

Central Services TECHNOLOGY & LOGISTICS CENTRE (TLZ)



01 Computer-controlled milling machine
02 Assembly hall
03 High-pressure tanks
04 TLZ Main building and equipment warehouse
05 Welding site

The TLZ - an extraordinary workplace

In order to answer current research issues, marine scientists have to rely on sophisticated, precise and sensitive technology. During operations at sea and underwater, this technology is subject to extreme stress. Therefore, it has to be maintained before, during and after expeditions. The engineers and technicians of the GEOMAR Technology & Logistics Centre provide this service to the scientific community. In addition, they develop in close collaboration with researchers new devices or convert existing ones so that they can also be used to answer new research questions. Innovative materials and new technologies are used in order to build them as reliable, sturdy and durable as possible. A recent example of this is the deep-sea crawler VIATOR, a contribution of the GEOMAR to the Helmholtz Alliance ROBEX. Partners from space and deep-sea research have joined forces to develop new robotic systems for research under extreme conditions.

The heart of the TLZ is a central assembly hall, where a gantry crane is available to move even heavy instruments. Trucks and containers can be loaded and unloaded with

a forklift on the container yard. Workshops for precision engineering, electronics, a locksmith's and joiner's shop are arranged around the hall, where, aside from wood, especially different kinds of plastic are processed. In these workshops the education and training of new recruits take place as well. With these capacities the TLZ offers apprenticeships for the profession of precision mechanics and electronics for devices and systems.

The TLZ is also home of the large scale sea-going infrastructure of the GEOMAR. These include the two remotely operated vehicles (ROV) KIEL 6000 and PHOCA, the autonomous underwater vehicle (AUV) ABYSS, the research submersible JAGO, the KOSMOS mesocosms and the components of the ocean observatory MoLab. Furthermore, there are oceanographic gliders and moorings, rosette water sampler as well as additional geophysical equipment like deep-towed side scan sonar and ocean bottom seismometers.

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The infrastructure of the TLZ

Main building with assembly hall (900 m²) as well as workshops, laboratories and offices

Equipment warehouse (1,200 m²)

Precision engineering workshop (500 m²) with conventional, as well as CNC- controlled tool- lathes- and milling machines

Electronic workshop

Locksmith's shop with welding site

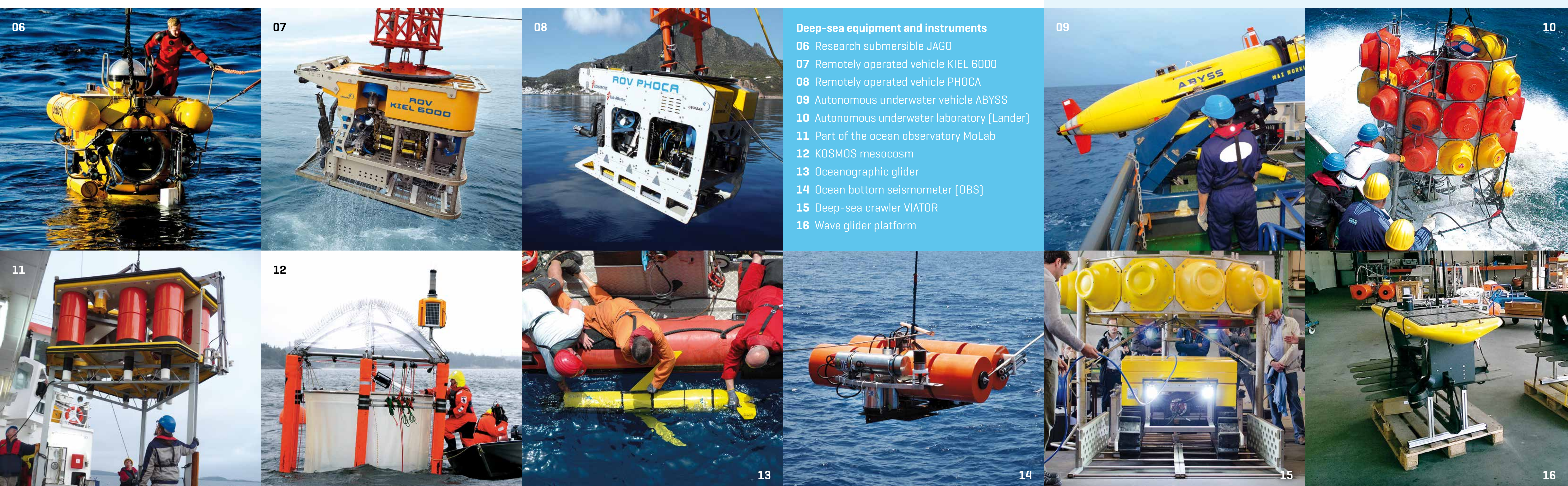
Joiner's shop for processing wood and plastic

Several laboratories, tailored to the individual needs of the research areas and a video lab

High-pressure tanks (up to 1,000 bar) for device testing

Container yard (2,000 m²)

Forklift (Capacity 9 t)



Deep-sea equipment and instruments
06 Research submersible JAGO
07 Remotely operated vehicle KIEL 6000
08 Remotely operated vehicle PHOCA
09 Autonomous underwater vehicle ABYSS
10 Autonomous underwater laboratory [Lander]
11 Part of the ocean observatory MoLab
12 KOSMOS mesocosm
13 Oceanographic glider
14 Ocean bottom seismometer [OBS]
15 Deep-sea crawler VIATOR
16 Wave glider platform