



WE MOVE YOU FORWARD

Piening Propeller



specialist plant
for propellers
and stern gears

INNOVATION DERIVED FROM TRADITION



Mathias Pein (CEO of Piening Propeller) with the prototype of the PCP (Piening Controllable Propeller), which was used for extensive testing to integrate the water hydraulics.

We are your specialists for controllable pitch propellers with water hydraulics. We are the only supplier on the market to have developed this modern technology and we also conduct important research and development work in other areas such as propellers or shaft systems. What is special about our holistic concept: We offer our customers complete solutions for all areas - naturally made exclusively in Germany.

We achieve this in part with support of our business partners:

- Beissbarth & Müller
- Belthor Systems
- Kunststofftechnik Rodenberg
- Procedere
- Profiseal
- ZF

who are also represented in this brochure.





HIGHEST QUALITY IS THE STANDARD WE REPRESENT

As a medium-sized company, we are always capable of responding specifically and with flexibility to every customer request and provide a tailored solution for every challenge. We place particular value on the high efficiency of our propellers, whilst also focussing on low noise development and avoiding cavitation erosion. High quality is our standard. That is why we thoroughly test our products in all stages of production, predict their performance and provide support during sea trials.

EVERYTHING FROM ONE SOURCE

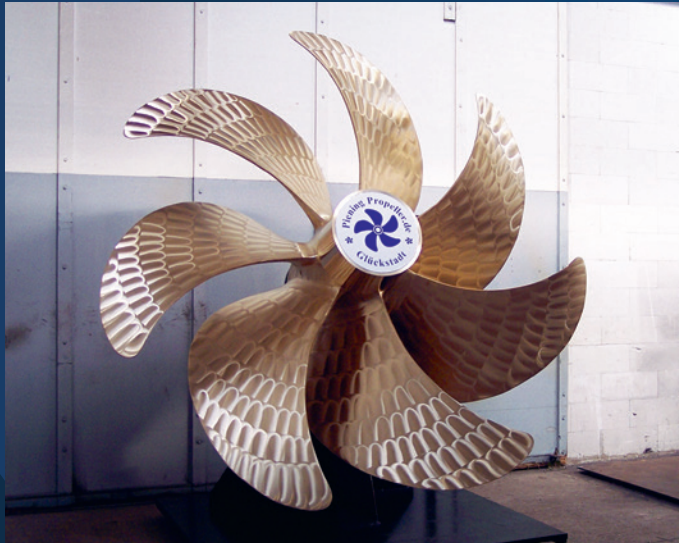
With our high-quality production in beautiful Glückstadt at the Elbe, where we have been based since 1929, we are able to guarantee our customers tailored products, short delivery times and a high degree of reliability. Our dedicated team consists of professional experts. We are particularly proud of our good name, which is known far beyond German borders.

In addition to commercial shipping, **PIENING PROPELLER** also considers itself a partner to the builders of yachts, research vessels and naval ships.



OUR PRODUCT RANGE AT A GLANCE:

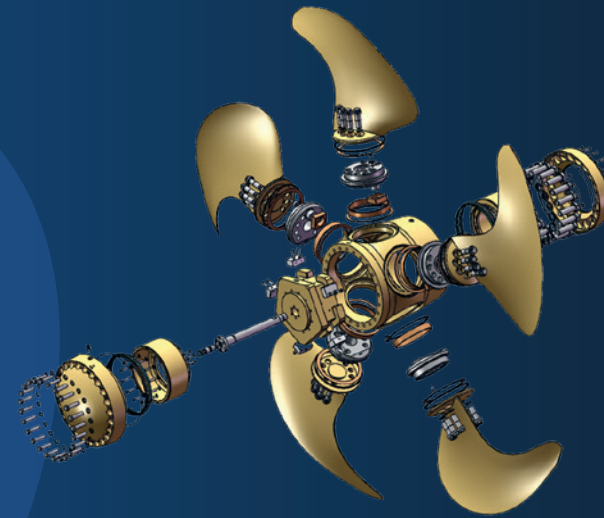
- Propeller
- ZF propulsion
- Service
- Shaft system
- Production



PROPELLER

Today, Piening propellers and shaft systems drive a wide range of different vessels in commercial shipping; but above all yachts, research and naval ships, where the requirements for propulsion systems are of particular importance.

Otto Piening GmbH produces sophisticated, innovative drive systems whose design and manufacture guarantee high efficiency, smooth running and reliability.

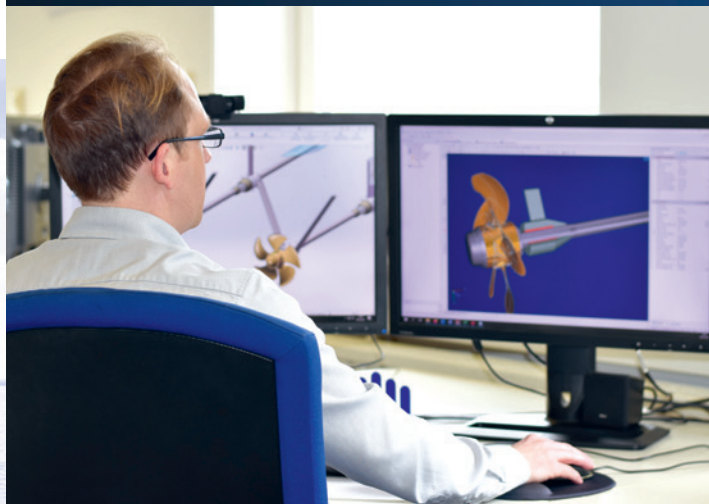


PLANNING AND ENGINEERING

The propulsion systems supplied by Piening Propeller are designed and manufactured in-house and, if required, in cooperation with shipbuilding research institutes.

The computer-aided design methods of Otto Piening GmbH, and the wealth of experience from more than 90 years in the market, form the essential basis for our sophisticated and innovative products.

Taking your requirements into account, we perform new designs, conversions and performance adjustments within the framework of the applicable ISO standards and in accordance with the regulations of each relevant classification society. The modern verification methods of Piening Propellers also guarantee high product quality, alongside safety and reliability.



FIXED PROPELLER

Our expertise in the field of propeller technology and our many years of experience are the foundation for the quality of our fixed pitch propellers. The result is extremely smooth and quiet running even at high thrust values.

Both design-defining requirements and criteria such as a high efficiency factor and reliability are self-evident standards in our design and manufacture.

The high efficiency of our products is supported by the use of state-of-the-art computer programs and design methods, which ensure fulfilment of the individual requirements applicable to each ship.

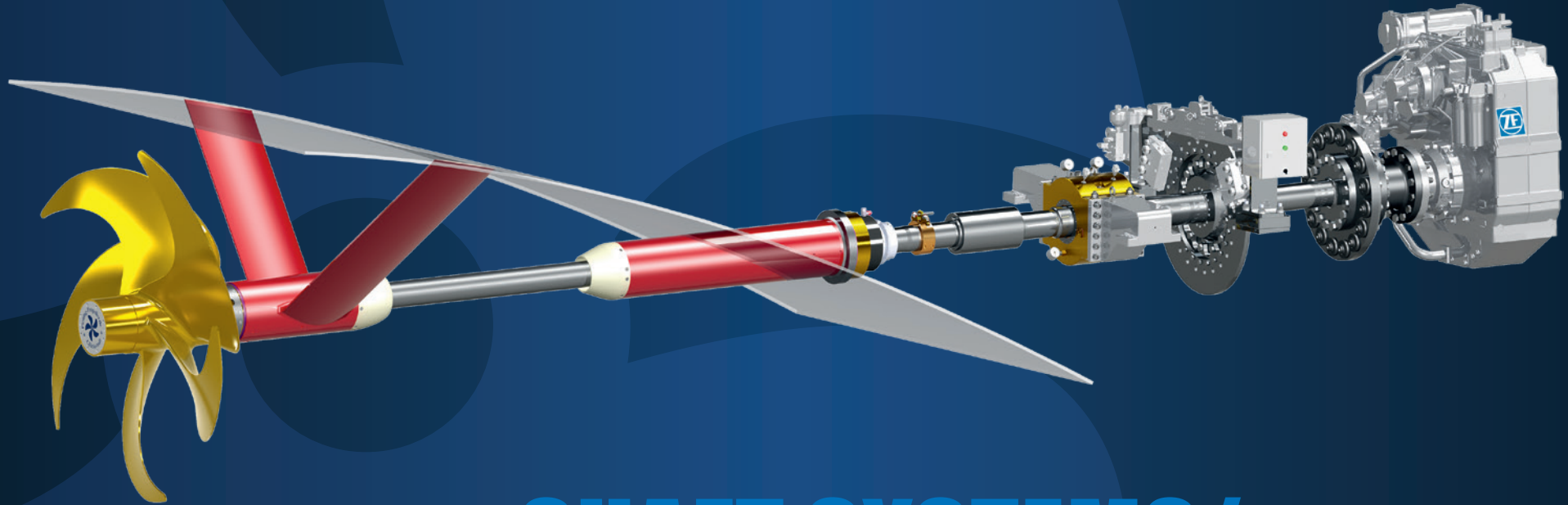
CONTROLLABLE PITCH PROPELLER

Since 2016, Otto Piening GmbH has been supplying Piening units with controllable pitch propellers in addition to drive units with fixed pitch propellers. Based on our accumulated experience, we focussed above all on formulating a new design to satisfy current market and environmental requirements.

As such, a PCP controllable pitch propeller (PCP = Piening Controllable Propeller) with four or five blades was developed. This unit is characterised by the following performance features:

- The hub has been optimised with regard to the hub-diameter ratio under hydrodynamic aspects as well as production costs.
- Optimised design of the hub for easier assembly/disassembly of the blades and the adjustment mechanism - the blades can be optionally attached to the hub from the inside or outside.

- The use of bearing elements leads to enhanced servability. Lowering the cost of regular maintenance and the replacement of wear parts in accordance with class requirements.
- All components originate exclusively from European production and are therefore also available at short notice.
- A further speciality and complete innovation is the pitch setting mechanism of the propeller, which can be operated with water hydraulics – meaning that any contamination outside or inside the ship, caused by the controllable pitch propeller system itself, will be eliminated in the future. The PCP type unit has already been used to equip various types of vessels with a wide range of requirements; the power spectrum of the PCP ranges from 200-12,000 kW.



SHAFT SYSTEMS/ DRIVE SYSTEMS

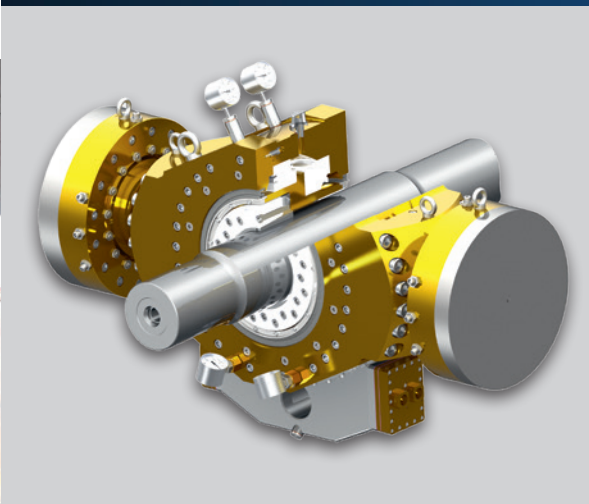
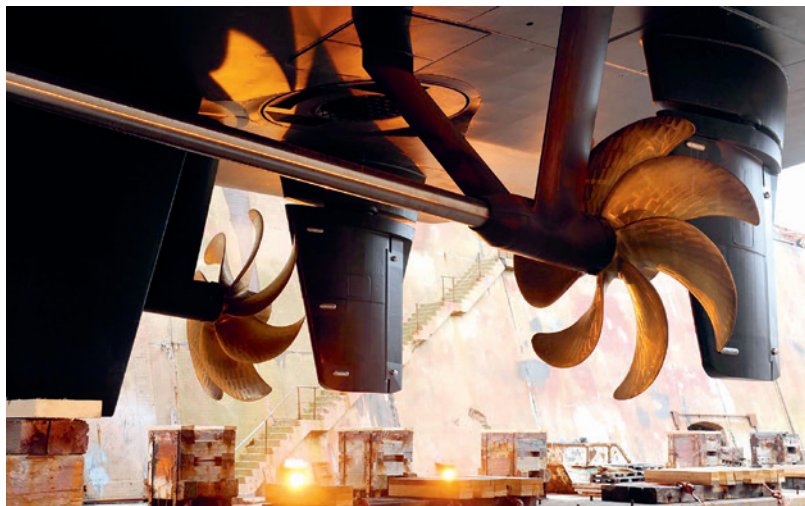
We place the highest demands on our shaft systems:

- Reliable and safe operation
- Low noise emissions
- Low vibration levels
- Optimal system integration

The **„PIENING PROPELLER POWER PACKAGE“** is usually a complete system which, in addition to shafts and propellers, also includes complete shaft struts for optimized flow to the propeller.

Furthermore, we are a service and sales partner of the gear manufacturer ZF and can therefore guarantee optimum implementation of the given power (from the main drive or hybrid auxiliary drive) in interaction with the propeller.

If required, these systems can be completed with our thrust bearings or combined devices for braking, turning or locking.

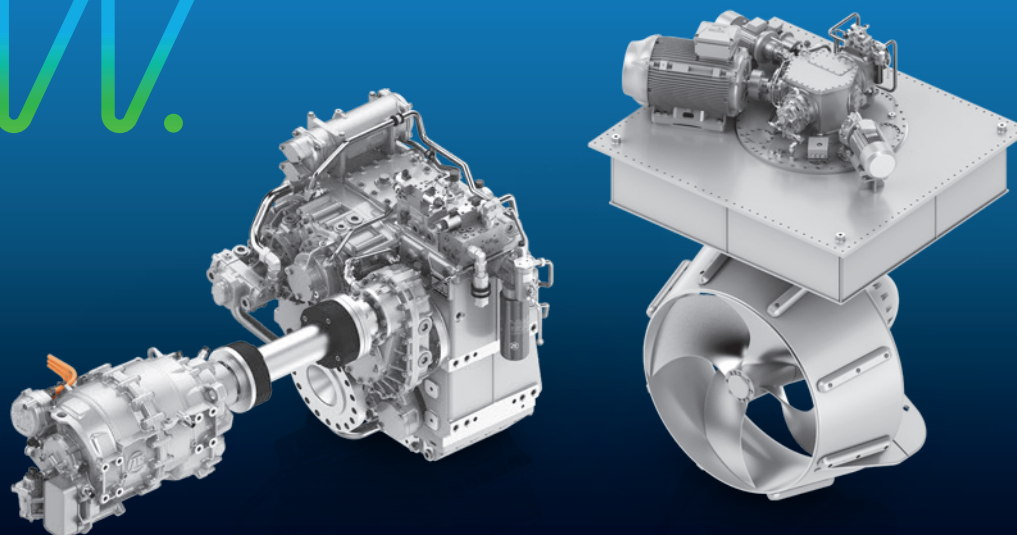


Piening - Thrust bearing



Next Generation Propulsion. NOW.

In addition to the new hybrid version of the ZF AT 80 thruster, ZF offers a broad portfolio of hybrid transmissions and transmissions for electric drives. And as a systems supplier, ZF can supply electric and hybrid-capable thrusters, electric motors, power electronics, and control levers. Shipbuilders and fleet operators benefit from the already perfectly coordinated drive system from a single source.



For more
information visit
www.zf.com/marine



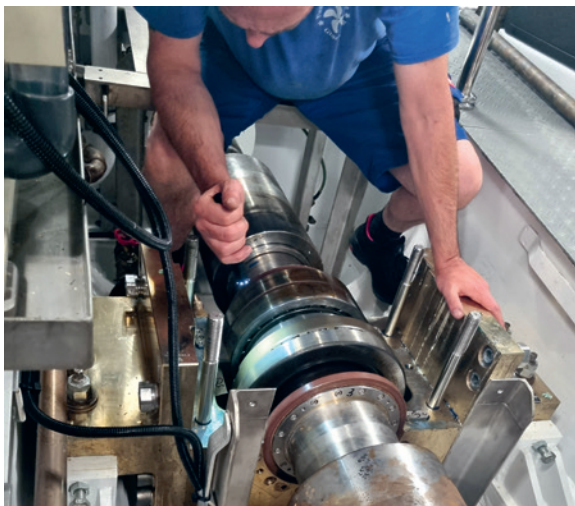


SERVICE & SUPPORT

Our SERVICE TEAM supports you around the world with all issues relating to propulsion technology (available at **Service@Piëning-Propeller.de**) – regardless of whether your inquiry concerns main drives with fixed or controllable pitch propellers or auxiliary drives, such as bow thrusters. We repair and provide support for the disassembly or assembly of hydraulically connected propellers, marine shaft couplings, shaft bearings, flanges, seals and other components or units.

In addition to variable pitch propellers from ZF or Piëning, we also overhaul hubs and blades from other manufacturers with extensive experience and at unbeatable conditions.

As a ZF service partner, we carry out maintenance work on all ZF gear unit series, including test runs. Our trained specialist personnel can also carry out extensive gear unit maintenance on board the vessel, if necessary, without removing the gear unit.



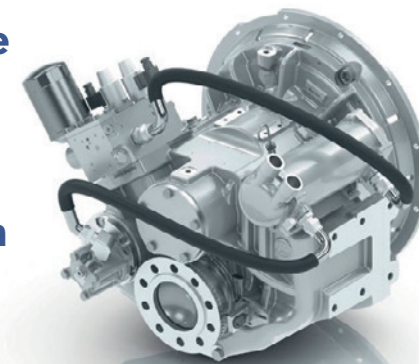
Seit 1951 ist Beissbarth u. Müller Service Partner der ZF Friedrichshafen AG, dem weltweit führenden Technologiekonzern in der Antriebs- und Fahrwerkstechnik, der als Erstausrüster sämtliche namhaften PKW- und Nutzfahrzeughersteller mit Getrieben, Lenkungen und Achsen beliefert.

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- » Schiffsgetriebe Reparatur
- » Wartungen und Ersatzteile
- » ZF Schmierstoffe
- » Technische Beratung
- » Verkauf von Neugetrieben





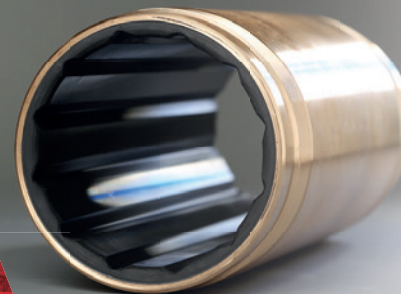
PRODUCTION

Our in-house production enables us to manufacture and deliver our products in the shortest possible time with unbeatable quality. Within the framework of propeller and system design, our scope of supply extends to complete propulsion systems with fixed pitch propellers or controllable pitch propellers (the latter being mainly cast from nickel-aluminium bronze).

Our quality management system is certified by DNV according to DIN EN ISO 9001:2015 and therefore guarantees that our products satisfy the highest requirements.

- » Individuell gefertigte Schiffswellenlager
- » Neuanfertigungen sowie Reparaturen

**Schiffswellenlager | Agrartechnik | Baupumpen
Industriepumpen | Formteile | Verschleißschutz**



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Rodenberg GmbH**

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www.ktrgmbh.de



Furthermore, we also offer extensive services covering a wide variety of contract work from industry. In our foundry and turning shop, our production includes the following:

- Parts made of special stainless steels according to own or third-party design
- Castings for tips and segments
- Propeller shafts with an individual length of up to 16,000 mm

Our strength lies in our independence and our exceptional, professional staff. We are of course also available at short notice for urgent repairs of damaged propellers or blades. We carry out contract works including the following, in accordance with your requirements:

- Repair welds
- Overturning of workpieces
- Milling work
- Surface planing
- Build-up welding



ENSURE ASSET READINESS
 WITH THE LONG WEARLIFE AND BEARING RELIABILITY OF THORDON COMPAC
 SEAWATER LUBRICATED PROPELLER SHAFT BEARINGS

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**Submit requests for repairs,
maintenance and diagnostics to:**
service@piening-propeller.de

You can also find further information
in various films posted on **YouTube**
by searching for the keywords
„Piening propeller“.



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ProfiSeal®

ProfiSeal GmbH, your specialist for sealing and bearing technology in commercial and recreational shipping. Our main activities are in the segments of workboats, government vessels and yachts.



**Your reliable
propellershaft
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since 1995**

**Worldwide unique
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bulkhead seal**

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500 mm shaft diameter



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