



GANZ

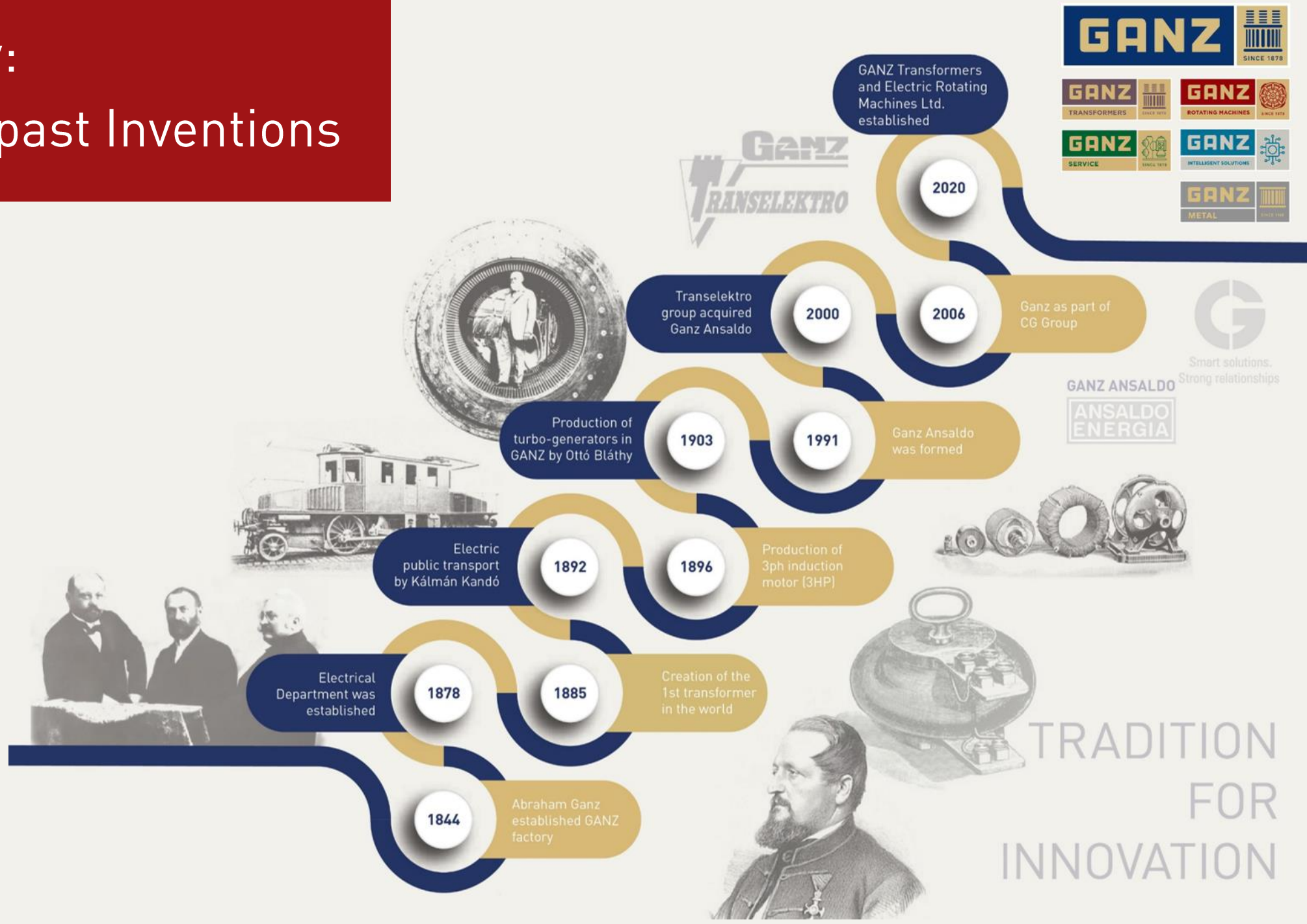
ROTATING MACHINES

SINCE 1878

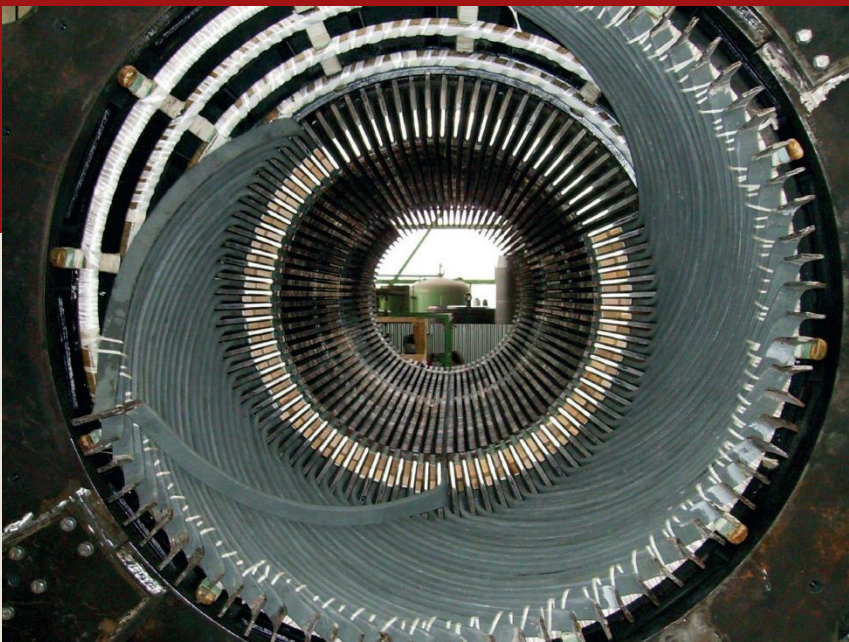
ELECTRIC MOTORS AND GENERATORS

**Ganz Transformers
and Electric Rotating Machines Ltd.**

GANZ History: The glorious past Inventions



TRADITION
FOR
INNOVATION



GANZ today

Renowned European manufacturing company
GANZ is a 100% Hungarian traditional brand, providing high engineered electrical products and solutions since 1878.

**State of the Art technology provides
standardized and custom based
solutions**

helping its customers with strong engineering,
production and service capability

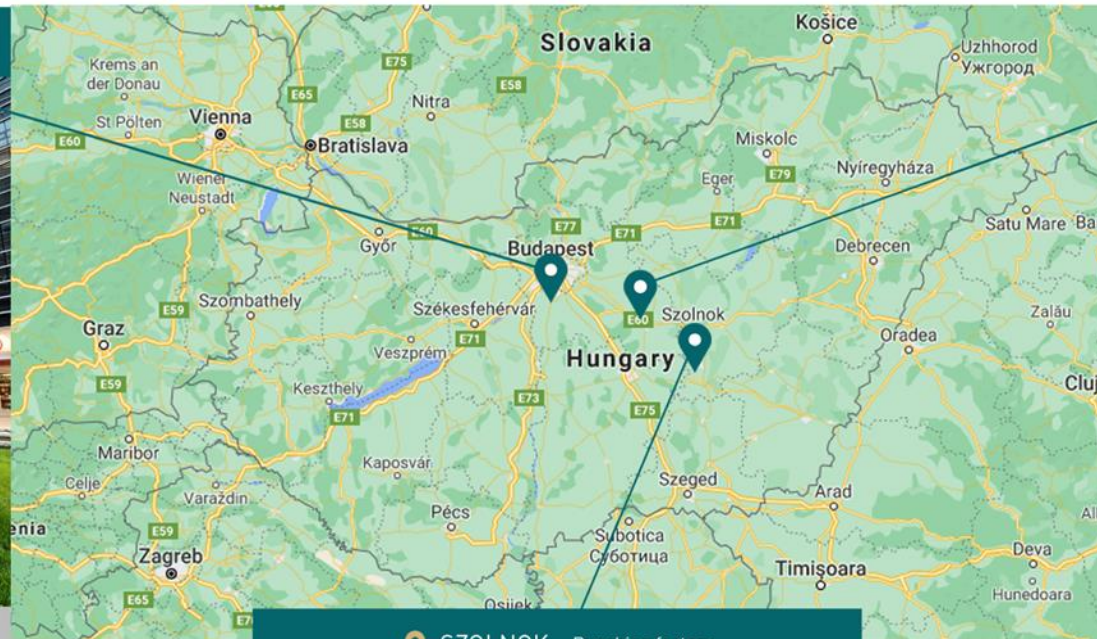
Unique & diverse portfolio

- Transformers
- MV Induction Motors
- Synchronous Generators
- Services

GANZ locations

The base of production remains at Tápiószele site, as one of the most modern heavy machinery facilities in Europe. (41000 m² factory)

BUDAPEST Central Administrative Functions | Sales | Design | Purchase



SZOLNOK Punching factory

TÁPIÓSZELE Transformer and Rotating Machines Factory – 41.000 m²



1095 Budapest, Soroksári út. 30-34.

- Central administrative functions (Head Office)
- Finance, PM
- Sales
- Design

Szolnok – Metal Works

- Metal factory
- Steel structure manufacturing

2766 Tápiószele, Györgyei út 14.

- Transformer, Electric Rotating Machine manufacturing
- Purchasing
- Service
- Logistics

GANZ factory

The base of production remains at **Tápiószele** site, about 90 km from Budapest, as one of the most modern heavy machinery facilities in Europe. (41000 m² factory)



Product scope



63 - 600 MVA
72,5 - 800 kV



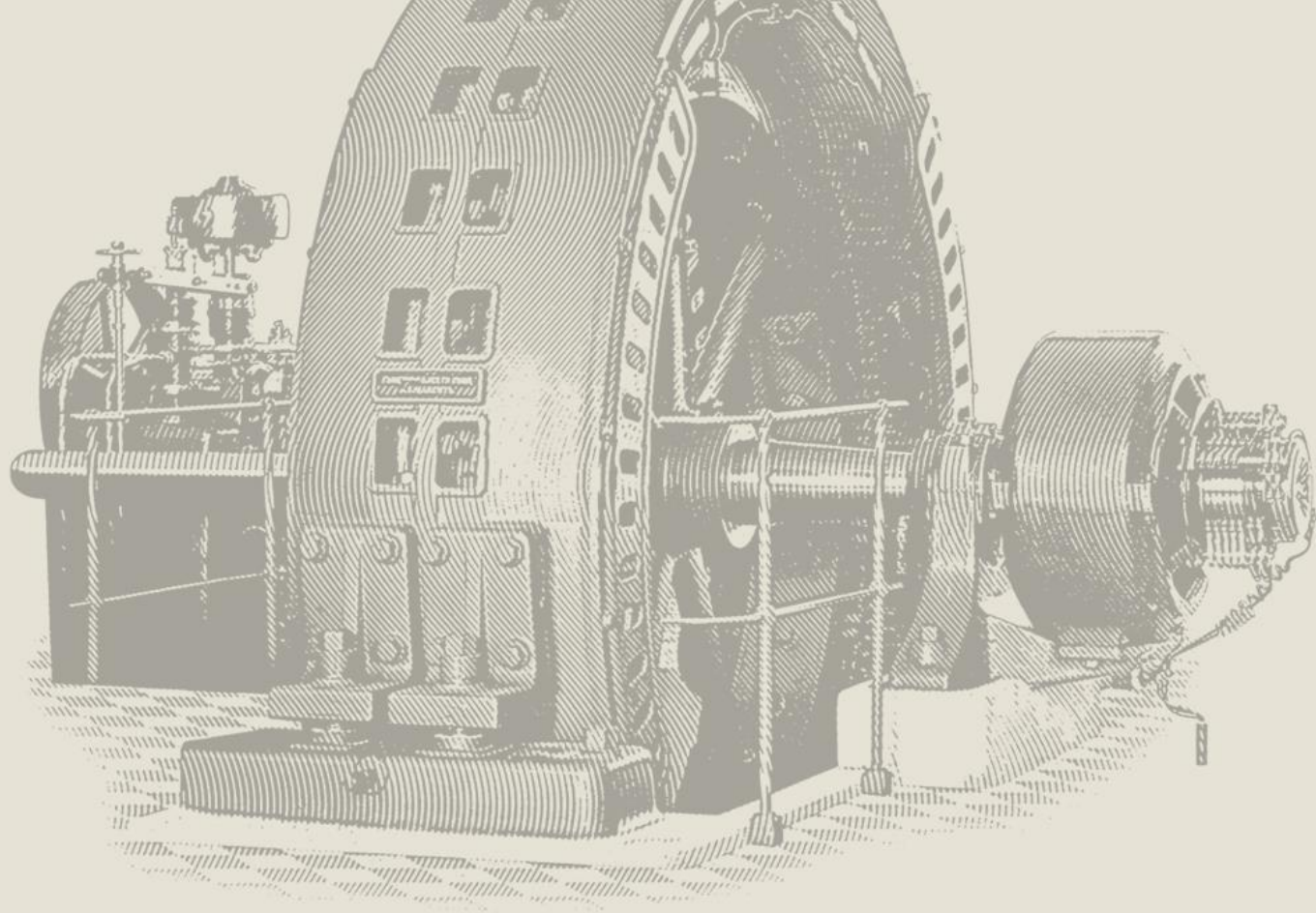
Asynchronous Motor
500 kW - 20 MW
Synchronous Generator
1 - 70 MVA



Services of
Transformers,
Rotating Machines,
GIS



GANZ
Intelligent Solutions
monitoring system



GANZ

ROTATING MACHINES



SINCE 1878

GANZ ROTATING MACHINES

Product portfolio



ELECTRIC MOTORS



500 kW - 20 MW
Induction Motors

GENERATORS



1 - 70 MVA
Synchronous Generators

SERVICES



Motor & Generator
Refurbishments

RM: Capabilities and market

Generators
upto 50MVA

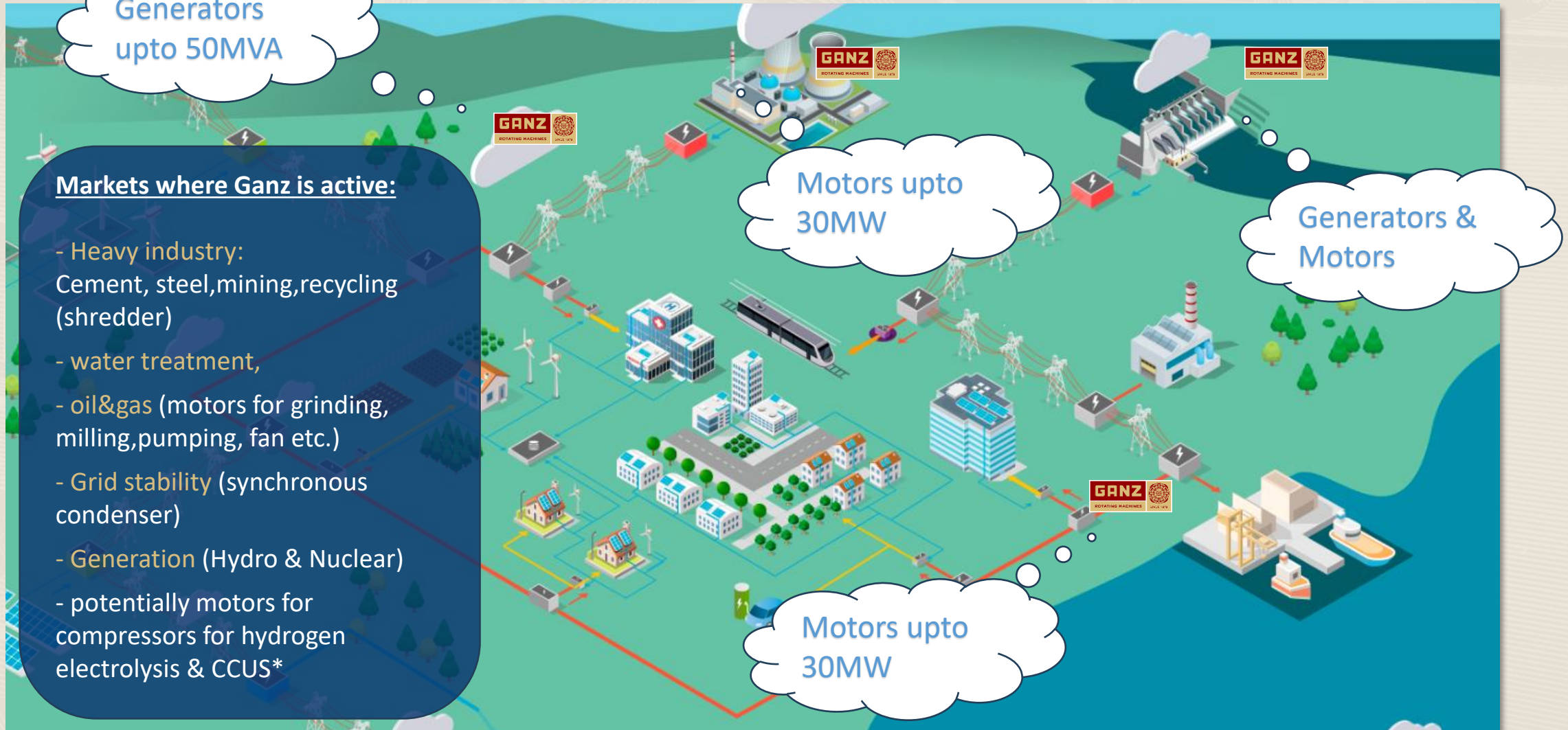
Markets where Ganz is active:

- Heavy industry:
Cement, steel,mining,recycling
(shredder)
- water treatment,
- oil&gas (motors for grinding,
milling,pumping, fan etc.)
- Grid stability (synchronous
condenser)
- Generation (Hydro & Nuclear)
- potentially motors for
compressors for hydrogen
electrolysis & CCUS*

Motors upto
30MW

Generators &
Motors

Motors upto
30MW



PRODUCTION FACILITIES



SHOP FLOOR

- ⊕ 12500 m² area
- ⊕ Own facility for laminations
- ⊕ Up-to-date technology (Design, Own manufacturing system, Insulation system, Testing)



INHOUSE MACHINE AND WINDING AREA

- ⊕ Diameter 5 m and Height 3 m machining
- ⊕ Area ideal to accommodate large capacity machines



COIL SHOP

- ⊕ Own Coil shop - employs resin rich & VPI insulation process
- ⊕ Looping, forming, stretching and coil heat treatment machines

PRODUCTION FACILITIES



VPI

- ⊕ The VPI insulation system (Micasytem)
- ⊕ Machines up to 2 m outer core diameter



ROTOR SHAFT MACHINING AND BALANCING

- ⊕ Inhouse shaft machining
- ⊕ Inhouse balancing machine for 50 tons Rotor, capable at 3600 rpm



ASSEMBLY

- ⊕ Crane capacity of 100 tons
- ⊕ Testing in horizontal / vertical configuration possible

General applications & markets

- Oil & Gas Industry
- Cement Industry
- Steel Industry
- Mining
- Nuclear Power Stations
- Desalination Plants
- Pumping Stations
- Thermal Power Stations
- Hydro-Electric Projects
- Steam/Gas Power Plants



Special applications



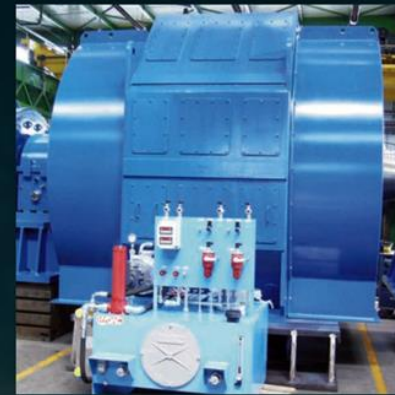
SHREDDERS



WOUND ROTOR MOTOR
WITH BRUSHLIFTING



GAS TURBINE
STARTING MOTORS



TEST BED
APPLICATIONS



BULB GENERATORS

References



Synchronous Condensers



Kazincbarcika TPP, Hungary
ON 1300x1250/6 11500 kVAr
6300 V 1055 A 50 Hz 1000 rpm

- Up to 50 MVar per machine // modular systems
- Up to 500MWs stored energy / flywheel
- Additional flywheels
- 350MVA short circuit power / unit
- Starting (pony) motor
- Couplings
- Base frame for pony motor
- Stools for flywheel bearing

- Static Excitation System
- VFD for pony motor (LV and MV)
- Oil lubrication system for machines
- Air coolers
- Pump unit for cooling water

GANZ SERVICE

Service Business Unit performs both factory based and on-site work for the company's products as well as products from other manufacturers in the form of

- maintenance,
- inspection,
- renovation, and
- upgrading.

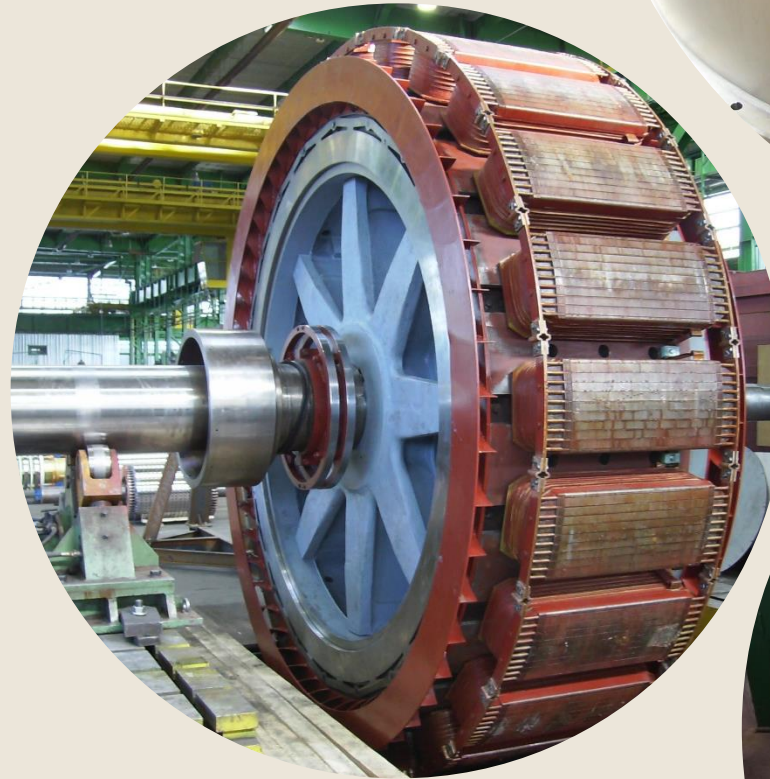
Thanks to our advanced instrumentation and trained workforce, we can also perform **preventive and fault-finding and measurements on site**, thus reducing maintenance / downtime, keeping the interests of the service provider in mind.

In addition to the on-site service, spare parts manufacturing is also offered.



RM Service

- Refurbishment/overhauling for motors and generators
 - in factory
 - at site
- 3rd party testing
- Main component parts (stator, rotor)
- Spare parts (slipring assembly, coils, other components etc.)





RM SERVICES CAPABILITIES

TURBO GENERATORS

- ⊕ Until 250 MVA 2 pole or 4 pole types
- ⊕ Performed at Site as well at Factory
- ⊕ Works mainly include
Removing old windings, Renewing the old stator bars, rewinding, core re-lamination, rotor works

HYDRO GENERATORS

- ⊕ Small and large generators until 100 tons
- ⊕ Performed at Site as well at Factory
- ⊕ Works mainly include
Stator rehabilitations (core, windings),
Rotor rehabilitations

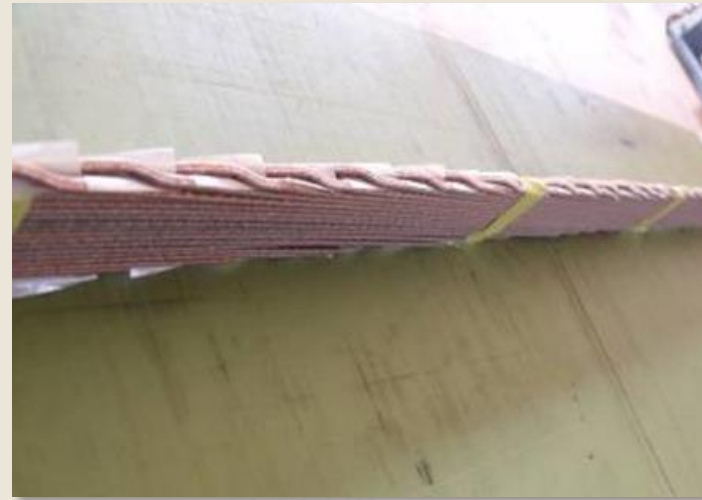
AC & DC MOTORS

- ⊕ Large Motors for special applications
- ⊕ Performed at Factory
- ⊕ Works mainly include
Stator rehabilitations
Rotor works

RM Spare Parts



Slip ring set for rotor



Roebel bar for generator stator



Salient pole for generator rotor

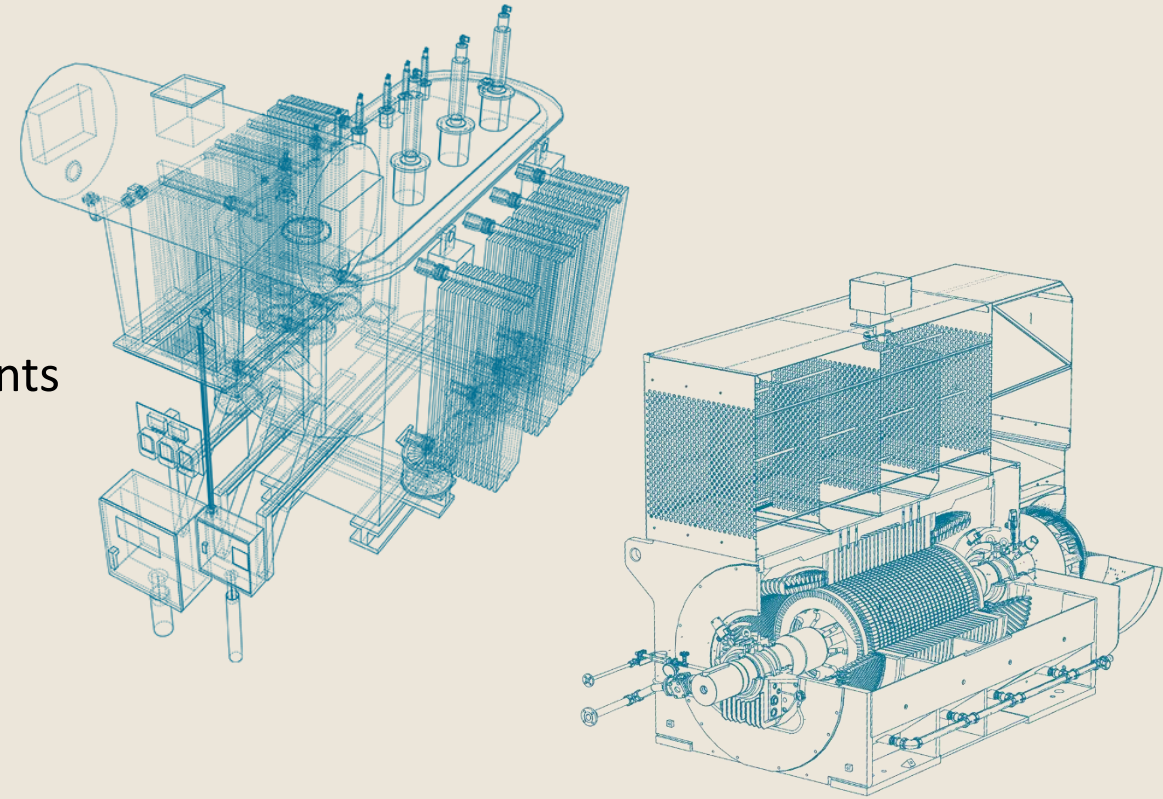
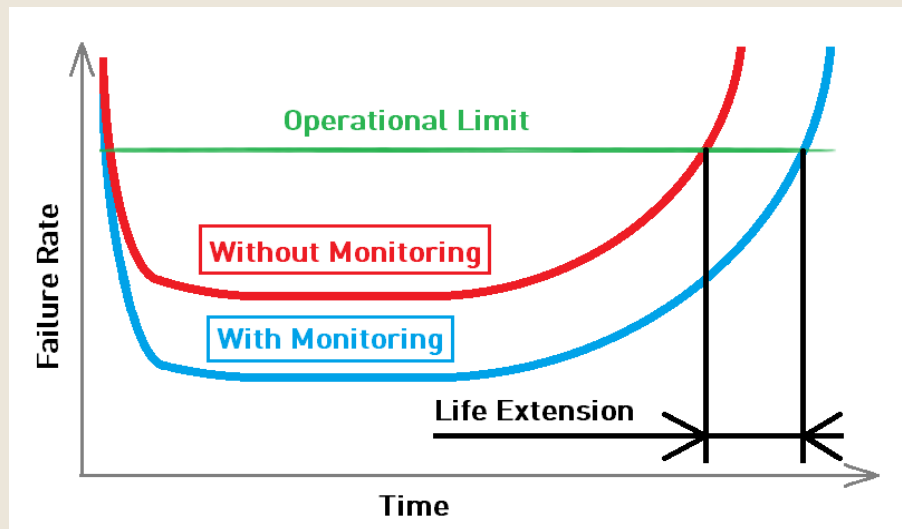


Coil set for stator windings

GANZ Intelligent Solutions - Digitalization Solution by GANZ

Main advantages of use

- Avoiding Critical Failures – detection at an early stage
- Reducing the duration and frequency of unplanned downtimes
- Predictive maintenance and replacement of components
- Access to Digitalization features



Solutions for Power Transformers and Rotating Machines

with cutting-edge technology!

Rotating Machines (packages)

iReady

- Temperature Monitoring (Winding, Bearing)
- Vibration Monitoring

iStandard

- Accessories Digitalization
- Cooling and Lubrication Monitoring

iAdvanced

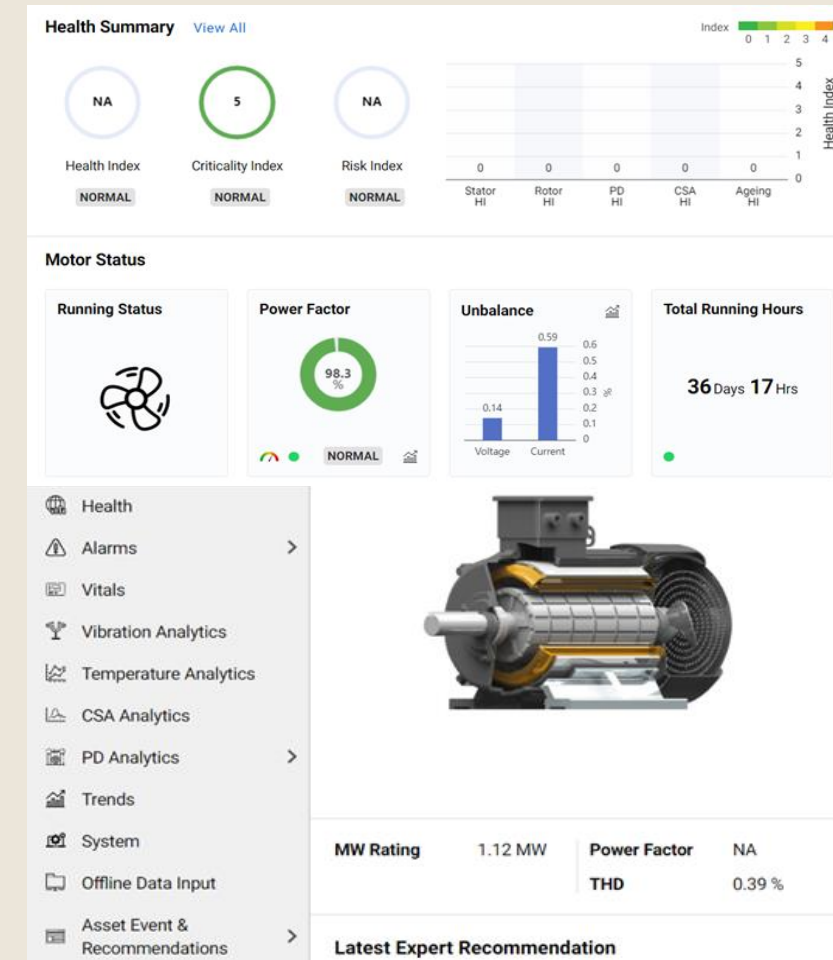
- Partial Discharge Online Monitoring
- Multi-Parameter configurations

Optional features

- Brush Wear – Pre-indication or Continuous Monitoring
- Current Signature Analyzer
- RPM Monitoring
- Fiber Optic Temperature Measurement



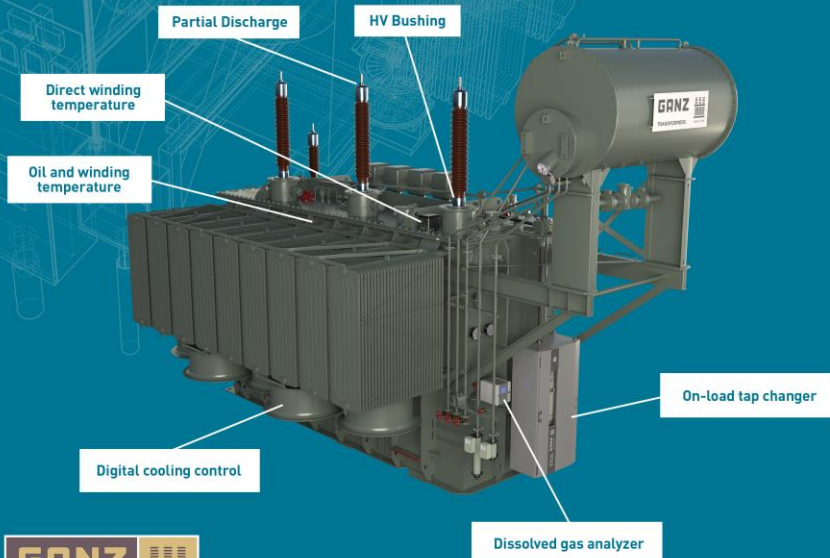
Apart from the packages, GANZ offers ***tailor-made solutions*** as well!



the new generation of transformers and electric rotating machines
equipped with digital monitoring system



Monitoring in Transformers



Monitoring in Motors & Generators



Growth plan now and in the future



In the past years we have been able to **triple our manufacturing output** and the number of our **employees** have **increased by 40%**



Also for the coming years, we expect this growth to continue, where we expect the **output to double till 2025** and also increase our employees by another 40%.



Significant growth in the **Service** and **Rotating Machines** is planned.

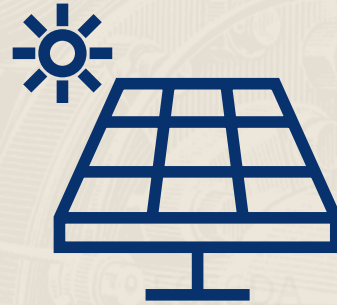


Environmental, social, and corporate governance

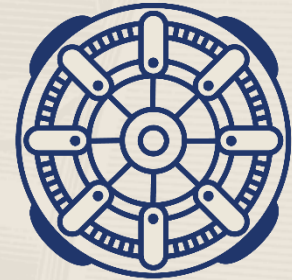
The investments till now and in the near future



A total of **13Meuro** has been invested since the restart in 2020.



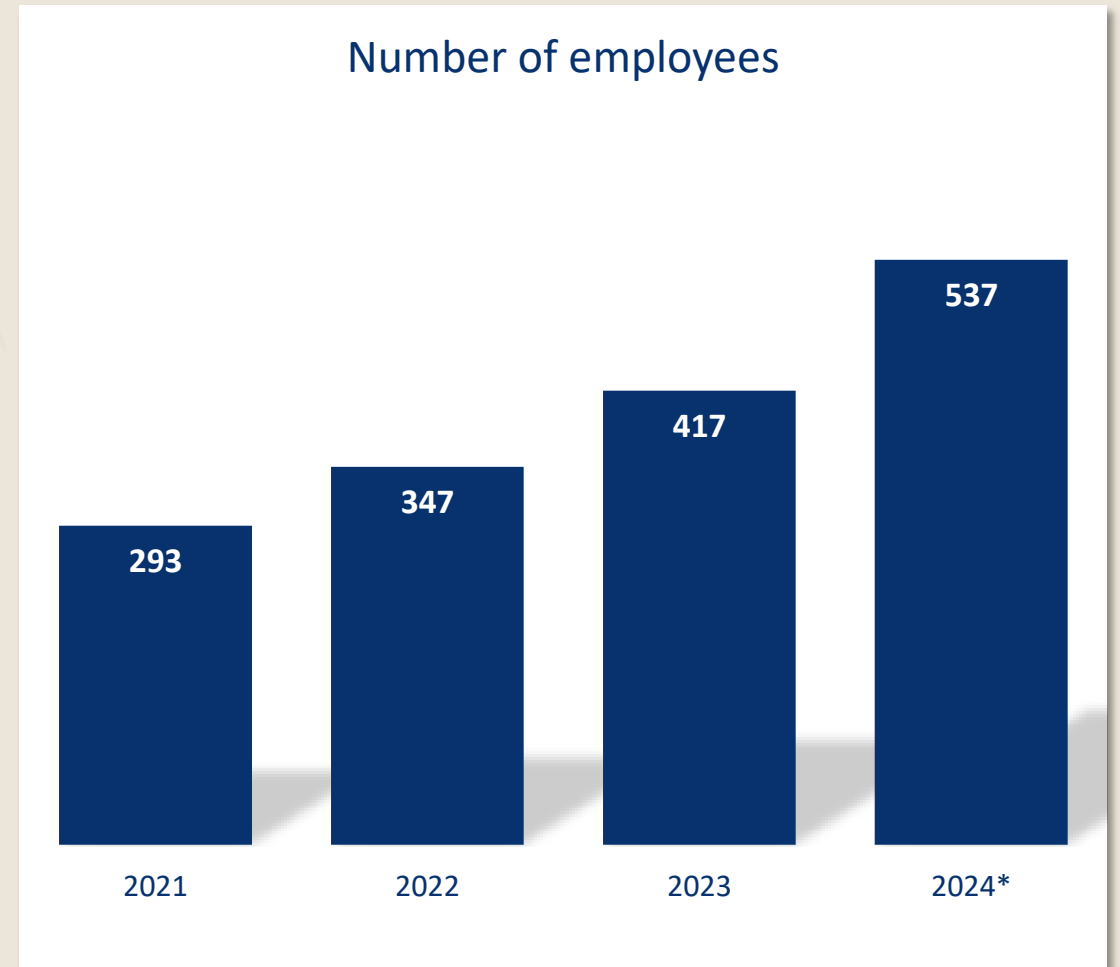
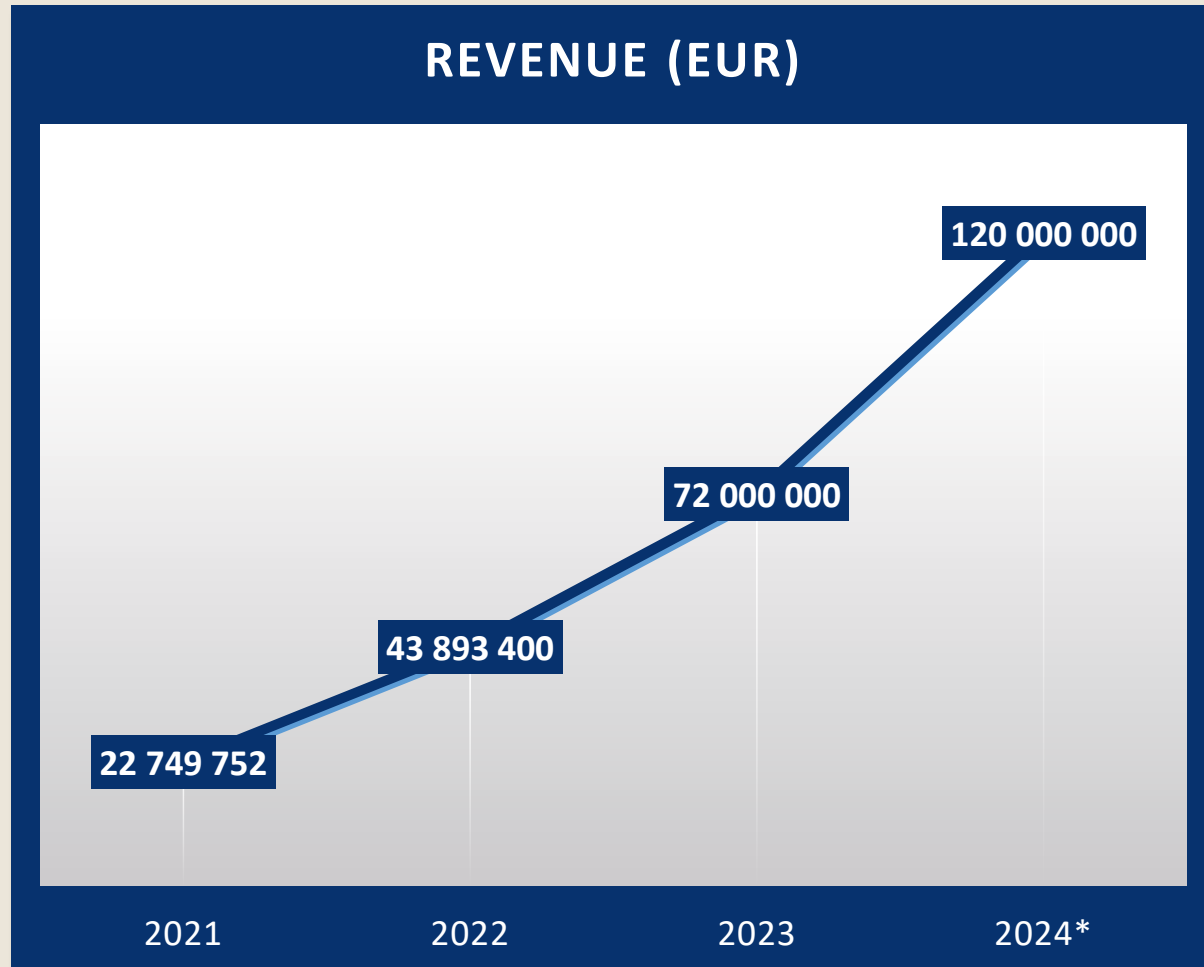
10Meuro will be invested in the coming 18 months in building a **2MW solar park**, improve buildings, and other energy efficiency improvement projects



14Meuro investment in our **Rotating Machine** will be executed in the coming 24-30 months

Project is called RM 2.0

GANZ numbers



Restart of steel structure production in Szolnok

- Ganz restarted the **steel structure production** in **Szolnok** in H1 2023.
- Strengthen the **supply of steel structure needs** of the transformer and rotating machine production
- New – Ganz subsidiary – company to bring to the surface the passive experience in **metal structure production**
- Around 50 new workplace on the **Szolnok** site in the 1st phase
- **4Meuro** investment to increase efficiency



The Ganz Energy Optimization Program



Total **10Meuro** investment

Increase in-house energy generation **2MW PV**

Reduce natural gas consumption in short term with **electrification** of the technology

Energy storage and smart operation

Decrease of total energy consumption with building insulations, efficiency improvements
→ ~ 40%

Eliminate fossil fuels from the operation in long term, in-line with EU ambitions

Why GANZ?

GANZ

ROTATING MACHINES



SINCE 1878

Competitive delivery times

Best value for money products

High quality tools, equipment and skilled professionals for testing, repairing and manufacturing transformers

Excellent engineering team

145 years market experience

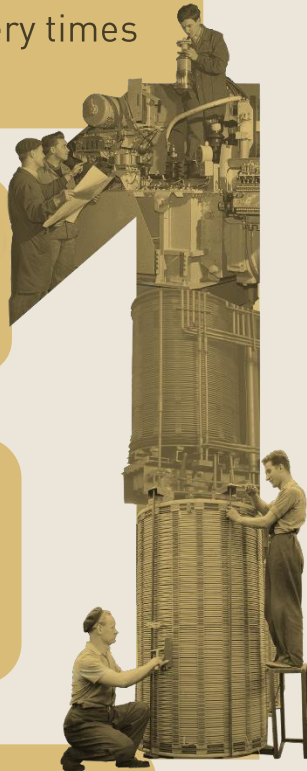
International experience, projects in 40 countries

High degree flexibility in design and construction

Tailor made solutions satisfying special requests

Proven technical solutions

Manufacturing facilities are modernized and in-line with Western European quality standards



„TRADITION FOR INNOVATION“

GANZ is looking forward to working with you!

Visit our website



www.ganzelectric.com

Visit our LinkedIn page



[Ganz Transformers and Electric Rotating Machines Ltd. | LinkedIn](#)

Write us



Sales:

lajos.harai@ganzelectric.com

(RO, IE, UK, HR, Scandinavia)

attila.maglodi@ganzelectric.com

(DE, AT, BX, PL)

gabor.godla@ganzelectric.com

(KZ, KG, CZ, SK, IT, CH, EG, UAE, Africa)

andras.polonyi@ganzelectric.com

(HU, ES, PT, IL, Baltics)

Service Sales: zsofia.guth@ganzelectric.com

Head of Sales: tamas.enyedi@ganzelectric.com

Business Development Manager: miklos.marczis@ganzelectric.com

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