

BREUER) **MOTOREN**

Company Profile

Company since 1877

- Company: Breuer Motoren GmbH & Co KG, Germany
- Web: www.breuer-motoren.de
- Foundation: 1877



Oil & Gas: Drilling, on- and offshore, TopDrive, Mudpump, Drawwork, RotaryTable



Mining: Underground mining, mining, conveyors, coal plow



Industry: Test benches, diesel-electric, solutions, ventilation, Tunneling



Company since 1877

Technology

VFD: standardized and customized drives and drive systems up to 3600hp (up to 4,16kV)

Motor: motors and motors with built-in drives up to 2200hp



Company since 1877



Customer service 24/7

- Accessibility of the Breuer motors customer service 24/7 at:

+49 172 5693945 or

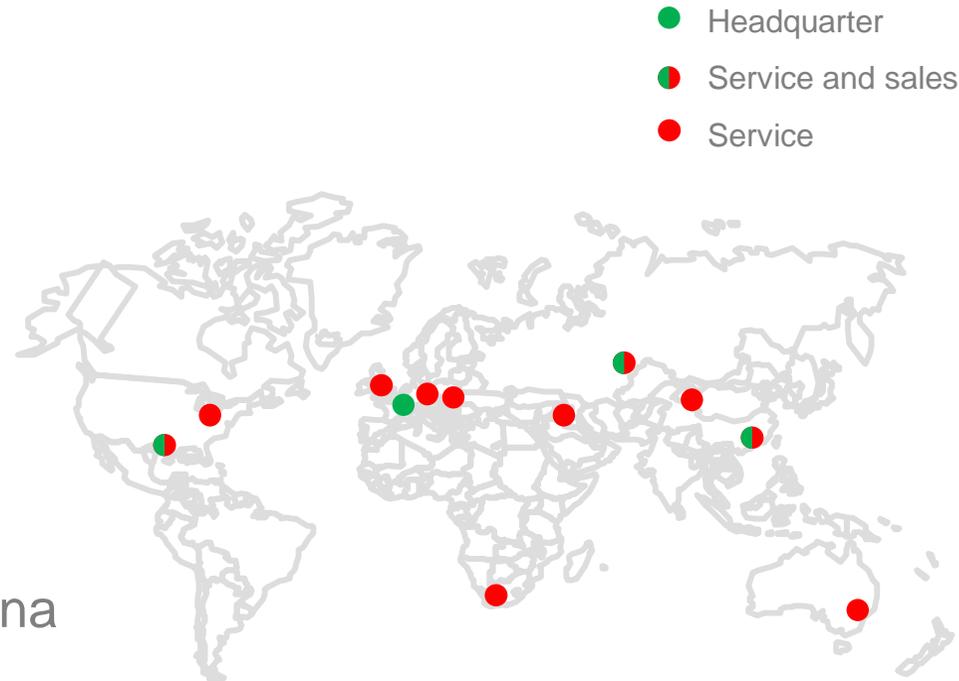
service@breuer-motoren.de

- Professional advice from technical / commercial qualified staff
 - Clarification and advice on technical issues
 - commissioning support
 - service
 - logistics



Company since 1877

- Bochum, Germany, Headquarter
- Novokuznetsk, Russia, Breuer Sibir
- Pittsburgh and Houston, USA
- Nottinghamshire, UK
- Baku, Aserbaijan
- Cleveland, South Africa
- Rybnik, Poland
- Ostrava, Czech
- Beijing and Ordos (Mongolia), China
- East Maitland, Australia



Proven solutions

According

- ISO 9001:2008 (Company)
- ATEX 100a (European explosion protection)
- UL / CSA / cUL (North American certification)
- IECex (electrical equipment for explosive atmospheres)
- GOST-R certification
- IEC/EN 60034 (Motor), IEC/EN 60079-0(Construction)
- IEC/EN 3834-3 (Bonding) and many more

Quality – Reliability

Availability - Flexibility

Proven and listed solutions



Products – Oil & Gas

Drives

Products – oil & gas - Drives

- **ecoVert** Series for Constant Torque and Variable Torque Applications
- Power range: 20 up to 3600hp
- Voltage range: 400V, 690V, 1140V (3,3kV, 4,16kV)
- Protection: IP21, IP23 or IP54 (or higher)



For tunneling machines

Products – oil & gas - Drives

Control part of VFD

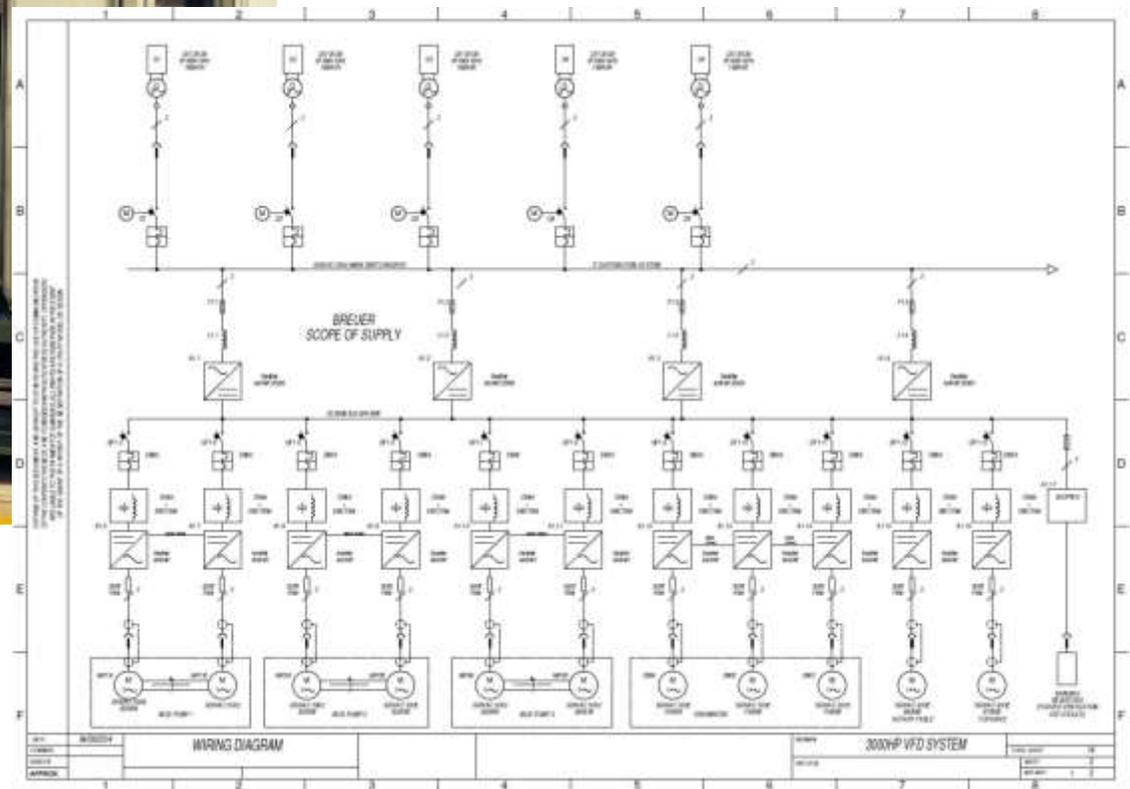
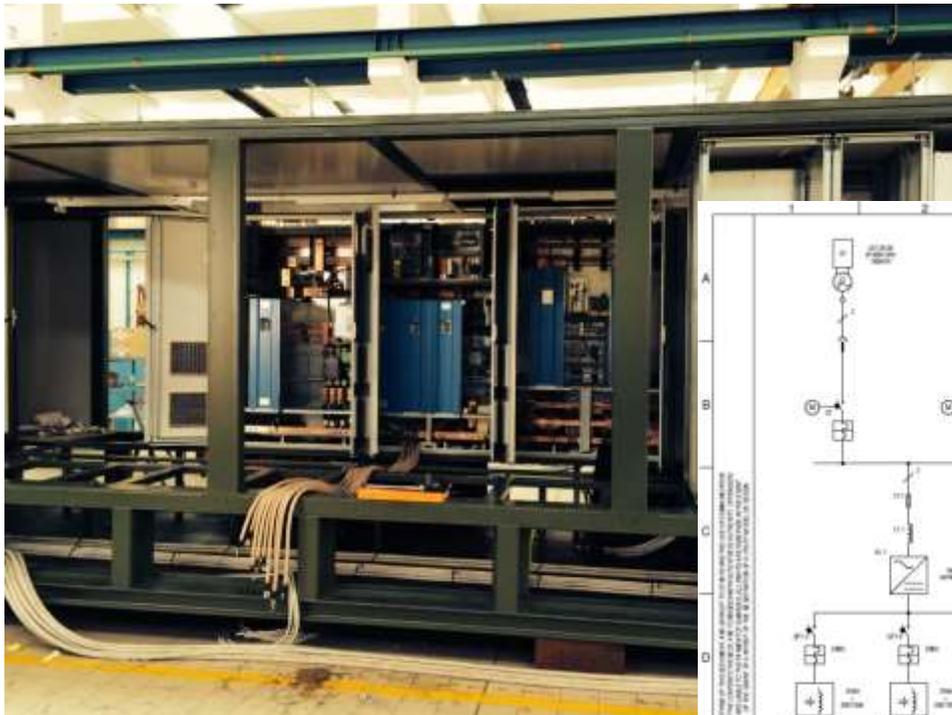
- Control via fiber optic cable
- Control unit optimized for Softtorque*
- Softpump included with or w/o Encoder
- For ASY and SYN motors
- One software: ecoWin, for programming, commissioning and archiving
- Customer part for own ideas
- Software blocks for Unbalancing, friction, service level, hoisting, Weight measuring, load balancing, traction control, etc.



*Shell Softtorque is a patented feature, certification together with Bentec, Germany

Products – oil & gas - Drives

Power Control Room and TopDrive Container concepts



Products – Oil & Gas

AC Motors

Products – oil & gas - Motors

Motor Advantages

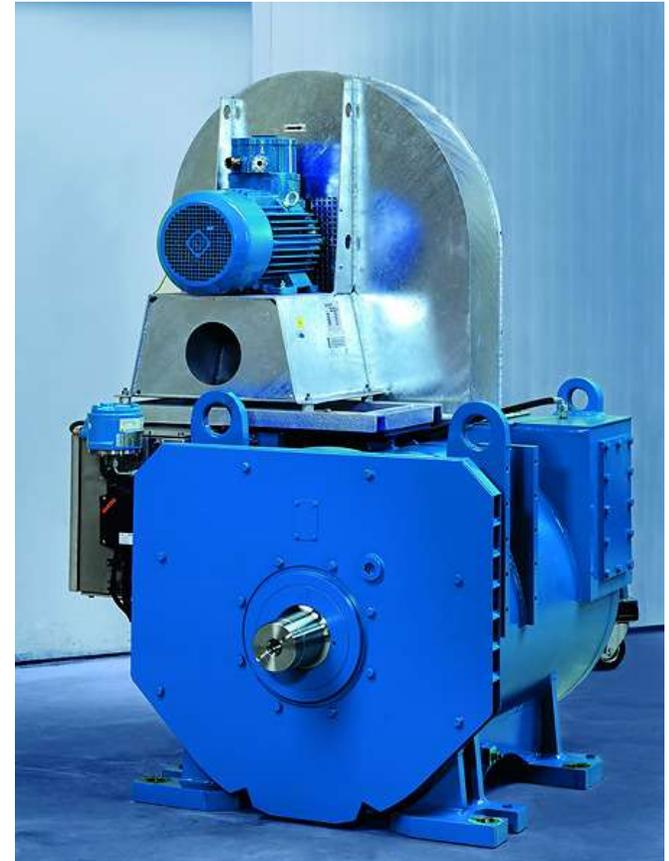
- Increased safety and explosion proofed motors (Ex e and Ex d) up to 2200 hp
- Ex e for ambient temperatures from -40°C up to +55°C in one design (w/o derating)
- LowNoise Motor and Blower
- Standard blower 85dBA-1m (with sound absorber 75dBA-1m)
- Blower motor prepared for VFD duty
- One Design for Drawwork and Mudpump duty (also belt driven DW)
- high quality shaft material 30CrNiMo8V
- Long life grease, for >40.000h in optimum condition



Products – oil & gas - Motors

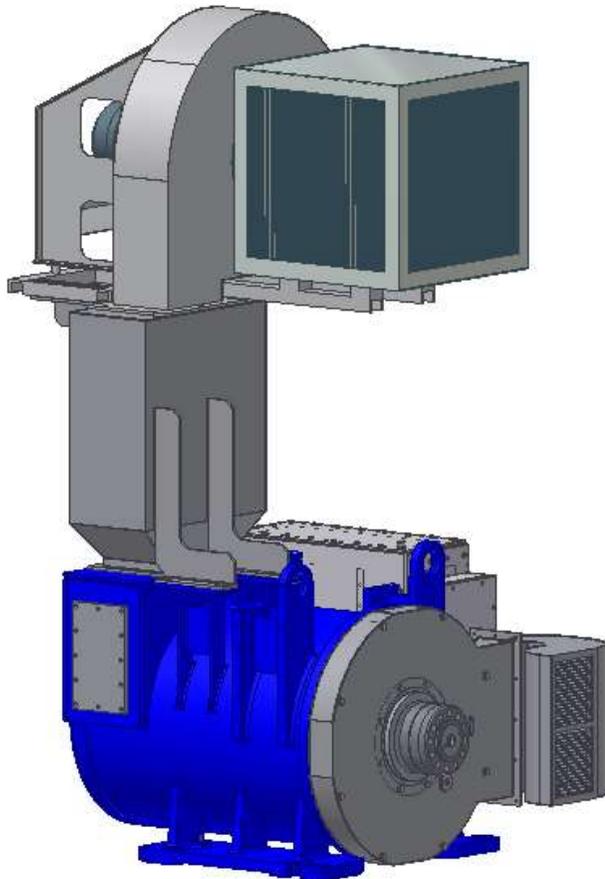
Motor Advantages

- Up to 20% less inertia than competition
- Up to 20% more torque than competition
- increased safety motor Ex II 2G EEx e II T3
- customization on request
- fully interchangeable with GEB20/22/28 (AC motor) or GE752 (DC motor)
- 10x platinum RTD and 6x PTC in winding and bearing for safe operation (redundancy)
- preparation for vibration monitoring
- Preparation for continuous isolation monitoring



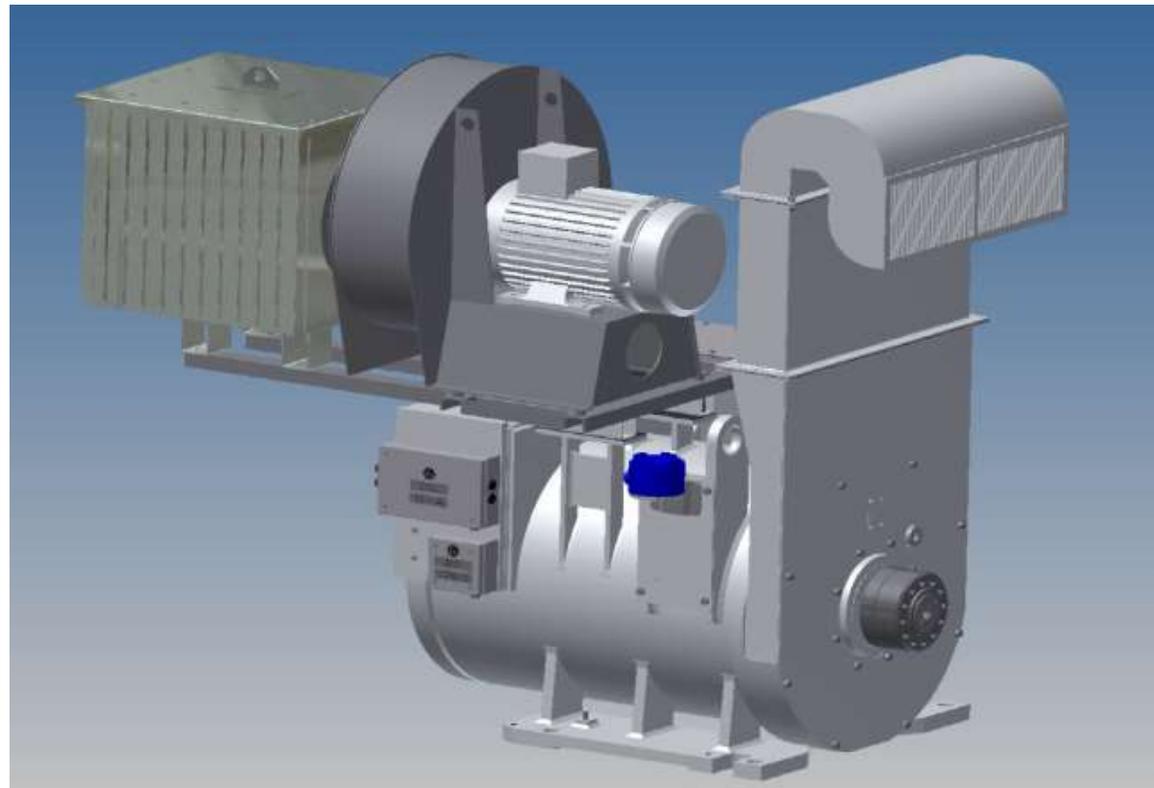
Products – oil & gas - Motors

Oil & Gas drilling motors, 815hp, 1150hp, 1600hp, 1800hp, 2000hp and 2200p



Products – oil & gas - Motors

Oil & Gas motors, 1200kW Mudpump motor with blower, water separator and goose neck or TEWAC motor IP56

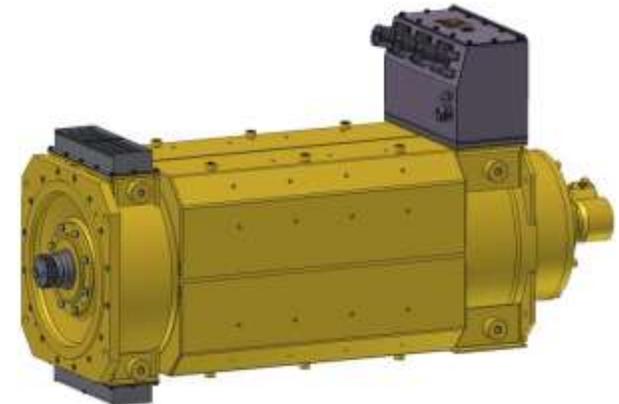


Products – oil & gas - Motors

TopDrive: 250T/350T/500T/750T/1000T classes,
Customized designs



- 300kW (400hp)
- 450kW (600hp)
- 500kW (680hp)
- 750kW (1000hp)
- 850kW (1150hp)
- 1200kW (1600hp)



Customer reference

Oil & Gas

Breuer oil & gas

- > 1000 motors in oil & gas drilling in operation
- > 250 TopDrives in operation
- > 15 years experience in drilling
- > 150 Rigs in operation with Breuer equipment
- > Made in Germany
- > Technical advantages
- > 24 month guarantee
- > Reliable quality
- > Continuous technical support



Customer references* oil & gas

BREUER MOTOREN

Customer listing "Oil & gas"

OEM	Contractor	EndUser
Aker Solutions	COFOR	Anadarko
Bauer Deep Drilling	Iceland Drilling	BP
Bentec	ITAG	Cepsa
Drillmec SpA	KCA Deutag	ENAFOR
Herrenknecht	MD Driling	ENI
Max Streicher	Pergemine	Exxon
PREP	PT Newtech	Hess Oil France
Tesco	RAG Austria	OMV
Cameron	RDB Erdöl Celle	PEMEX
T&T Engineering	Saxon	Repsol
	Schlumberger	RWE/DEA Group
	Todd Energy	Saipem
		Shell
		Sonatrach (Algeria)
		SOCAR
		Statoil
		Tatneft

Bochum, 18th of February 2015

*In 90% of all motors we only know the OEM customer. 95% of the products are labeled to the OEM name.

ONLY INTERNALLY

Applications – oil & gas

Oil & Gas drilling systems



- 1st motor in 2003 is still running
- Useable for onshore and offshore application
- 300kW (400hp) up to 1620kW (2200hp)
- air- or watercooled motors
- Mudpump / Drawwork / Rotary Table / Top Drive
- Proven three-phase asynchronous motors (Ex e II T3)



Applications – oil & gas

Oil & Gas drilling systems



- for artic & desert rigs (-40 to +55°C (131°F))
- LowNoise design
- no service needed in an interval of around 50.000h
- free customization and labeling



Products – Mining

Drives and AC motors

Products - Mining

Variable speed drives (VFD) and asynchronous motors

- >700 units in operation
- First sells in early 1997
- 10 – 1600 kW (100 – 4160 V)
- watercooled system
- VFM – Variable Frequency Motor
- High degree in protection, Shock and Vibration Resistant



dksWa50UM/2-4; 250kW



dksWa650UM/3-6 EN;
400kW

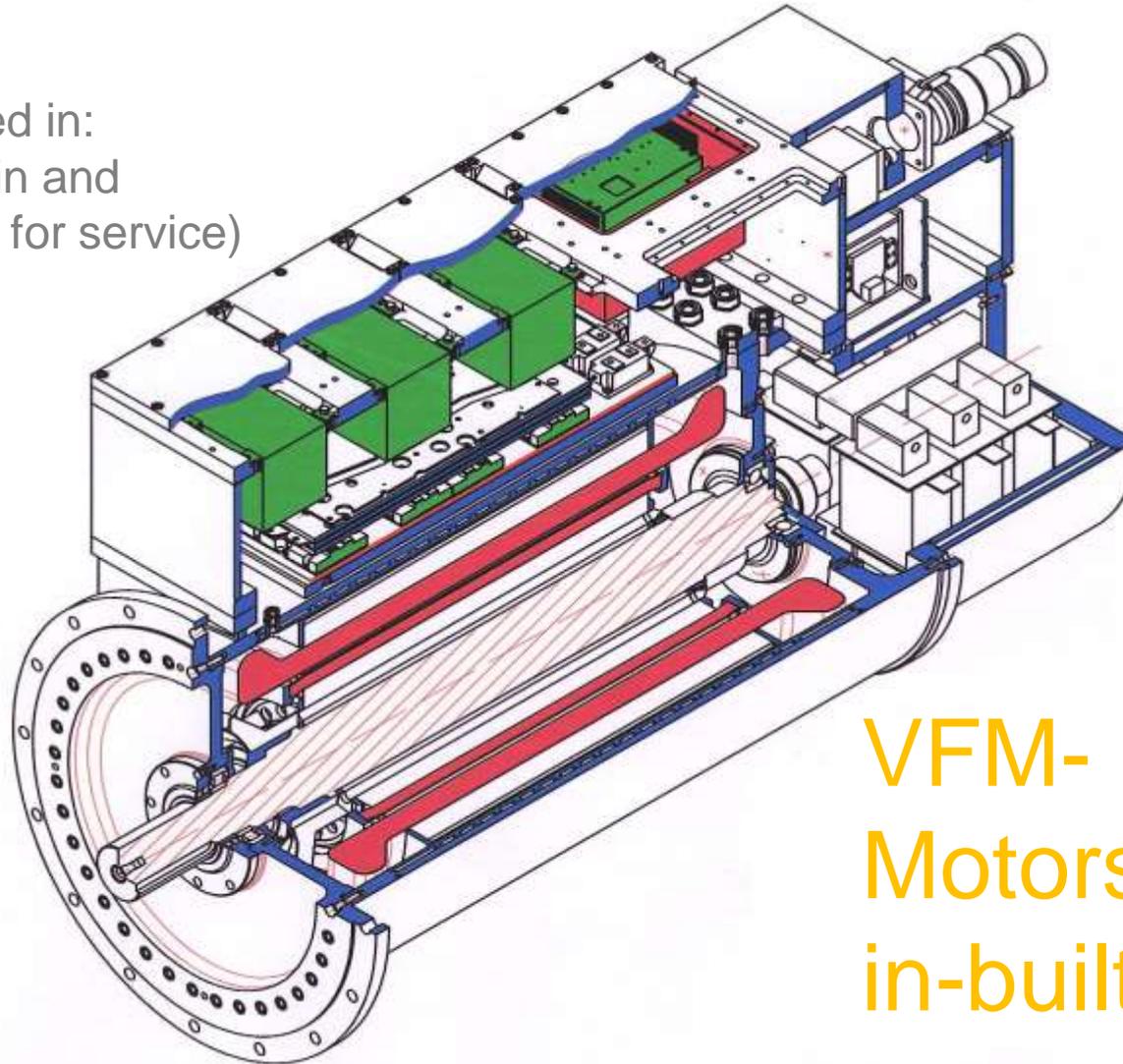


dksWa72UM/4-4; 1600kW

Products - Mining

Only connected in:

- Power (Main and 120V/230V for service)
- Bussystem
- Water



VFM-
Motors with
in-built Drives

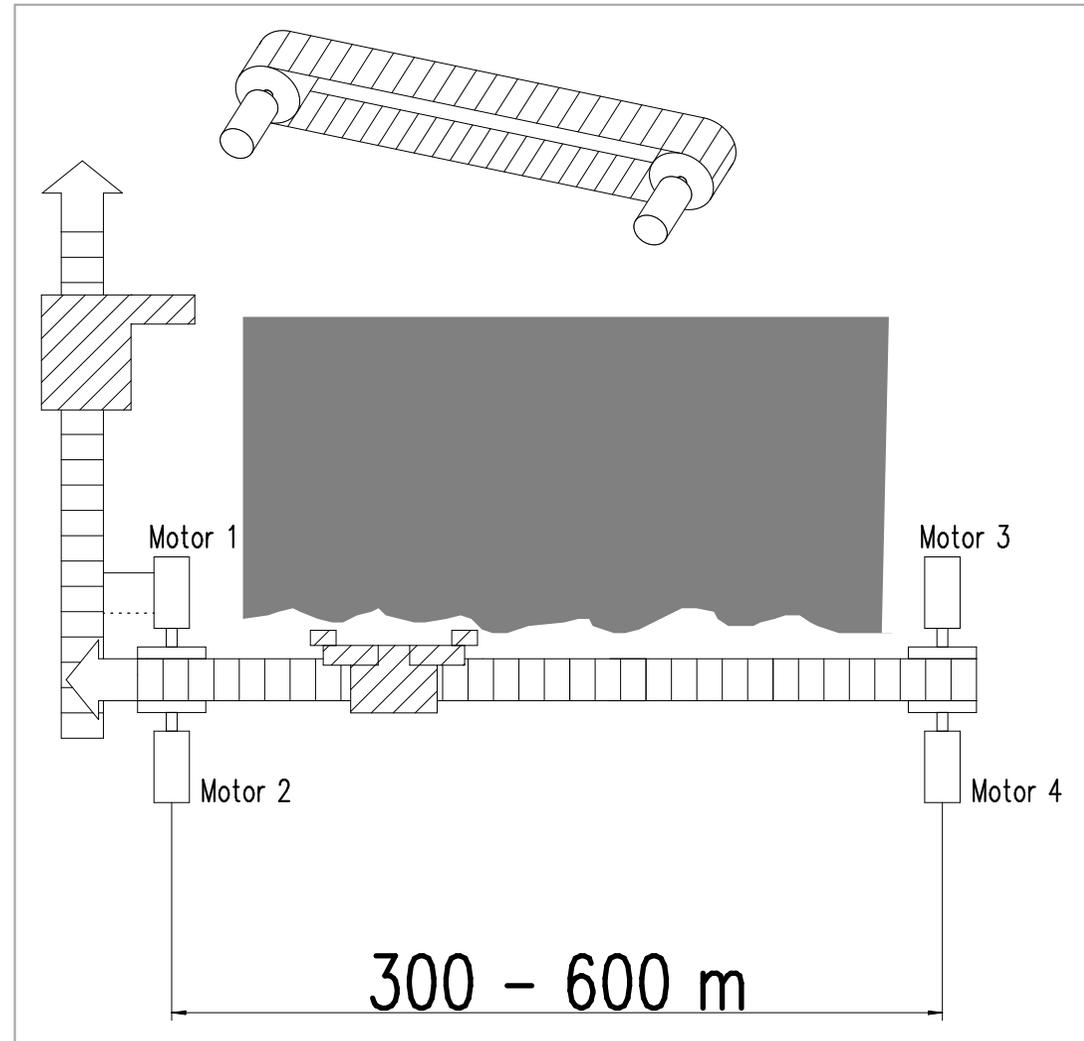
Applications – Mining

Applications - Mining

Plane and conveyor systems



800 kW, 1000V



Applications - Mining

Continuous Miner



VFD

Double Drive 2 x 42 kW, 1000 V

Traction motor 4000 U/min

Flameproof EEx d I housing for VFD and motor



Applications - Mining

Shearer

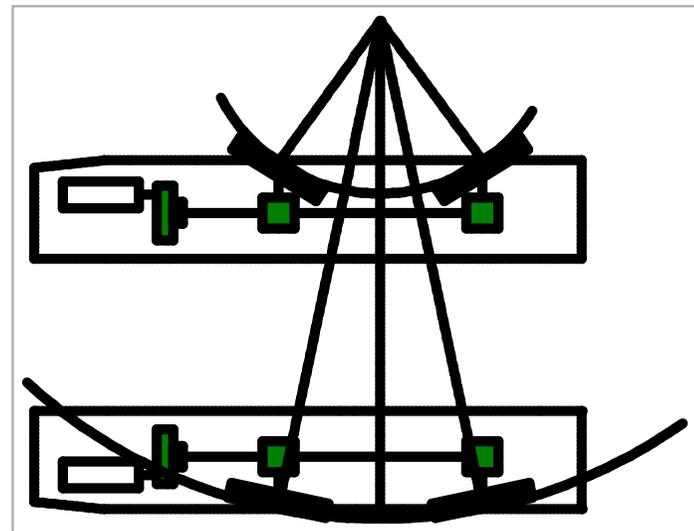
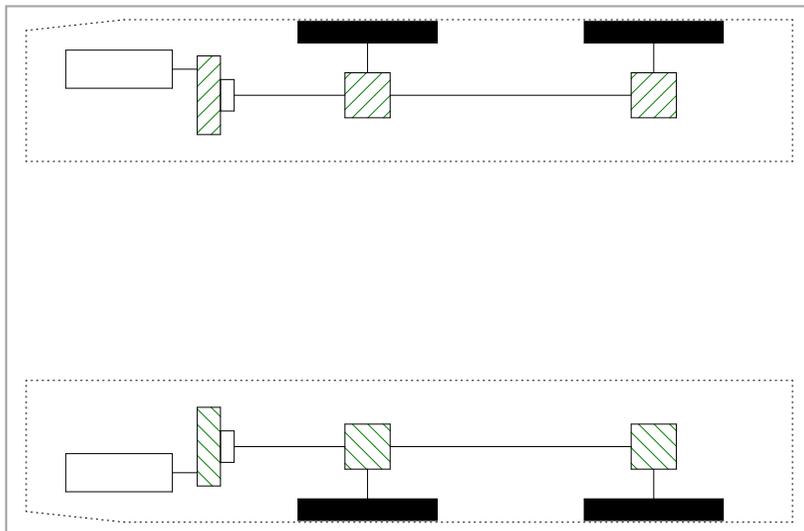


- Drive: 2x 125 kW + 1x 250 kW
- AFE in one housing, extremely
- Small design (only around half of industry VFD 460 V / 690 V (up to 1140 V possible))



Applications - Mining

Shuttle Car



BREUER) **MOTOREN**



Made in Germany!