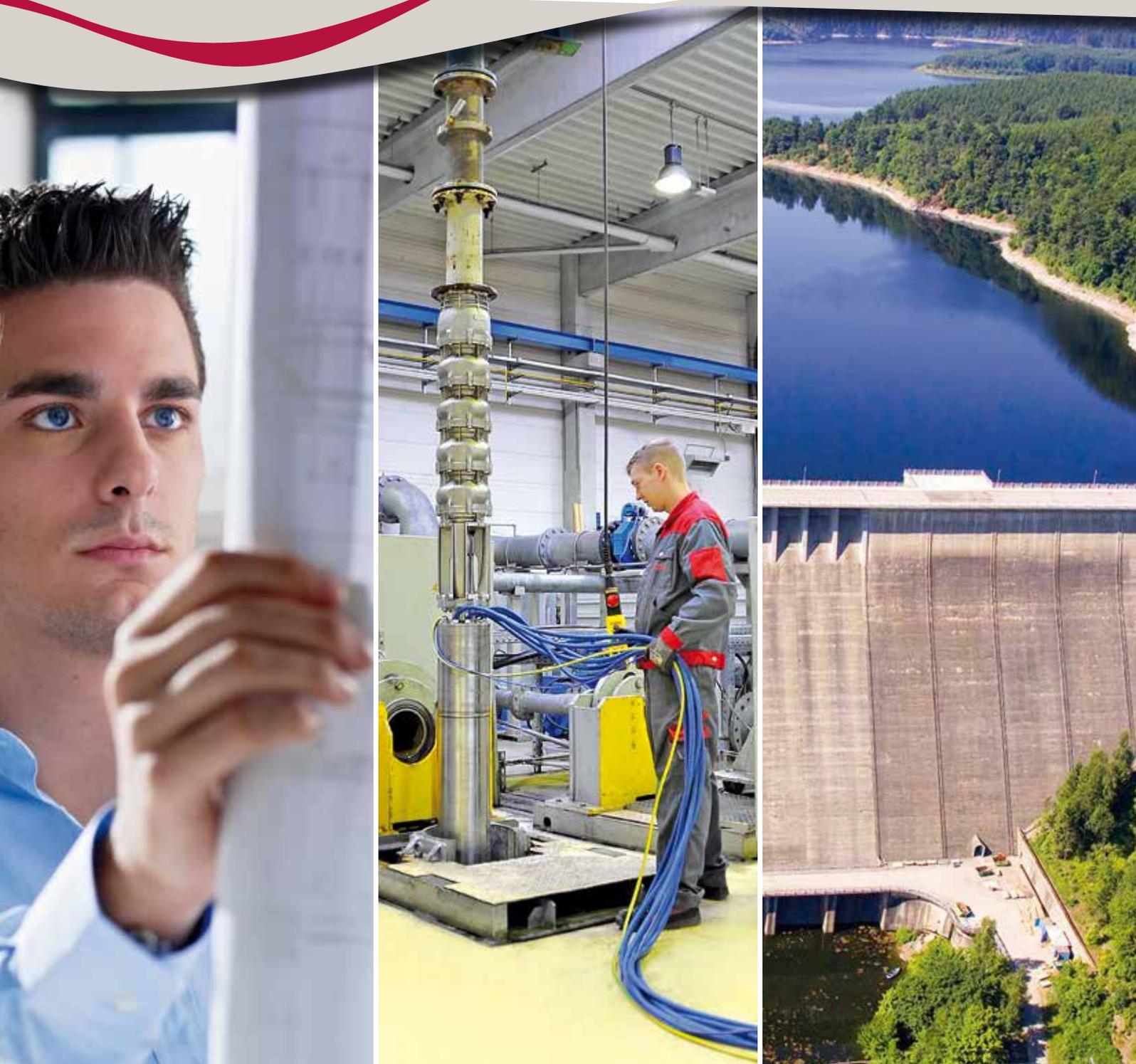


oddesse

smart power for life

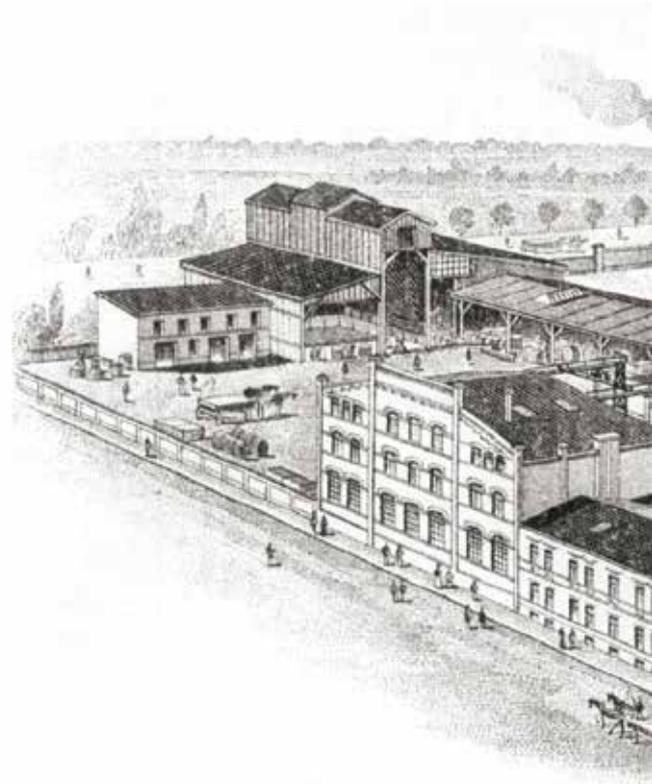


No-one knows who invented the pump, but there are a few recognisable names – such as Archimedes, Ktesibios and Otto von Guericke – which represent milestones in pump development stretching back more than 2,000 years and leading up to the wide variety of pumps we have today.

FOR ~~oddesse~~, THE FUTURE HAS ALREADY BEGUN

For over 100 years, the name Oddesse has also represented pioneering achievements in the field of machine and pump engineering.

Customer-oriented innovations and guaranteed quality promise sophisticated water supply and disposal solutions. This has been the key to this traditional company's competitive success around the world.

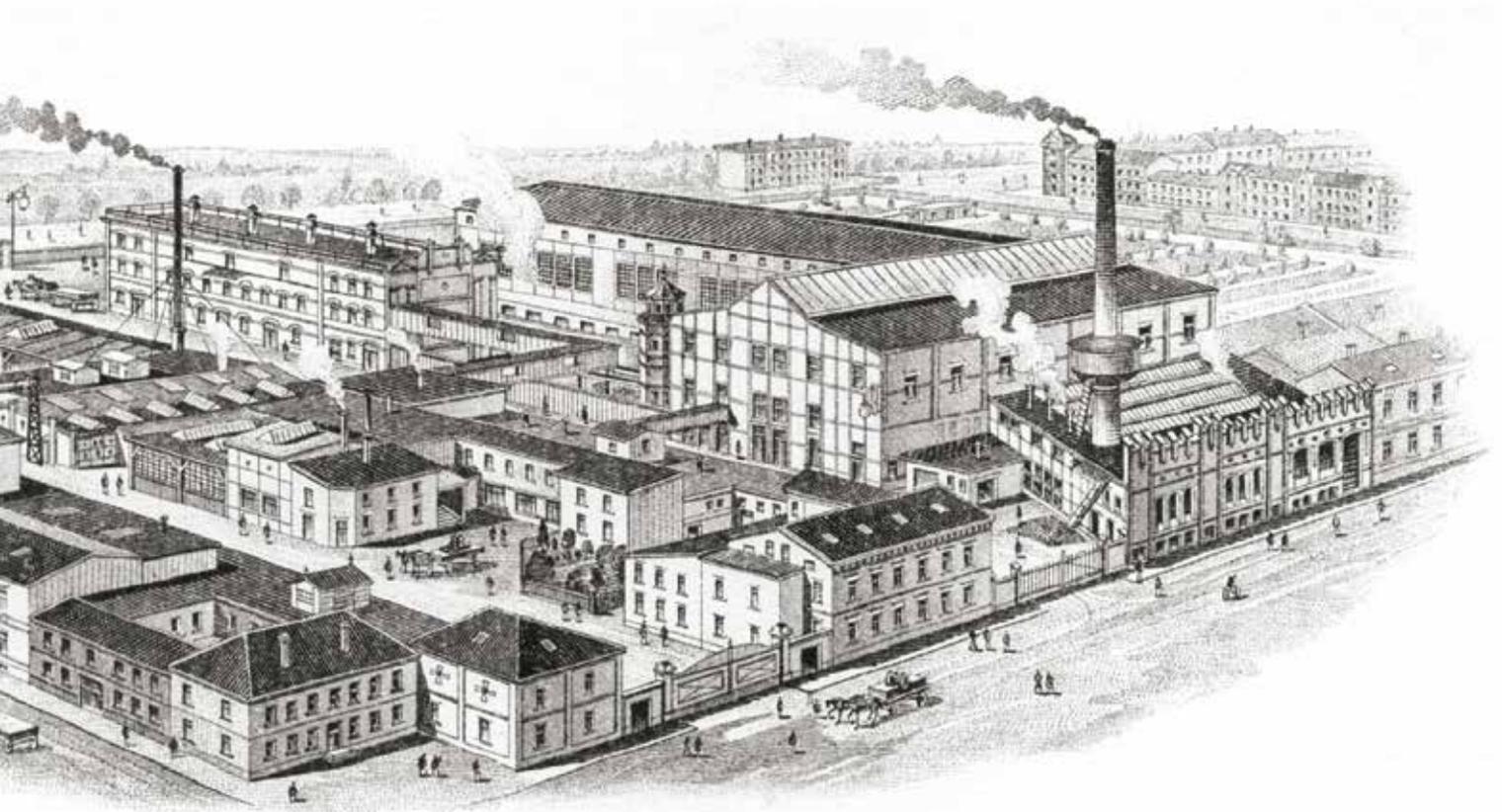


The most significant milestones in our history

Master coppersmith Forstreuter from Oschersleben recognises the sign of the times in **1854**: The sugar industry centred in the fertile Magdeburger Börde area experiences an enormous boom. As a result of the great demand for energy, lignite mining also develops in the region. The demand for machines, steam boilers and pumps is on the rise. The master coppersmith founds Forstreutersche Maschinenfabrik.

In **1897**, the founder's sons steer the company toward specialisation in pump engineering and merge with the Oddesse-Dampfpumpen-Gesellschaft of Hamburg. The very name Oddesse represents the model for success. English engineer Oddie possessed a pioneering technical spirit, and German businessman Hesse ensured the successful commercial application of the patents and efficient company organisation.

By **1900**, Oddesse has their own bronze and iron foundry and branches throughout Germany and elsewhere in Europe. Steam piston pumps are produced for the merchant marines and navy, and centrifugal pumps and bow rudders are also produced. The company exports pumps to four continents. Upon uniting with renowned pump manufacturer Klein, Schanzlin & Becker A.G. in **1929**, the factory is enlarged and expanded.



"THE FARTHER BACK YOU CAN LOOK,
THE FARTHER FORWARD YOU ARE LIKELY TO SEE."

Winston Spencer Churchill,
British statesman,
winner of the Nobel Prize for literature

Technical innovations such as the development and production of submersible motor pumps and submersible motors spread the company's excellent reputation throughout the global marketplace. Starting in **1939**, the successful pump manufacturer operates under the name KLEINSCHANZLIN-ODDESSE GmbH. After the end of the Second World War in **1945**, the production facilities are dismantled and given to the Soviet Union as reparations.

Nonetheless, production starts up again in **1946**. VEB Pumpenfabrik Oschersleben impress customers in many different countries with high quality and new product innovations. The modern production facility built in **1975** boasts enough space for around 1,400 employees. Following the challenges of the reunification of Germany, the company changes its name to odesse Pumpen- und Motorenfabrik GmbH in **1994** and successfully continues a great tradition.

With the commissioning of a new state-of-the-art manufacturing facility with a production area of 6,800 square metres focusing on single- and multi-stage submersible motor pumps and submersible motors in **1998**, the company begins a new era. odesse's team of experienced and technology-oriented employees quickly and flexibly respond to the ideas and wishes of their international customers in more than 50 countries in innovative ways and offer sophisticated solutions for a host of pump and plant applications.



"THE QUALITY OF A COMPANY'S
PRODUCTS IS DETERMINED BY THE
QUALITY OF THE COMPANY ITSELF."

The management of
oddesse Pumpen- und
Motorenfabrik GmbH



WHAT WE STAND FOR TODAY

oddesse recognise the sign of the times. With a future-oriented company concept, we're continuing the more than 120 years of tradition in pump engineering in Oschersleben with a high-productivity machine park and state-of-the-art CAD product development and order management. Most important, however, is our experienced and highly qualified team of craftsmen, engineers and managers.

Naturally, we guarantee our high quality standard with a quality management system compliant with ISO 9001:2008. We approach the complexity of the challenges of our times holistically. People, technology and the environment are equally important in the focus

of our actions. As a family-run mid-sized company, we don't limit our innovations to just developing and producing technical solutions.

We consistently think and act with our customers' best interests in mind and create long-lasting, powerful products of guaranteed quality while optimising the use of resources. Our tradition and principles demand this of us. As a flexible supplier, we not only offer a range of high-quality submersible motor pumps and submersible motors, but also offer dependable project accompaniment and other well-developed services in over 50 countries.

INNOVATION DEMANDS GOOD TIMING

More than a century ago, pumps from Oschersleben were in demand around the world, and things haven't changed in this regard. Pumps and plants from odesse enjoy an excellent reputation not only in Germany and the EU, but in over 50 countries around the globe, especially in the regions of Central Asia, the Near and Middle East, Northern and South Africa as well as in the Far East and South America.

The odesse product range includes a broad spectrum of different centrifugal pump designs for a variety of different applications. We focus on single- and multi-stage submersible motor pumps for delivering clean water, dirty water and effluent, as well as a large number of special applications.

For more than 80 years, odesse has developed and produced submersible motors which, either coupled with odesse submersible motor pumps or as a drive unit for other pump manufacturers, are used around the world. We also produce single- and multi-stage centrifugal pumps for use in water management, industry, construction and the municipal sector.

In the field of plant engineering, odesse plan and implement pump stations, effluent lift systems, pressure boosting plants and systems for delivering geothermal water, among other things.

The odesse service and sales network guarantees our customers across the globe qualified consulting and technical support.



"SMALL THINGS MAKE PERFECTION,
BUT PERFECTION IS NO SMALL THING."

Henry Royce,
English entrepreneur





WATER SUPPLY

IT'S WHAT WE DO

REFERENCES

Domestic water production
Domestic water supply
District water supply
Equipment for deep wells
Seepage water pumps
Water circulation
Cooling water supply

Berlin/Brandenburg, Germany
Island of Rügen, Germany
Elbaue – Ostharz, Germany
Saudi Arabia
Rappbode dam, Germany
Oyster farm, France
Tidal power station, East China Sea



STRONG AND UNWAVERING

A reliable supply of water can have a decisive effect on health, economic success and environmental safety. Whether it's for domestic water supply by water works, the irrigation of agricultural land, the provision of service water for industry and power plants or the oxygen enrichment of breeding water at fisheries, submersible motor pumps from odesse are called into action.

Pressure boosting systems ensure that water arrives where it's needed.

Submersible motors are used as drive motors for water delivery with well pumps. They are also used in sophisticated pump operations such as geothermal heat utilisation.

odesse submersible motors can be used as drive motors for any submersible motor pump with connection dimensions according to NEMA standards or international standards.



WATER DISPOSAL SPECIALISED PUMPS AND SYSTEMS

REFERENCES

Water-level regulation

Seepage well in industrial areas with considerable threats to domestic water

Flood protection

Pressure drainage

Pressure drainage

Sewage pumping station

Effluent aeration

Brandenburg, Germany

Dresden, Germany

Oderbruch, Germany

TAV Beeskow, Germany

Struharov, Czech Republic

TAV Oschersleben, Germany

Russia



COMPLEX TASK? NO PROBLEM!

Equipment from oddesse is used for a broad range of tasks, from the disposal of dirty water and effluent in household, commercial, municipal and industrial settings and in emergency situations as well.

Specialised pumps and pump systems fulfilling demanding requirements are used to deliver water ranging from clean water to very dirty water of different densities, sometimes at higher temperatures.

The spectrum ranges from the disposal of household effluent to the operation of municipal purification plants and from water-level regulation to the emptying of floating docks and tanks. They are used by fire brigades and technical relief organisations to pump out flooded rooms.

The drainage and sewage pumps employed stand up to the use in brackish water and seawater. This means that modern pumps from oddesse also contribute to protecting the environment.



MINING FOR DEMANDING SYSTEMS

REFERENCES

Well galleries for drainage

Feed pumps for ISL technology

Drainage pumps in ore mining

Pit drainage

Dewatering in mineral surface mines
and quarries

Surface coal mines, Germany

Central Asia

South Africa

Copper mines, Chile

Germany



COMPETENCY ISN'T A GIFT

As long as people engage in mining, the control of water will play a special role. Modern pump systems facilitate dewatering in mining, both deep in the ground and on the surface.

Today, mining is one of the main areas of use of odesse pumps, and that includes the delivery of abrasive and aggressive media. The replacement of grey cast iron with bronze for acidic media and new materials such as complex synthetics, elastomers and chrome- and duplex-steels guarantee reliable and low-maintenance operation.

In addition to surface mining, where submersible motor pumps are used for well dewatering, specially designed feed pumps are used for ISL (in situ leaching) in the environmentally friendly production of heavy metals.

Our broad range of application-specific submersible motor pumps for mining also includes Söffel pumps, which handle dirty water. They are used on floating platforms as well.



SHIP BUILDING/OFFSHORE TECHNOLOGY INNOVATIVE SOLUTIONS

REFERENCES

Seawater intake pumps on offshore rigs

Supply pumps in offshore wind parks

Pump systems for anti-heeling rigs

**Cutter pumps for
purification plants aboard ships**

**Macerator pumps for
membrane purification plants**

West Africa

North Sea and Baltic Sea

Denmark

China

Finland



HIGH TECHNOLOGY ON BOARD

Ship building has accompanied humanity since the beginning of history and enabled every continent to be settled. The demand for ever larger bulk carriers and tankers at affordable prices has increased with the advent of the industrial revolution and globalisation. Today, this business is centred primarily in the Far East.

In Europe, the main shipbuilding nations of years past have developed new future-oriented market niches, such as:

- Cruise ships and yachts
- Specialised ships (e.g. cable ships)
- Naval ship building
- Offshore technology and offshore wind parks

This specialisation in complex, valuable high-technology

ship designs and offshore technology demands continuous innovation by supplier industries, including the design of pumps for use in seawater with varying levels of aggressiveness.

Compliance with the "Alaska Standard", which demands a high level of water purity in effluent treatment, requires high-quality macerator pumps to be used in purification plants aboard ships.

As sea and deep-sea mining develop, the supplier industry turns its attention to an ever increasing number of sophisticated new technologies, and the greatest demands are being placed on pump engineering.



INDUSTRY

A BROAD FIELD

REFERENCES

Service water supply and boiler feed pumps

Power plants, Germany

Delivery of geothermal water for energy production

Iceland

Pumps and plants for large-area agricultural irrigation

Magdeburger Börde, Germany

Pumps and systems for biogas plant

Brandenburg, Germany

Pumps and controllers for the sanitation of surface mines

Saxony-Anhalt, Germany



PUMPS FOR INDUSTRY AND AGRICULTURE

The broad range of applications of pumps and plants in industry and agriculture alone reveals the range of technical challenges facing modern pump engineering.

Each sector places different – sometimes extreme and uncommon – demands on the materials of all the components, and production is in small quantities. odesse provide top-of-the-line pump, motor and system solutions.

In agriculture, pumps are not only used for irrigation and drainage, but also for liquid manure transport and for filling and emptying tanks holding different substances.

New materials and ingenious technologies make mature technical solutions possible within the framework of safety and environmental-protection requirements.

High pump and motor reliability is a basic requirement for their use in the wide variety of different plants and systems.

There is only one word that applies here as well: Premium

Applications

- Domestic water supply by water works
- Irrigation and drainage
- Overhead irrigation
- Dewatering in mining and underground construction
- Service water provision for industry and power plants
- Pressure boosting systems
- Seawater delivery
- Geothermal water utilisation
- Delivery of chemically contaminated water
- Environmental technology
- Clean or slightly dirty water with a solids content of up to 50 mg/l
- Fresh water, seawater and brackish water
- Delivered medium temperatures of up to 80 °C

Executions

- Multi-stage submersible pumps in sectional or jacket design with radial or semi-axial impellers
- Rewindable, water-filled motors
- Motors in compliance with NEMA standard or international standards
- Discharge nozzle with pipe thread or flange
- High-quality materials for application in service, industrial, geothermal and seawater



SUBMERSIBLE MOTOR PUMPS

po-so / po-ss





Seawater intake pumps on offshore platform West Africa

- Seawater-resistant materials with minimum quality AISI 316 or bronze – duplex stainless steel also possible
- Rewindable submersible motors with high-quality special winding wire and supply cable
- Used to deliver process water, cooling water, ballast water, extinguishing water and sanitary water



Feed pumps in ISL mining Central Asia

- Resistance of all materials used to acid-water mixtures (AISI 316, 904 or duplex steel)
- Submersible motors with special winding for heavily fluctuating voltages
- Motor protection device with special monitoring software, overvoltage protection (lightning strike) and pump monitoring
- Usage at temperatures down to -40 °C and up to +50 °C possible
- Also available with pressure or suction jacket

Performance is what counts

Applications

- Drive motors connected to deep well pumps for water delivery
- Pump drive for applications with special requirements, such as in mining, utilisation of geothermal energy as well as in offshore and marine technology
- Drive motors for all submersible motor pumps with connection dimensions according to NEMA standards or international standards, respectively

Executions

- Three-phase asynchronous motors for 50 or 60 Hz and voltages up to 1,000 V
- Water-filled motors with rewindable stators, dynamically balanced and with high resistance to thermal stress
- High-quality thrust bearings that operate in both rotation directions and possess a high load-bearing capacity
- Water-lubricated radial bearings for a horizontal and vertical motor application
- Windings for temperatures up to 80 °C of the pumped medium available
- Speed regulation between 30 and 60 Hz via frequency converter possible
- High-quality materials for application in service, industrial and seawater



SUBMERSIBLE MOTORS

po-mo / po-moh





Specialised motors for high thermal loads Germany

- Specialised motors for water temperatures up to 80 °C
- With heavy sedimentation of iron ochre and minimal cooling flow
- Use of high-quality, temperature-resistant winding wire
- Improved circulation of motor filling and good heat dissipation via internal cooling circuit
- Optimised pressure-balancing system



Special motors for pressure-boosting pumps Tidal power station in China Sea

- Motors with seawater-resistant materials
- Rewindable motors with winding wire resistant to higher temperatures
- High-quality submersible cable couplings for disconnecting and coupling motors while submerged

Versatile in use

Applications

- Irrigation and drainage of agricultural areas
- Water-level regulation (land reclamation and polder pumps)
- Circulation of water in purification plants
- Oxygen enrichment of breeding water at fisheries
- Trimming of ships, ferries and tankers
- Emptying and flooding of floating docks
- Emptying and flooding of tanks
- Clean or slightly dirty water with a solids content of up to 50 mg/l
- Fresh water, seawater and brackish water
- Delivered medium temperatures of up to 50 °C

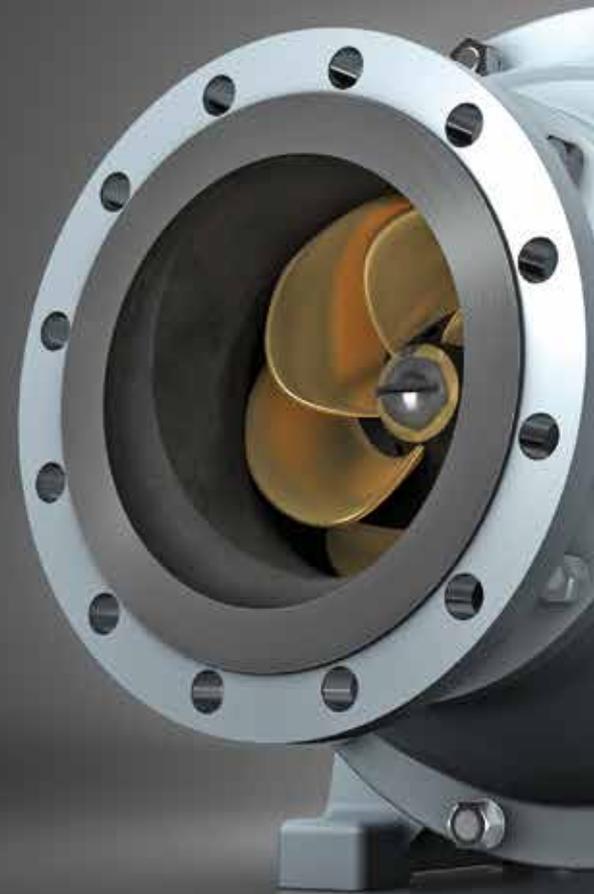
Executions

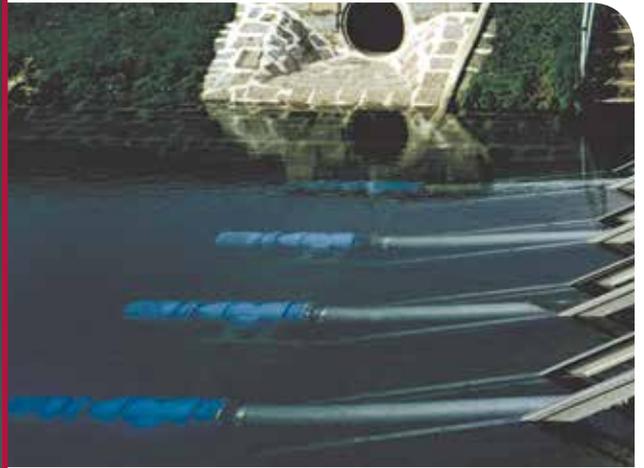
- Single-stage centrifugal pumps with open semi-axial impeller
- Submersible, rewindable and water-filled motors with protection level IP 68
- Motor cooling through pumped medium that flows around it
- Water-lubricated radial and axial slide bearings
- Encapsulation of rewindable motor via mechanical seal
- Optimal motor filling guaranteed by a volume-compensation system
- Rubber-sheathed electrical cable, watertight connected
- Continuous operation, switching operation or frequency control
- Tandem operation
- High-quality materials for application in service, industrial and seawater



PROPELLER PUMPS

po-upl





Drainage pumps for flood protection Germany

- Propeller pumps with inflow basket
- Mounted on guide rails
- Submerged, rewindable, water-filled motors
- Automated coupling system



Circulating pumps for oxygen enrichment in aquaculture, for example in oyster breeding France

- Material: grey cast iron or cast bronze
- Submersible version
- Used horizontally or vertically
- Operation with frequency converters

Every model is portabel

Applications

- Dewatering in the construction industry and in mining
- Keeping pits and soakaways dry
- Disaster control and by fire brigades
- Water supply in industry and agriculture
- Pumping dry of flooded rooms
- Irrigation and drainage of municipal, garden and domestic areas
- Clean or abrasive water with containing admixtures with particle sizes up to 35 mm
- Max. density: 1,100 kg/m³
- Delivered medium temperature: up to 40 °C, up to 60 °C for a short period

Executions

- Submersible, single-stage centrifugal pumps
- Motor compartment sealing via two high-quality mechanical seals
- Ball bearings with long life grease lubrication
- BaMotor cooling through pumped medium that flows around it
- Available with motor protection
- Automatic level regulations is optional
- Pressure port with quick-release coupling, flange, hose nozzle or Whitworth thread
- High-quality materials for application in service, industrial and seawater



DRAINAGE PUMPS

po-Söffel / po-Söffel X





Dewatering pumps for draining surface mine beds Germany

- Stationary and mobile operation with submersible Söffel drainage pumps
- With tandem coupling for serial connection of multiple Söffel pumps
- Continuous dry running does not cause damage



Transport pumps for pumping out aggressive water from a residual surface mine lake Germany

- Söffel X made of AISI 316 stainless steel
- Mounted under a floating platform
- Excellent resistance to abrasive and corrosive conditions
- Safe operation guaranteed, even for delivering of aggressive fluids

The top of its class

The ORCUT TMS, TES, ES and KM cutter pumps are manufactured by ORPU Pumpenfabrik GmbH, an odesse subsidiary in Oranienburg.

These pumps are characterised by a tried-and-tested, effective multiple-cutting system and are operated with motors of efficiency class IE2.

Applications

- Delivery of raw and sewage water with solid components at purification plants and pump stations
- Local drainage, dewatering and service water removal
- Delivery and breakup of contaminated dirty and sewage water, primarily in pressure drainage applications
- Homogenisation of the delivered medium
- Especially suitable for membrane purification plants on land or at sea

Executions

- Single-stage centrifugal pumps, suitable for wet, dry and mobile set-up
- Single-channel impeller or vortex impeller
- Available with cutting system
- Single-phase or three-phase motor, protection level IP 68
- Explosion-protection possible
- Motor sealing via high-quality mechanical seals



SEWAGE PUMPS

ORCUT / po-w





Cutter pumps in pressure drainage systems for effluent transport Czech Republic

- Sewage submersible motor pumps with an effective and reliable cutting system
- Not susceptible to blockages, even with high levels of solid components or atypical solid components
- Low-maintenance, service-friendly
- Significant cost advantages in rural areas



Macerator pumps in membrane purification plants for the treatment of effluent on ships Finland

- Dry-installed sewage pumps with an innovative three-stage cutting system
- Break-up of solids down to a cut edge size of less than 3 mm
- Optimally suited for fulfilling the requirements of the "Alaska Standard" for treated effluent
- In-built motors of energy efficiency class IE2



Pressure-boosting plants at water works Germany

- Pressure jacket pumps
- Alternating and peak-load operation possible
- Electronic oddesse controller
- Low noise level
- Maintenance-free, fully automatic operation

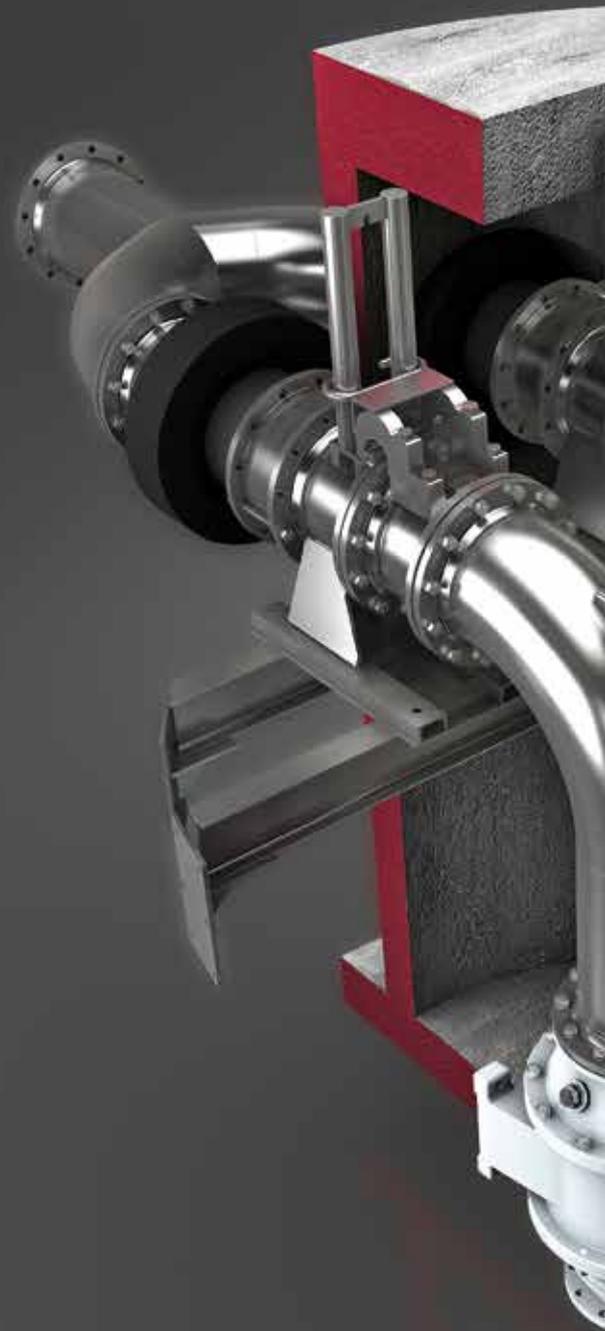


Solar pump systems using three-phase current technology Mauritania

- For delivering water from deep wells in self-sufficient areas
- Creation of a technical three-phase current field from solar energy using solar inverters from the EAI Ilseburg company
- Operation of oddesse submersible motor pumps
- Other technical devices can be connected

EAI Elektro- und Automatisierungstechnik GmbH in Ilseburg have been innovative and reliable partners to oddesse in the development and supply of innovative electronic controllers and monitoring systems for pumps and motors for over 15 years. They support oddesse in their area of specialisation all around the globe.

SYSTEM SOLUTIONS





Pumps and systems for biogas plants

Brandenburg, Germany

- Use of different types of pumps for water supply, the process stages and the auxiliary circuits
- Propeller pumps, submersible motor pumps, controllers
- Pump plants for draining storage areas



Equipment for domestic water supply from deep wells

Saudi Arabia

- Powerful submersible motor pumps with integrated EUPSIM microcontroller module
- Driven by generators
- Speed regulated via frequency converters
- Continuous measurement of the motor temperature and data transmission over the motor cable
- Monitored and controlled via Internet/mobile devices



Motor production

Reinvestment in winding technology enables high flexibility and variation in motor manufacturing.



Repair hall

Preventive service and re-manufacturing of components, submersible motors and pumps.



The test field

State-of-the-art test rigs guarantee top quality and operational safety before delivery even occurs.



Production hall

Optimised manufacturing technology and employees with diverse qualifications ensure efficient production and short delivery times.

oddesse – smart power for life

Following our own tradition, oddesse Pumpen- und Motorenfabrik GmbH will continue to orient ourselves to the wishes of our customers and the needs of the market with our modern and reliable products, today and in the future.

Continual innovation, further product development and new investment in the company, in addition to targeted co-operation, will continue to secure oddesse Pumpen- und Motorenfabrik GmbH's competitive edge and sustainable success.

Our motivated employees are involved in business decisions and guarantee both high product quality and goal-oriented service for our customers.

Consistent customer orientation, the desired flexibility level and top product quality are most important to all our colleagues so as to ensure business success, now and in the future.

Don't try to foresee the future. Instead, make it possible.
The future begins today!

■ Made in Germany

Submersible motor pumps
Submersible motors
Propeller pumps
Drainage pumps
Sewage pumps
Side-channel pumps
Household water pump plants
Submersible motor compressors
Volute casing pumps
Sectional centrifugal pumps
Accessories
Pump systems

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smart power for life

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