1. Presentation
2. Target Markets
3. Complete Service
4. Example Projects
5. Product Portfolio
6. Contact Persons



1. Presentation



CEDS DURADRIVE

Founded in 1970 as “SSB Antriebstechnik”

Your contact for custom requirements with over 50 years of experience

Over 110 employees design and produce drive solutions in Salzbergen

We produce drives for the wind industry, mechanical engineering, lifting technology industry and the aerospace/defence sector across the globe

2.

Target Markets

2. Target Markets

Presentation

Target Markets

Complete Service

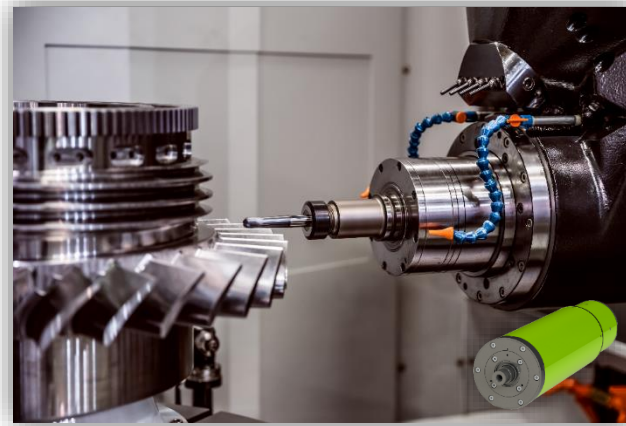
Example Projects

Product Portfolio

Contact Persons



RENEWABLE ENERGIES



MACHINE TOOLS



AEROSPACE/DEFENCE



LIFTING TECHNOLOGY



MARINE SHIP ENGINEERING



TRANSPORT ENGINEERING

3



Complete Service





Our services:



Consulting:

- Optimisation of performance data for the drive
- Optimisation of performance in relation to installation space
- Over 50 years of experience
- Analysis of technical requirements and coordination of your project requirements
- Development and presentation of the specifically best solution by our development team

- 50 years of development expertise
- Mechanics
- Electrics
- Electronics
- Development test rigs
- 3D printing

Development:

In-house development of:

- Motor and drive systems
- Generators
- Gearboxes and gearbox combinations

- 50 years of manufacturing expertise
- CNC machining centres
- Latest balancing technology
- Extensive test stands

Manufacturing:

- Custom manufacturing possibilities in a space measuring over 15,000 m²
- From prototypes to series production

Great manufacturing depth:

- Machining technology
- Winding facility
- Installation
- Assembly
- Prototype test stands
- Batch testing facilities



Quality Management

- DQS-certified quality management system
- DIN EN ISO 9001:2015
- DIN EN ISO 9100:2018 – **from 11/2023**
- Own test laboratories and test facilities
- Manufacturing according to ATEX product directive 94/9/EC
- UL certification pending

Test facilities and scope (extract)



Department	Prototype testing	Series testing	QM
Function	Test stand 1 Loading measurement: - 29 kW / 4,000 rpm (max. 5,000 rpm) - 70 Nm (max. 140 Nm)	Vogelsang und Benning No load measurement	Zeiss MC 850 3D measurement
	Test stand 2 Loading measurement: - 128 kW / 4,000 rpm (max. 6,000 rpm) - 305 Nm (max. 400 Nm)	Schwahn No load measurement	Zeiss Duramax 3D measurement
	Test stand 3 Loading measurement - 475 kW / 2,510 rpm (max. 6,000 rpm) - 1800 Nm (max. 2,400 Nm)		Faro Gage Plus 3D measurement
Measuring possibilities	Output measurement (electrical & mechanical) No load measurement Vibration measurement Temperature recording Sound pressure measurement Insulation measurement Resistance measurement Inductivity measurement Rotary transducer testing	No load measurement High-voltage testing Insulation measurement Resistance measurement Inductivity measurement Rotary transducer testing Vibration measurement	Length measuring unit
Special features	Universal converter also for magnet rotor up to 500 A or 1,000 A bei Asynchronmasch.		
	Variable transformer: 127 - 620 V, 50 Hz, 190 A		
	Rotating converter: 0 - 180 V, 0 - 50 Hz, 200 A		
	Recooling system		

Technical Service:

- Transparent processing
 - Flexibility
 - Optimisation/repowering
- Inspection, maintenance and repair
 - On-call service for mechanics, electrics and electronics
 - Effective rapid help from experienced service technicians for maximum system availability
 - Extensive range of spare parts
 - Commissioning and recommissioning of complete systems

4

Example Projects

CEDS Asynchronous Generator

Project description:

The aim of this project was to develop a generator for a hybrid system in a straddle carrier. The level of efficiency needed to be as high as possible to achieve appropriate fuel savings for the port operator.

Solution: CEDS asynchronous generator



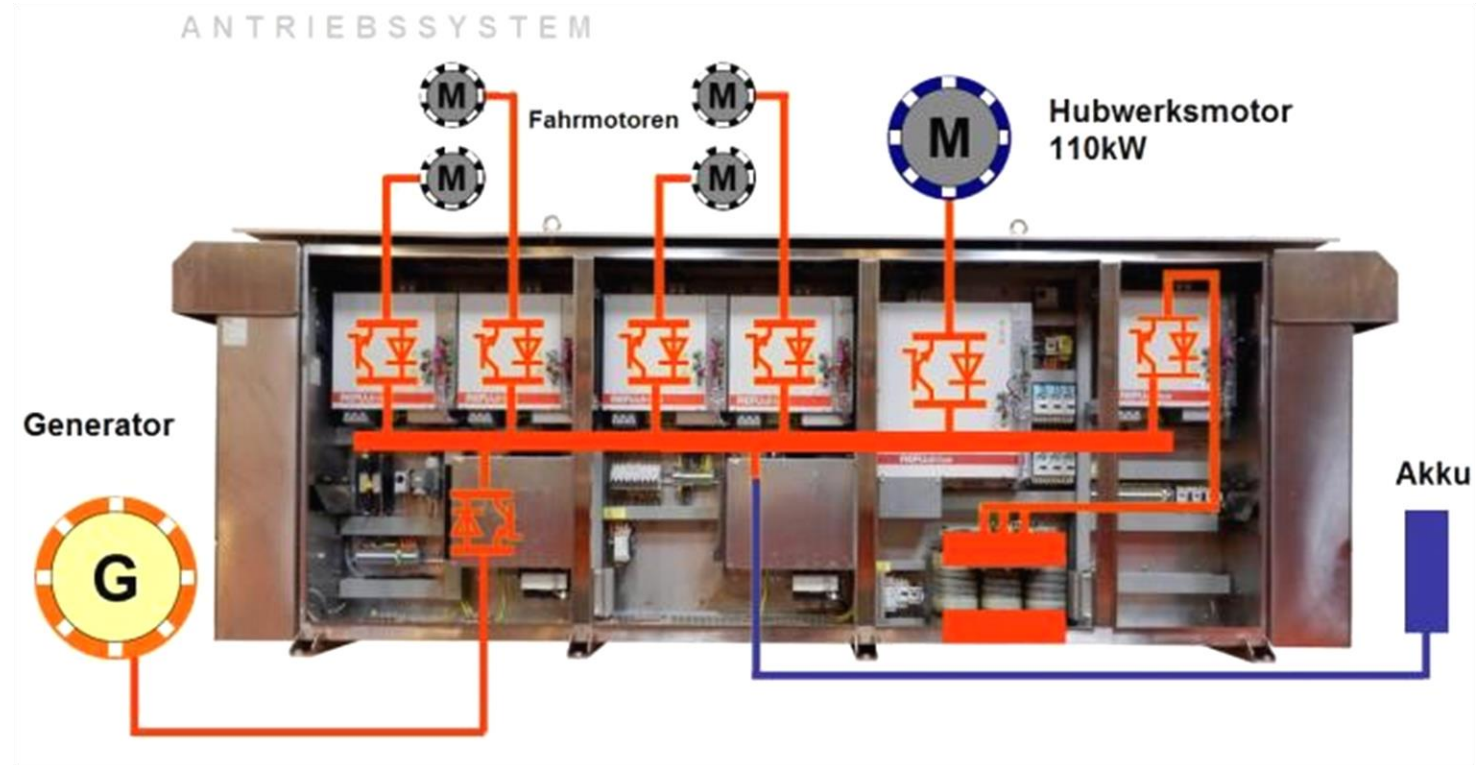
Type designation	DOEI-1232.04887.00
Type of operation	S1
Rated power	90 kW
Rated torque	638 Nm
Rated speed	Nominal speed: 1,440 rpm
Winding	420 V / 47.4 Hz
Rated current	146 A
Cooling	IC11 (self-ventilating)
Protection type	IP 23
Efficiency	93.0%

CEDS Asynchronous Generator



Application areas:

- Straddle carrier hybrid system



The generator supplies the energy via a converter to the intermediate circuit and, in this way, can be run at the best operating point to reach maximum output.

Thanks to the one-sided bearing and the corresponding flange design, we were able to develop a compact self-ventilating machine.

The measurements during operation confirm a fuel saving of 20%.

CEDS Torque Assembly



Project description:

The aim of this project was to achieve both a high rated torque in the limited installation space and a large inner diameter without changing the stator outer diameter.

Solution: CEDS torque assembly

A high peak torque could reduce the acceleration and braking times in the customer’s highly dynamic processing centre.

Application areas:

- Processing centre

Type designation	BFSDP-1813.132326.00
Type of operation	S1
Rated power	48.8 kW
Rated torque	4,660 Nm
Rated speed	Nominal speed: 100 rpm Max. speed: 225 rpm
Winding	358 V / 110 Hz
Rated current	121 A
Cooling	IC71W (water-cooled)
Protection type	IP 00

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Product Portfolio



Our Range

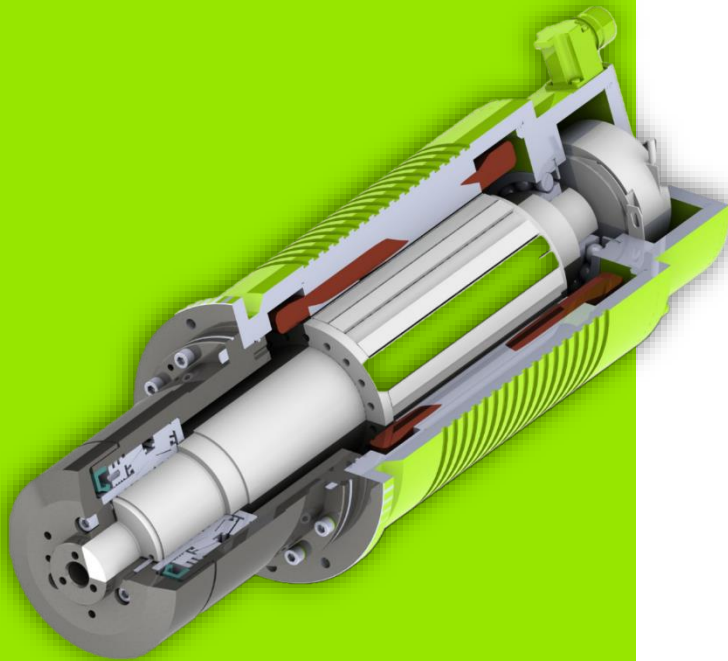
Manufactured size:	up to outer diameter 1.2 m
Output:	according to requirements
Torque:	up to 20 kNm
Speed:	according to requirements
Voltage range:	up to 690 VAC
Torque density:	very high

As external and internal rotor, mostly liquid-cooled

- Low cogging torque
- High speed stability
- Very compact as assembly and highly integrable
- Permanent magnet (NdFeB)



Our Range

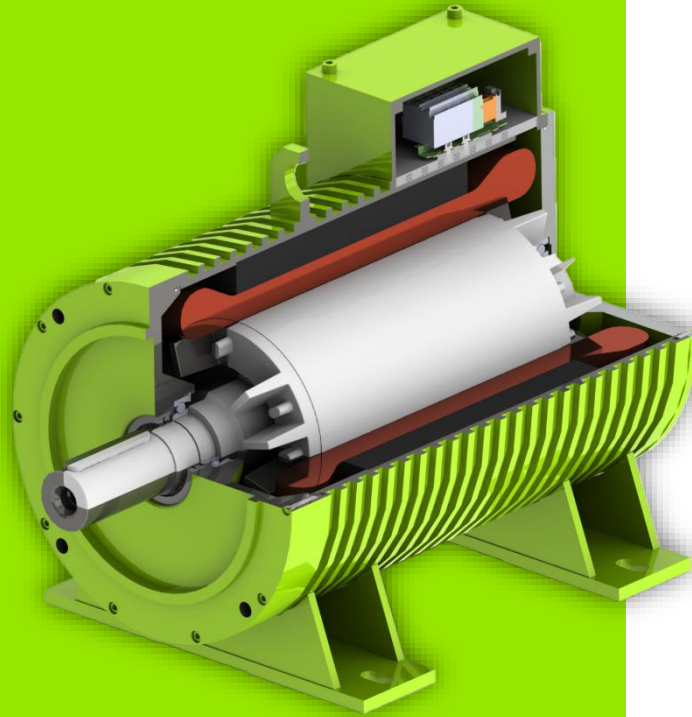


Manufactured size:	IEC standard to Transnorm
Output:	up to 1 MW
Torque:	up to 18 kNm
Speed:	up to 60,000 rpm
Voltage range:	up to 690 VAC
Power density:	high
Efficiency:	up to 97%

As external and internal rotor; self-cooling, fan-cooled or liquid-cooled

- High speed stability and positioning accuracy as well as best acceleration performance
- Highly compact as assembly and highly integrable
- Permanent magnet (NdFeB/SmCo)

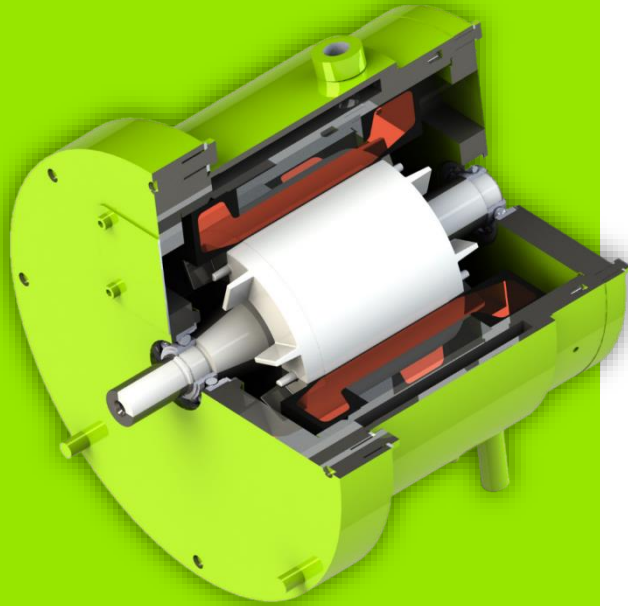
Our Range



Manufactured size:	IEC standard to Transnorm
Output:	up to 100 kW
Torque:	up to 800 Nm
Speed:	up to 15,000 rpm
Voltage range:	up to 690 VAC
Power density:	high
Efficiency:	up to 97%

As external and internal rotor; self-cooling, fan-cooled or liquid-cooled

- High speed stability
- With cage winding that can be operated directly from mains
- Permanent magnet (NdFeB/SmCo)



Our Range

Manufactured size:	IEC standard to Transnorm
Output:	up to 750 kW
Torque:	up to 4,000 Nm
Speed:	up to 30,000 rpm
Voltage range:	up to 690 VAC
Power density:	medium
Efficiency:	up to 97%

As external and internal rotor; self-cooling, fan-cooled or liquid-cooled

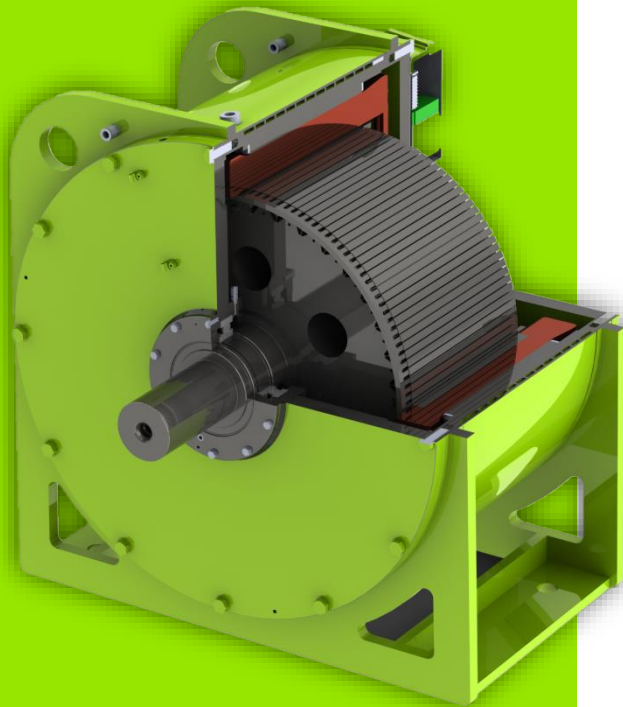
- No magnets
- High overload capacity
- Mains operated or via frequency converter
- Operation possible without speed sender

Our Range

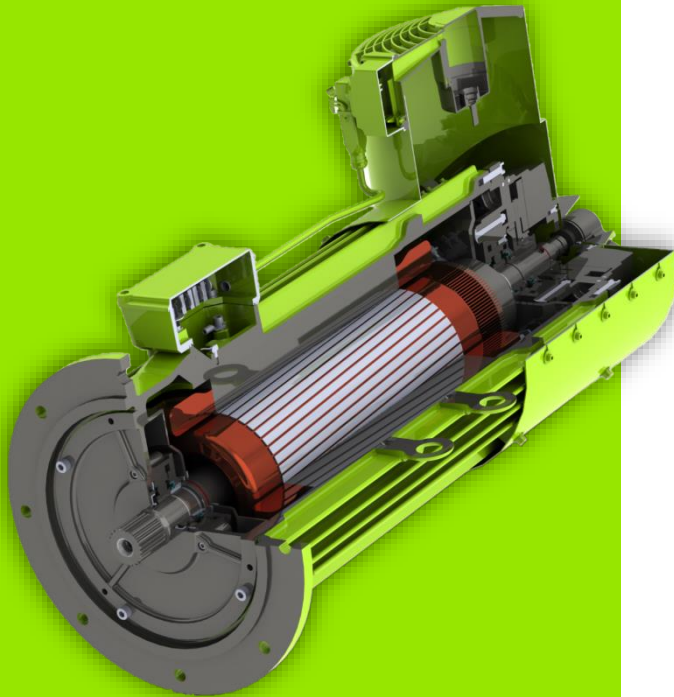
Manufactured size:	IEC standard to Transnorm
Output:	up to 500 kW
Torque:	up to 15,000 Nm
Speed:	up to 1800 rpm
Voltage range:	up to 690 VAC
Torque density:	high
Efficiency:	>97%
Power factor:	~ 1

Self-, fan- or liquid-cooling

- High efficiency
- Stable speed
- Operation possible on converter or directly on mains



Our Range



Manufactured size:	IEC standard
Output:	up to 20 kW
Torque:	up to 150 Nm
Speed:	up to 3,000 rpm
Voltage range:	up to 500 VDC
Power density:	medium
Efficiency:	up to 90%

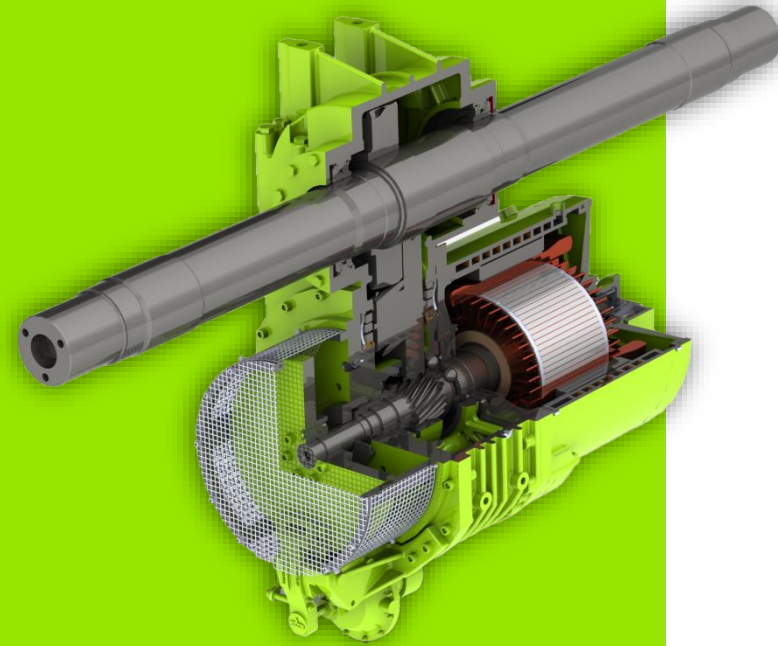
Electrically or permanent-magnet excited; self-, fan- or liquid-cooling

- Operation on converter
- Emergency running with battery possible

Our Range

Torque: up to 20,000 Nm
Efficiency: up to 98%

- Long life (20 years and longer) or long maintenance intervals (10 years)
- Reinforced bearings
- Protection classes for rough conditions
- Output shaft(s) according to customer requirements
- Free configuration of gear reduction/transmission



Our Range

Certifications: UL / ATEX / DNV GL / LR / Bureau Veritas

Other technologies: Complete drives
(motor/gearbox combinations)

Protection type: up to IP68

Special features: high manufacturing depth, fast and flexible



6

■ **Contact Persons**



Get in touch

Sales: Ludger Kaiser
Service: Udo Poggemann
Design: Benedikt Haverland

Tel.: +49 5976 6449 0
E-mail: info@ceds-duradrive.de
Web site: www.ceds-duradrive.de



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