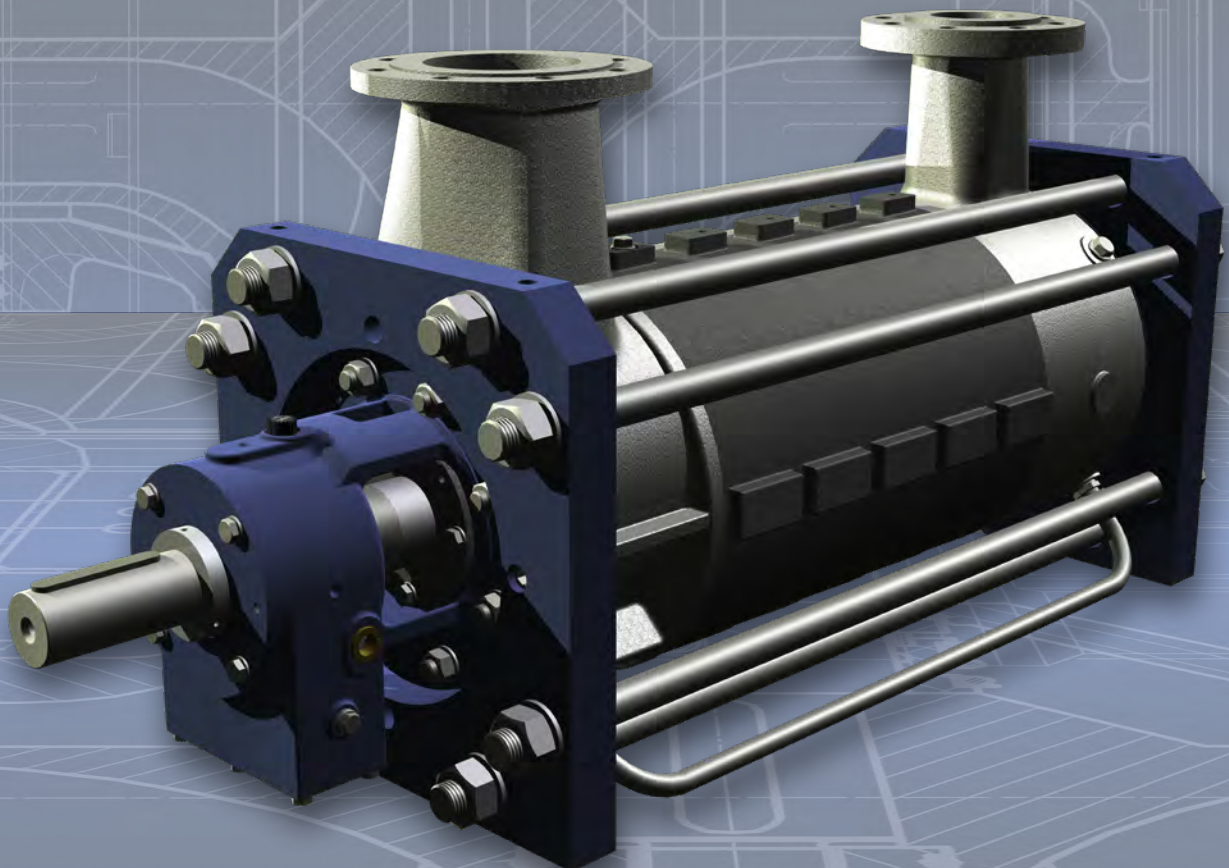




DÜCHTING
PUMPEN

Product Overview **TYPE HPH**



FLUE GAS DESULFURIZATION



The flue gas cleaning in Germany started with the adoption of the „Großfeuerungsverordnung“ - a regulation for open fire - in 1982. From the very beginning DÜCHTING PUMPEN took part in this business and today has one of the largest populations in European power stations. With the development of the material **SICcast®** now almost every FGD pump is built completely in **SICcast®**. Through this unique and innovative technology our products are increasingly favored beyond the borders of Europe.

WATER TREATMENT



DÜCHTING PUMPEN has worked in desalination with high-pressure centrifugal pumps in reverse osmosis now since the early 90s. While the demand for higher quantities and pressures has risen over the past years DP has kept up with the development and can now offer high-pressure pumps, including energy recovery units. The materials used for these pumps have been proven in numerous applications and the performance data has been adjusted to market demands by means of CFX programs.

MINING



Since the early 50s DÜCHTING has supplied pumps to the mining industry, especially German hard coal mining - at first only as maintenance and primarily with respect to underground mining. In the following years new pumps and wear-resistant centrifugal pumps for the processing of coal were added. Today DÜCHTING PUMPEN covers the entire market for centrifugal pumps in mining including high-pressure cooling centrifugal pumps.

INDUSTRY / OIL & GAS



The chemical industry profits from the **SICcast®** - material of DÜCHTING PUMPEN.

As far as this field of application is concerned the high chemical resistance of **SICcast®** is of primary importance: its corrosion resistance with respect to acids will even exceed that of Ni-alloys.

These pumps are entirely metal free in all wetted areas - even the single- or double-acting mechanical seals.



Quality through experience

DÜCHTING PUMPEN is a privately owned German company with more than 77 years of experience in the field of advanced centrifugal pumps for use in many different industries.

Our motto “Quality Through Experience” forms the basis of our sophisticated product range. The capabilities of our company in the construction, manufacturing, testing and commissioning of our products is highly respected in the industries we serve.

Our reputation is based on a sustainable company policy, focusing on efficiency, reliability, innovation and thorough customer after-sales service which is provided by partners in the countries where our products are installed.

In order to meet the current demand for highly efficient and reliable products in seawater desalination, DÜCHTING PUMPEN offers optimized high-pressure pumps and energy recovery turbine units. To minimize total energy costs in high pressure seawater desalination plants, we are at your service during both design and operation.





Ring section design pump

TYPE HPH

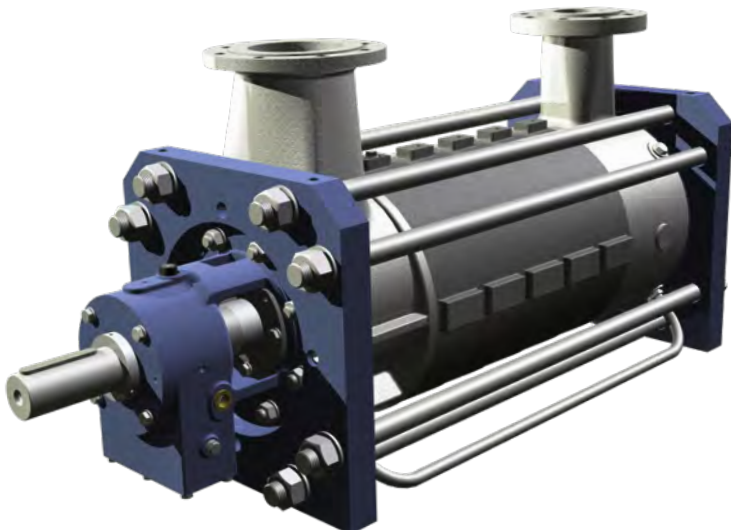
Suitable for slightly polluted, chemically neutral or aggressive liquids.

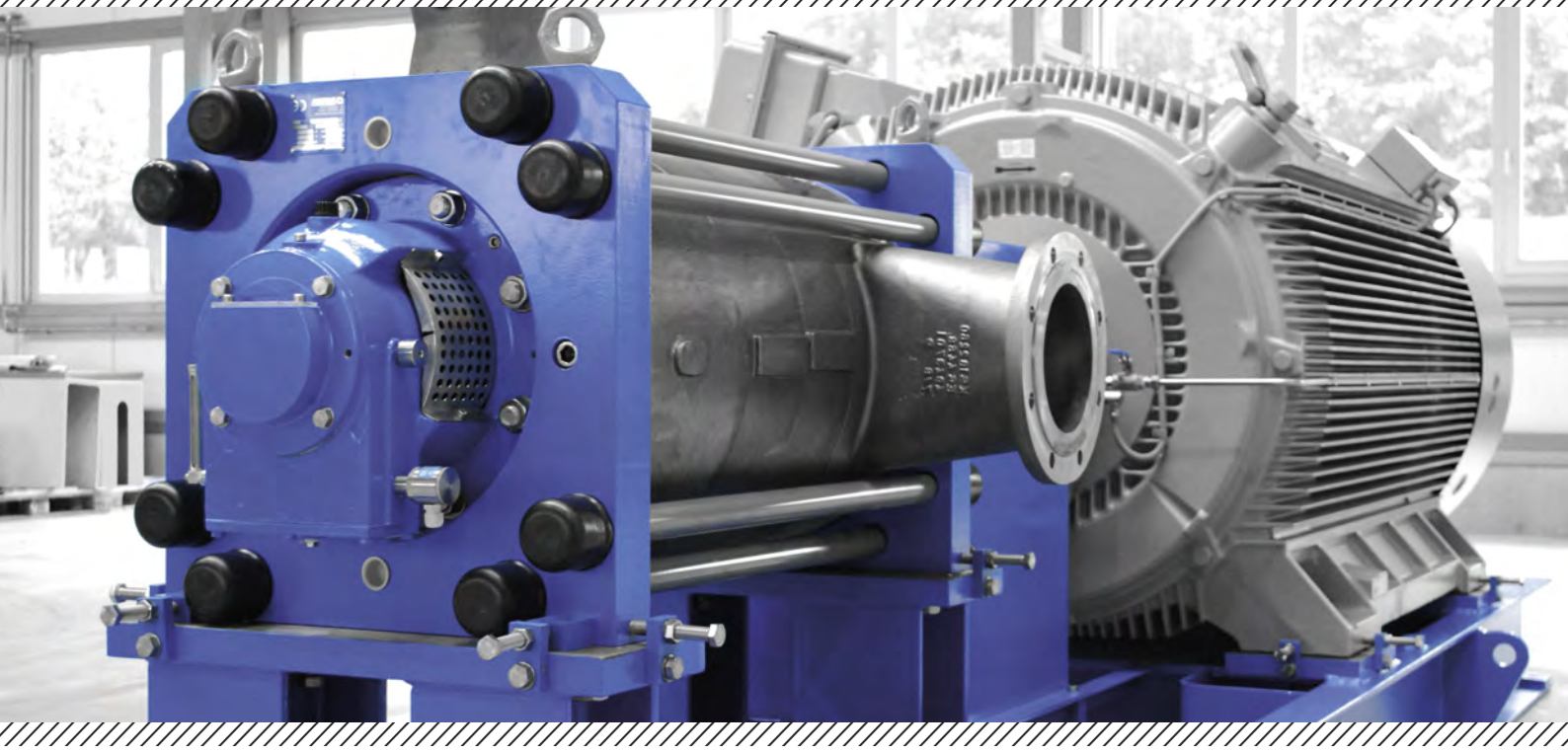


HPH Design

Multistage centrifugal pump in ring-section design.

- Pump inlet: axial or radial with flanges positioned at 90° increments
- Discharge flange: radial positioned at 90° increments
- Replaceable rings in composite material to maintain best efficiency and reliability
- Shaft sealing by stuffing box or mechanical seal
- Axial thrust compensation by balancing discs, piston or combination of both
- Easy replacement of all wearing parts
- Tailormade solutions available:
 - ▶ **Pump dimensions can be adapted to customer requirements**
- Impellers are fixed by fitting key (e.g. backflushing) possible
- Replaceable Impeller wear rings available
- Pump with one or two connective shaft ends
- Impellers and diffusors are cast by using ceramic moulds to get highest surface quality for outstanding hydraulic performance





Fields of Application

Handling of clean or slightly polluted, chemically neutral or aggressive liquids.

- Pressure boosting systems in industrial process
- Water supply, and water treatment
- Seawater desalination
- Condensate production
- Boiler feed systems
- Hot water applications
- Petrochemical applications
- Water Injection

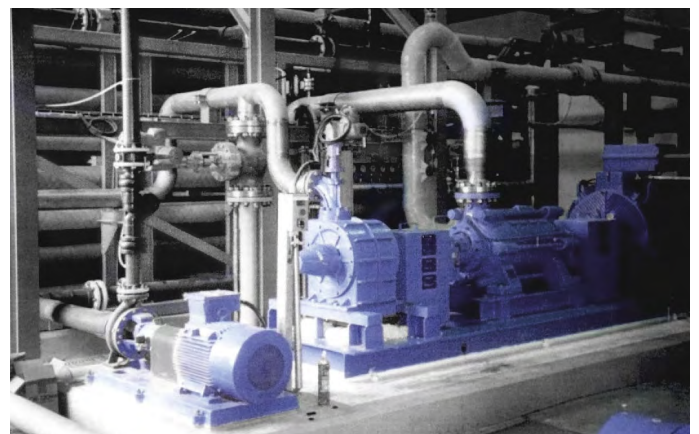
Materials

Carefully selected depending on the application and adapted to the respective conditions.

DÜCHTING PUMPEN offers improved corrosion resistant materials like SUPER DUPLEX stainless steel with Pitting Resistance Equivalent numbers above 40.

Technical Data

Pump Size:	DN 80 to DN 300 (3" to 12")
max. Pressure:	100 bar (1450 PSI)
max. Flow:	3500 m³/h (15400 gpm)
Total head:	up to 1100 m (3600 ft)
Rotating Speed:	up to 3600 rpm



Diffusor

With reduced impact losses due to CFD optimized flow channels.

Impeller

Design in consideration of optimal specific speed.
Cast in ceramic moulds for best surface quality.
Different impeller sets available for every pump size.

Wear Rings

Replaceable wear rings in composite material to maintain best efficiency and reliability.

Axial suction Branch available

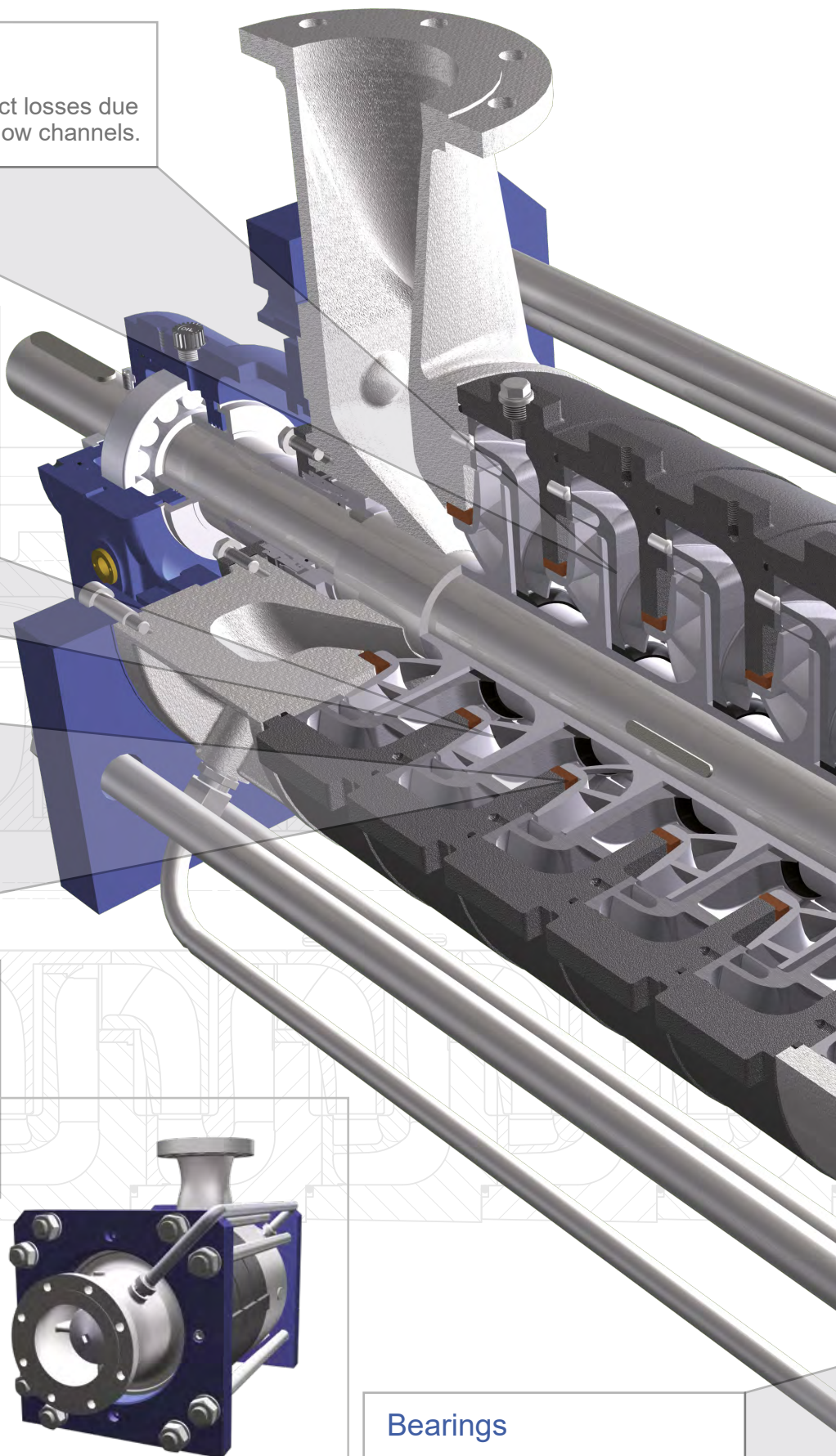
In horizontal orientation for constant inlet velocities and reducing suction pressure requirements.

Liquid lubricated plain bearing

Plain bearing eliminates second mechanical seal (for axial inlet).

Bearings

Supplied with oil-lubricated anti-friction bearings or plain bearings for long-life performance.

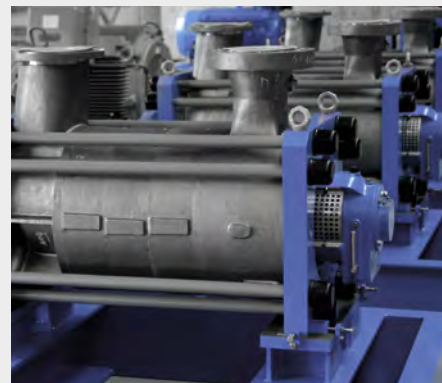
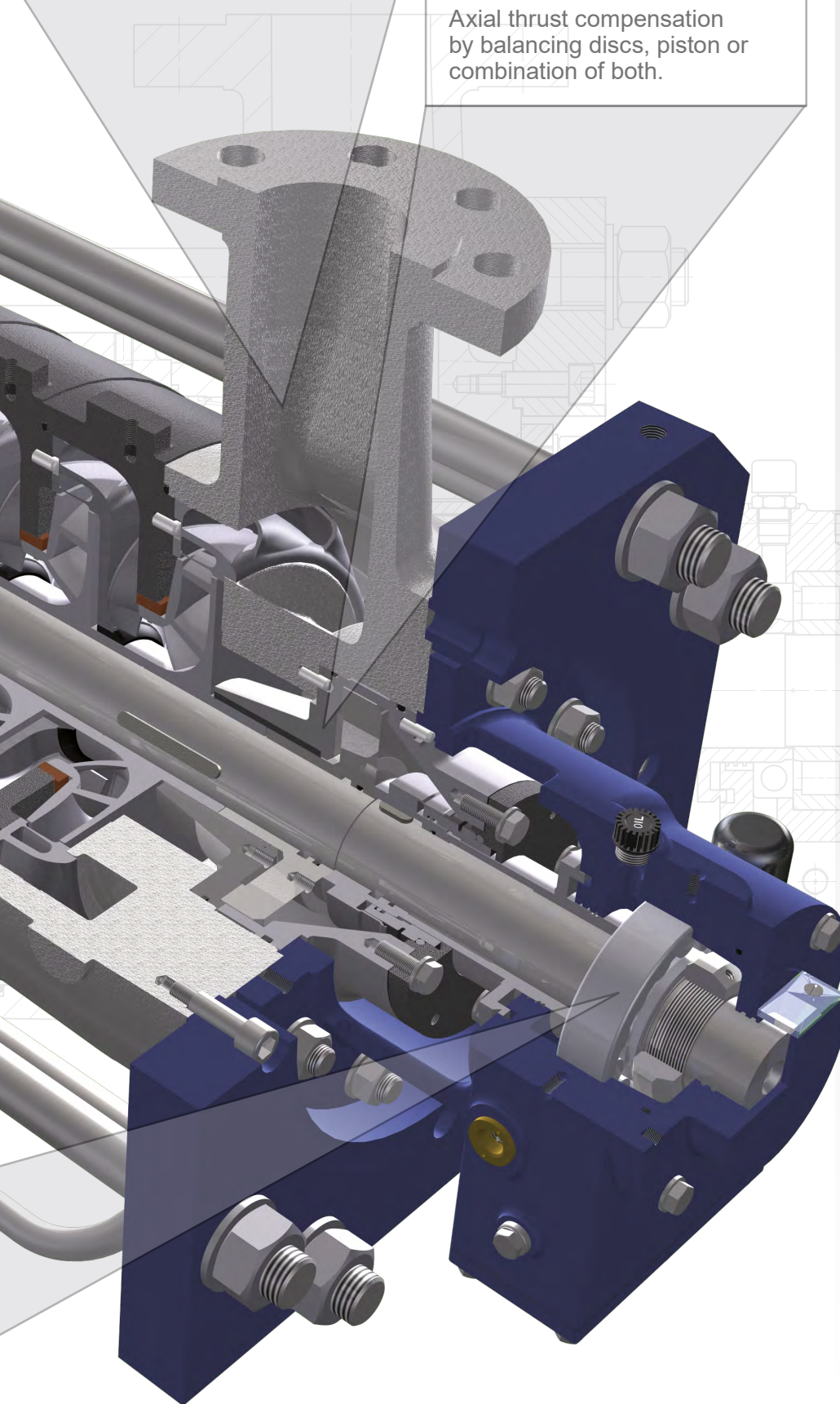


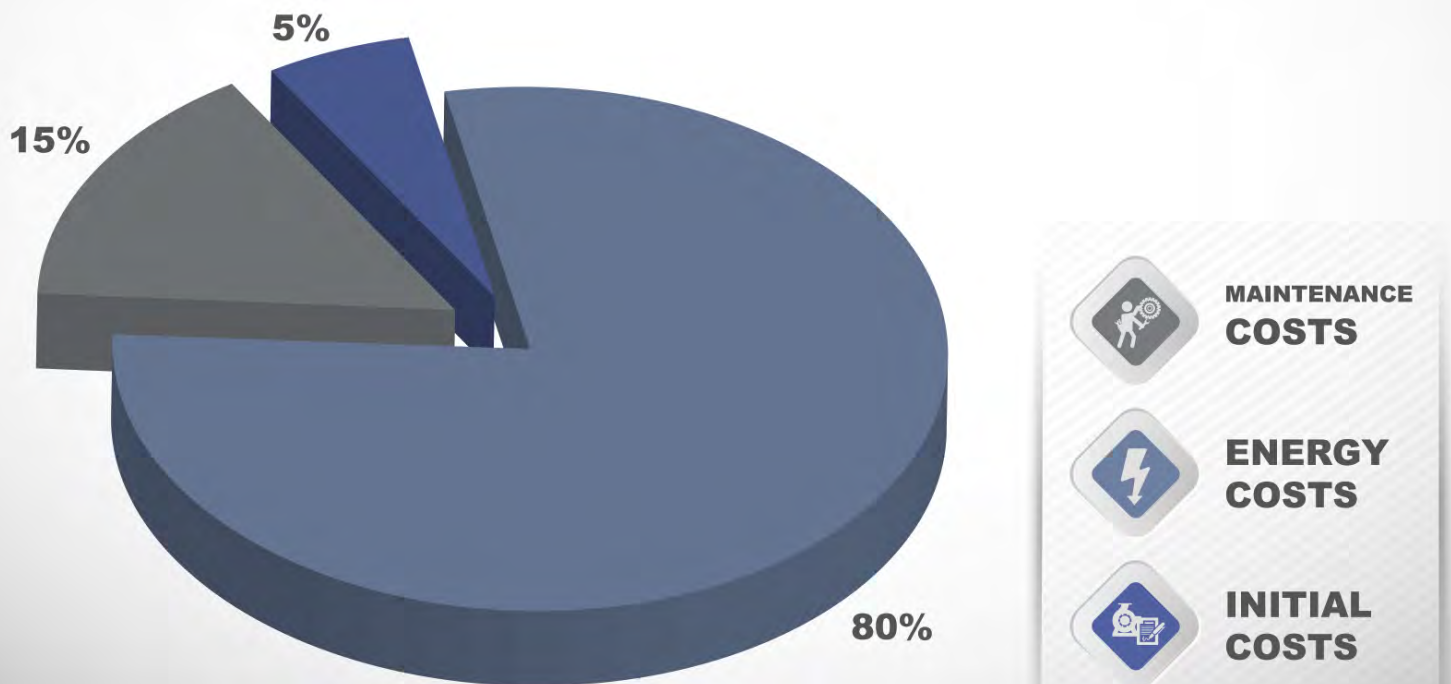
Discharge Casing

Optimized by numerical calculations to achieve best outflow conditions.

Balancing Device

Axial thrust compensation by balancing discs, piston or combination of both.





Life-Cycle-Costs

Average life cycle costs for industrial pumps.

Evaluating the Life-Cycle-Costs will identify the most financially attractive alternative. The initial purchase price is a very small part of the life cycle cost for high usage pumps. Minimizing energy consumption and plant downtime have a big influence on the total Life-Cycle-Costs.

Energy costs

DÜCHTING PUMPEN offers a wide range of impeller sets for high efficiencies.

- high efficiency leads to low energy costs

Maintenance costs

Robust design leads to long lifetime of the pump parts.

- low wear leads to low maintenance work and costs

Easy accessible and changeable wear parts lead to short downtime for overhauls.

- short downtime leads to low maintenance costs





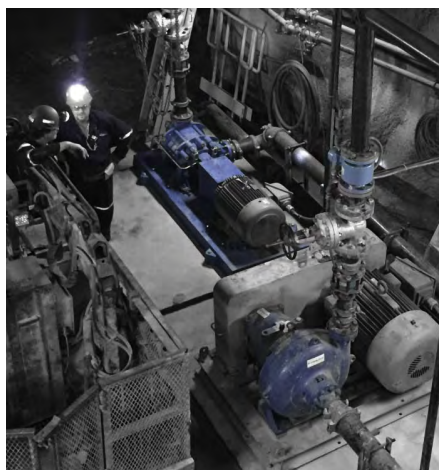
After-Sales-Service & Spare Parts

With its service and spare parts department DÜCHTING PUMPEN offers the full range of After-Sales-Service.

With its own service technicians and several service partners worldwide DÜCHTING Service is everywhere and always available.

Inhouse - Service

- Maintenance
- rebuild & repair
- damage analysis
- performance tests with vibration analysis
- site staff training
- and much more



Site - Service

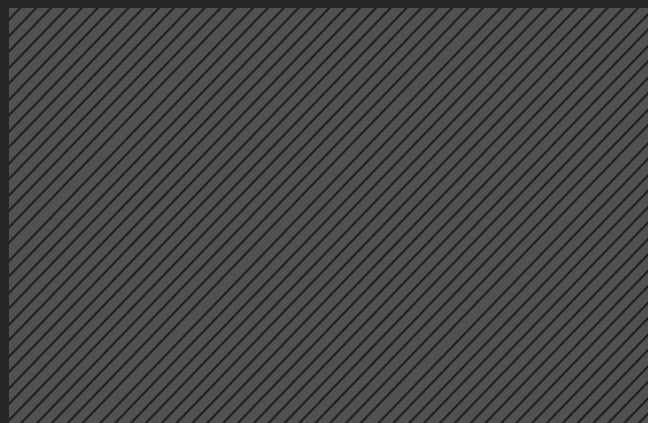
- start-ups
- commissioning assistance
- Revisions
- Repairs
- Troubleshooting
- laser alignment
- vibration & condition analysis
- flow rate measuring
- whole pump rebuild and repair
- mechanical seal exchange
- on-site training
- and much more



Please contact us at:

+49 23 02 / 969 - 0

or send a message to service@duechting.com



DÜCHTING PUMPEN Maschinenfabrik GmbH & Co. KG



Wilhelm Düchting Str. 22
58453 Witten, Germany



+49 2302 / 969 - 0



+49 2302 / 690 - 443



www.DUECHTING.com



info@duechting.com

