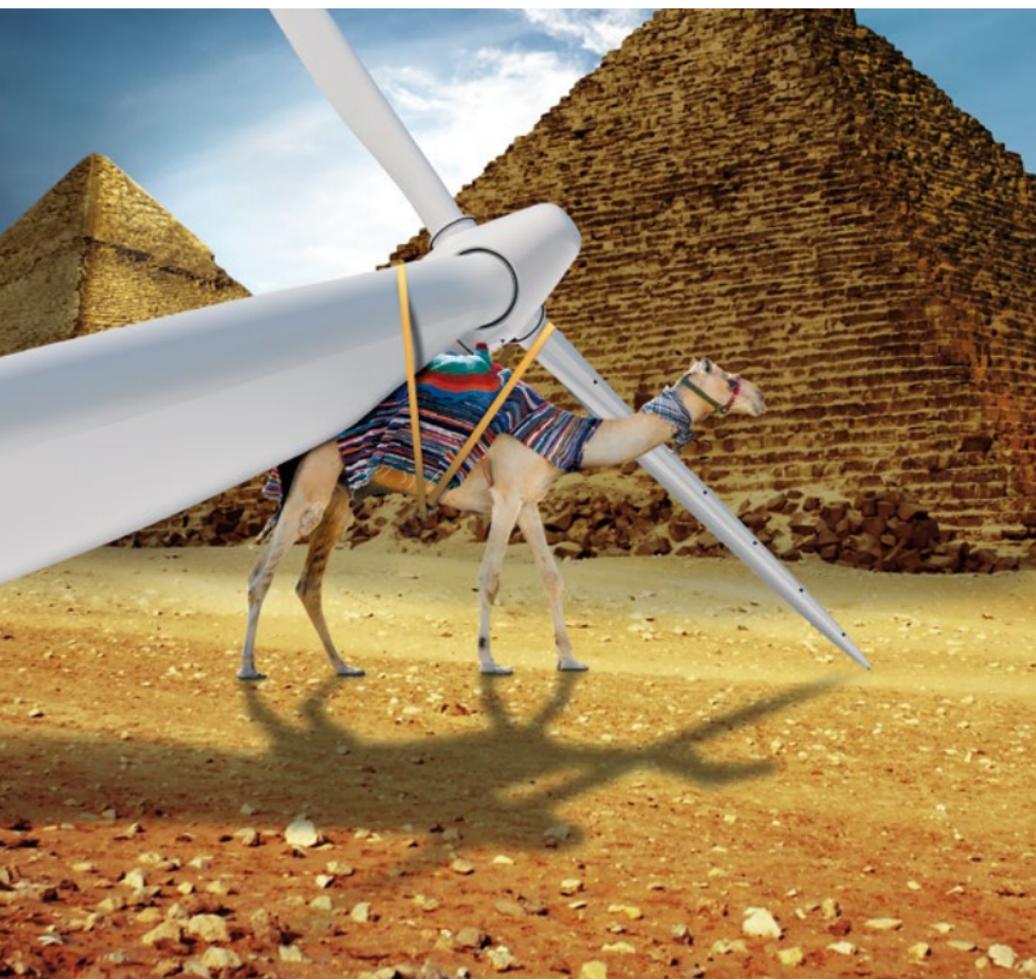


*Innovation in Motion*



# Metalworking to go

Discover direct on-site mobile machining!





## Benefit from intelligent machining methods – right on site

With Miba's mobile CNC machining units

Wherever and whatever you want to machine directly on site, no distance is too great and no component too big for Miba's mobile CNC machining units. Sometimes, for example, components cannot be dismantled or are simply too large for stationary machinery. Starting now, you can turn to flexible on-site machining in such situations. You will benefit from extremely high-quality machining with shorter machining times than at stationary machinery.

### **The advantages at a glance:**

- Greater quality and precision of machining at the precise times when it counts most
- Shorter assembly and processing times
- Greater flexibility
- Reduced transportation costs

Miba's mobile special machinery will machine a broad range of components in sizes up to a diameter of 20 meters directly on site. Thanks to its modular design, the machinery is easy to transport – when packed in containers, it can also be delivered by airfreight or helicopter.

# Produce directly on site today

Miba offers a broad range of mobile special machinery solutions

Mobile CNC machining units from Miba are used above all at power plants where large built-in parts need to be machined directly on site. This applies to both new construction and overhauls. Whether at hydroelectric power plants, wind power plants, nuclear power plants or conventional power plants, Miba has the right special machinery solution for your requirements. Miba is especially focused on the energy sector, from machining turbine housings in hydroelectric power plants to overhauling steam turbines or the large valves and fittings of nuclear power plants.

## Examples of specific uses:

- Housing construction for Kaplan and Francis turbines
- Flange machining and weld seam preparation of steel components
- Milling of tower units in wind power plant construction
- Overhaul of turbines in hydroelectric power plants
- Overhaul of throttle valve bearings and sealing surfaces in pumped storage power plants
- Special machining of valves and fittings even in the primary circuit of nuclear power plants



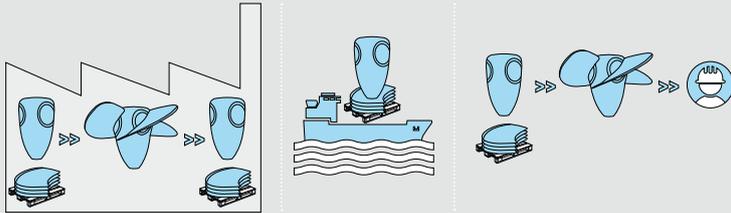
Mobile CNC Machining Center for hydro turbine housings



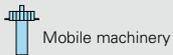
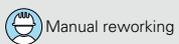
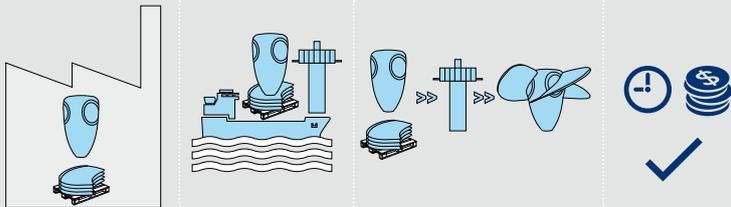
# Optimize your workflow

Mobile machining in direct comparison to stationary machining

Until now:



Now:



Miba makes short work of direct on-site machining – reducing processing times, increasing flexibility, saving transportation costs and at the same time improving the precision of machining. The intelligent system concept makes it possible to combine all the steps of machining, such as turning, milling, grinding, drilling and thread cutting.

## Example: Workflow optimization in the machining of turbine housing at hydroelectric power plants

(see on the left page)

**Until now**, turbine housing has, due to its transportation, been designed in dismantlable form, machined in a stationary manner, then dismantled, transported, reassembled and cast in concrete. This process often gave rise to deformations, which made time-consuming reworking necessary. Weeks of expensive repairs were needed to attain the turbine's required level of precision.

**Now**, the housing can be welded and immediately encased in concrete and fully machined on site with Miba's mobile special machinery. This makes it possible to shorten processing times and increase machining precision. This creates a twofold improvement in efficiency: installation costs are reduced and the efficiency of the turbines is increased.

# Discover a new dimension of manufacturing tolerances

Mobile machining – more precise than ever before

Miba has always stood for intelligent production technology and the greatest precision – and the same holds true when it comes to mobile machining. Miba online laser tracking makes it possible to constantly monitor and automatically correct machining steps in an ongoing process – online and in real time. This ensures minimal manufacturing tolerances with a flatness accuracy of  $<0.2$  mm for diameters up to 15 m. Thanks to this extremely high precision, wind towers can, for example, be built higher. This in turn makes wind power plants more efficient, fully harnessing the facilities' output potential.

“Through Miba's exact control technology, the combination of all the steps in machining and online laser tracking, our customers gain a real technological edge in power plant construction.”

**Josef Engl, Head of Design, Miba Automation Systems GmbH**



Powerful Mobile CNC Milling Machine for steel towers



## Our experience adds up to success

Miba is the global market leader in mobile CNC machining units for large components.

With more than 60 years of experience in the production of special machinery and over 20 sites in eleven countries around the world, Miba is a big, strong partner for you – especially when it comes to the individual, mobile special machinery solutions that competitive production and machining demand.

As part of Miba's New Technologies Group, Miba Automation Systems has access to the financial and human resources necessary to develop major special machinery projects and implement them worldwide together with you. In terms of service, too, Miba is working for you around the world – from installation to maintenance to extra support.

Miba delivers mechanical production solutions that are perfectly tailored to your individual needs. Talk to us about your special mobile machining requirements – we'll develop the optimal special machinery solution together with you!

# Innovation in Motion

**Miba Group** is an international owner-managed listed company that employs more than 4,300 people and produces technologically advanced and highly resilient power train components and special machinery.

**Miba Sintered Components** are high-precision, high-strength components used in car engines and transmissions.

**Miba Bearings** are crucial components that significantly affect engine function and service life.

**Miba Friction Materials** are decisive performance elements in vehicle clutches and brakes, optimizing speed and power.

**Miba Power Electronics Components** such as resistors and heat sinks are key to more efficient power trains and renewable sources of energy.

**Miba Special Machinery** enables high-precision and swift mechanical production of small to very large components.

**Miba Coatings** are used in components for engines, transmissions and other highly sophisticated applications.

## Contact Information

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