

# GENERATORS FOR SMALL HYDRO POWER PLANTS

G&Em s.r.o. is a dynamically developing company dedicated to the design and manufacture of electric rotating machines, specialized in generators for small hydro power stations.

We not only have extensive expertise and technical competences, but we also have many years of experience in the field. We continue to build on this history in the design of generators and electric motors with more than 40 years already under our belts. In addition to our own R&D, we cooperate with experts from technical universities and research institutes in finding very special solutions.

Technical qualifications and up-to-date production facilities enable us to fulfill all the customer's wishes with respect to generator implementation and long-term use.

Thanks to our modular design, we are able to submit binding dimensioned drawings of generators within 14 working days of signing the contract.

The average delivery time is 6 months.



## SYNCHRONOUS GENERATORS

Output: 100 – 8,000 kVA

Speed: 150 – 1,500 rpm

Voltage: 400 – 6,600 V

Protection: IP21 – IP56

Cooling: air, water (IC01 – IC81W)

Mounting: horizontal, vertical (incl. inclinations from the vertical)

Installation dimensions and free shaft ends according to customer requirements.

## ASYNCHRONOUS GENERATORS

100 – 1,000 kW

150 – 1,500 rpm

380 – 690 V



## Specialized in generators for hydro-electric power plants:

- Advanced design
- Careful workmanship
- High efficiency
- Long service life
- Reliable operation

## Generator design:

- Own calculations of electromagnetic circuits and their constant optimization
- Mechanical parts with 3D software – robust for catching the turbine forces
- Bearings from first-class manufacturers – roller, slide type
- Accessories – optional according to the project (voltage and cos-phi regulators, temperature detectors, speed sensors, transformers, filters, protections etc.)
- Easy maintenance – spacious terminal box and easily accessible parts

# PRODUCTION FACILITIES

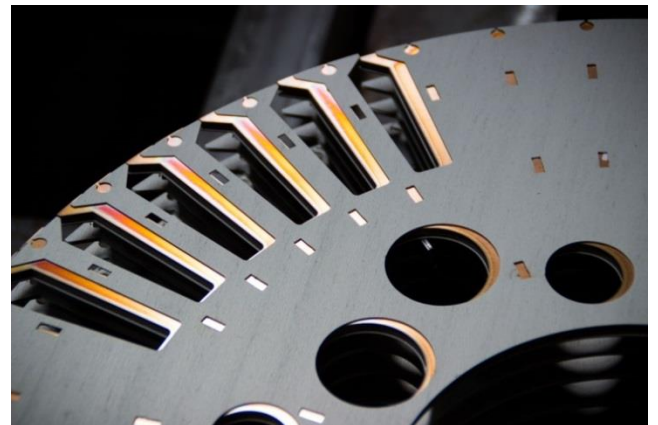
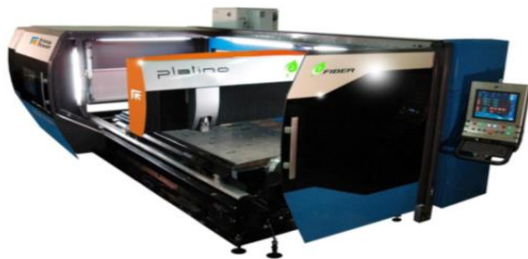
## 1. Production hall and premises

- New hall 54 x 18 m with equipment, total production area of 7,200 m<sup>2</sup>
- Production capacity is 100 machines per year

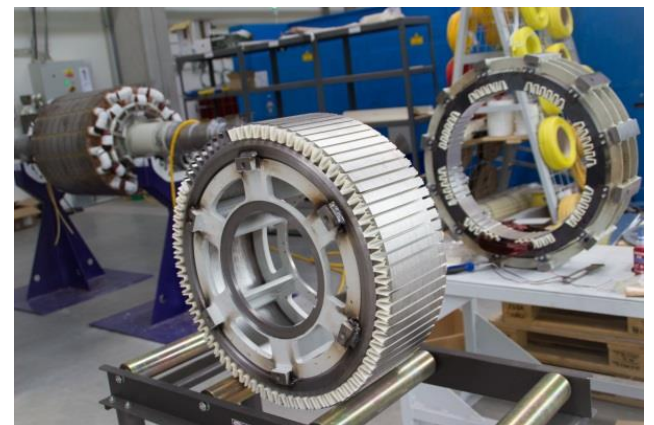
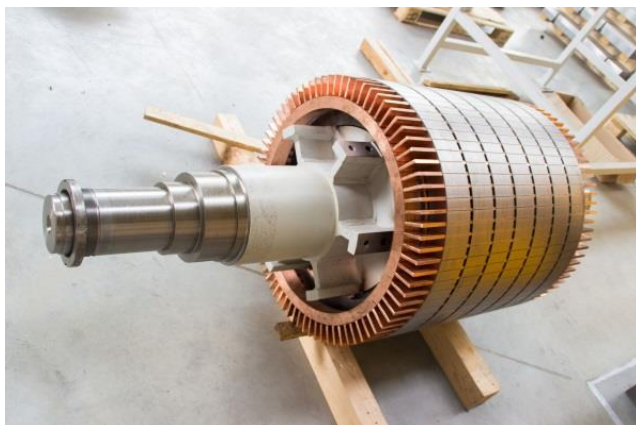


## 2. Laser cutting of sheets up to 5 mm thick

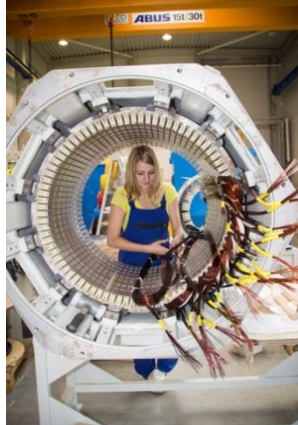
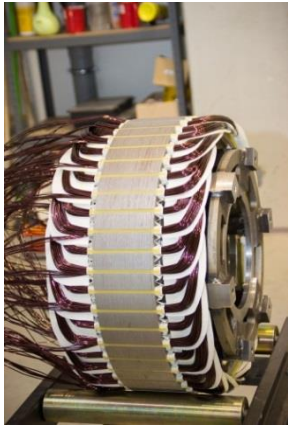
### Prima Power Platino *Fiber*



## 3. Stacking of rotors and stators



#### 4. Winding of rotors and stators



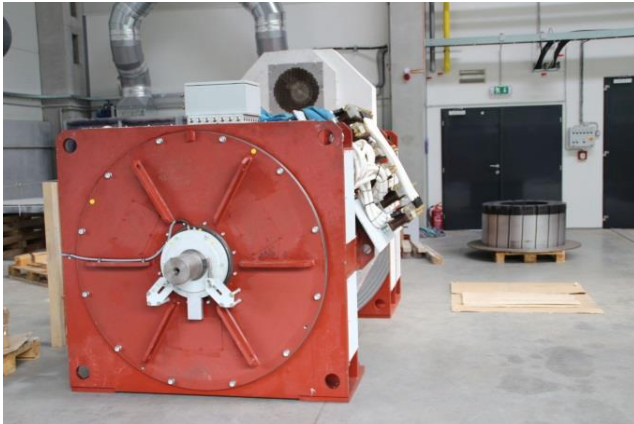
#### 5. Assembly - portal crane + auxiliary lift, total lifting capacity 42 tons



#### 6. Own test room with up to 5 MW output Testing of horizontal and vertical machines.



## 7. Paint and shipping room



## 8. Installation, service, technical support at the customer

Ideal service solutions– by the designer of the specific machine.

# REFERENCES

- Baumüller Nürnberg GmbH, Germany
- ČKD Blansko SMALL HYDRO, s.r.o., Czech Republic
- Energi Teknikk AS, Norway
- Fadum Tekniske AS, Norway
- HYDROHROM, s.r.o., Czech Republic
- Lifjellkraft AS, Norway
- Mavel a.s., Czech Republic
- Strojírny Brno, a.s., Czech Republic
- TURAB AB, Sweden
- Turbogen Engineering Sagl, Switzerland
- Vattenkraftbolaget Teknik AB, Sweden
- Vélaverkstæðið Árteigi, Iceland
- Voith Hydro GmbH & Co KG (Kössler GmbH & Co KG, Austria)
- Other references and contact persons on request

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