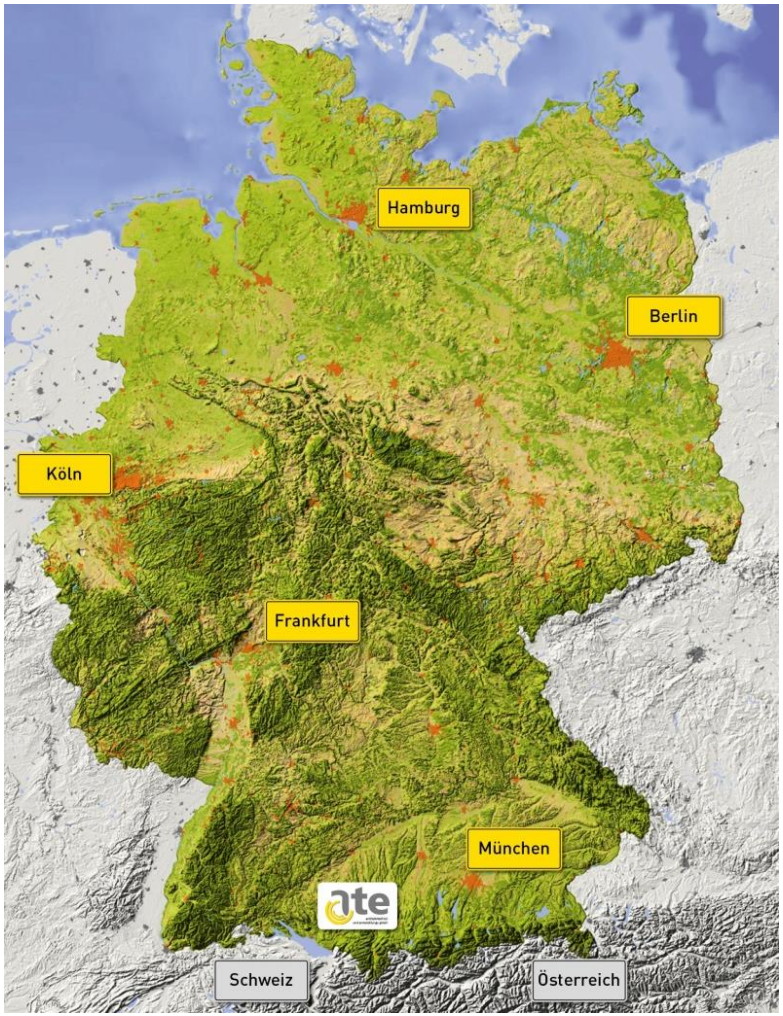
There is a driving power that makes our motors the best: us

ate
antriebstechnik
und entwicklungs gmbh

ABOUT US

Where we are



History / Milestones

2000 „ate" foundation by four owners

2004 ISO 9001 certification

2007 Investment in Laser Cutting Centre and Vacuum Moulding System

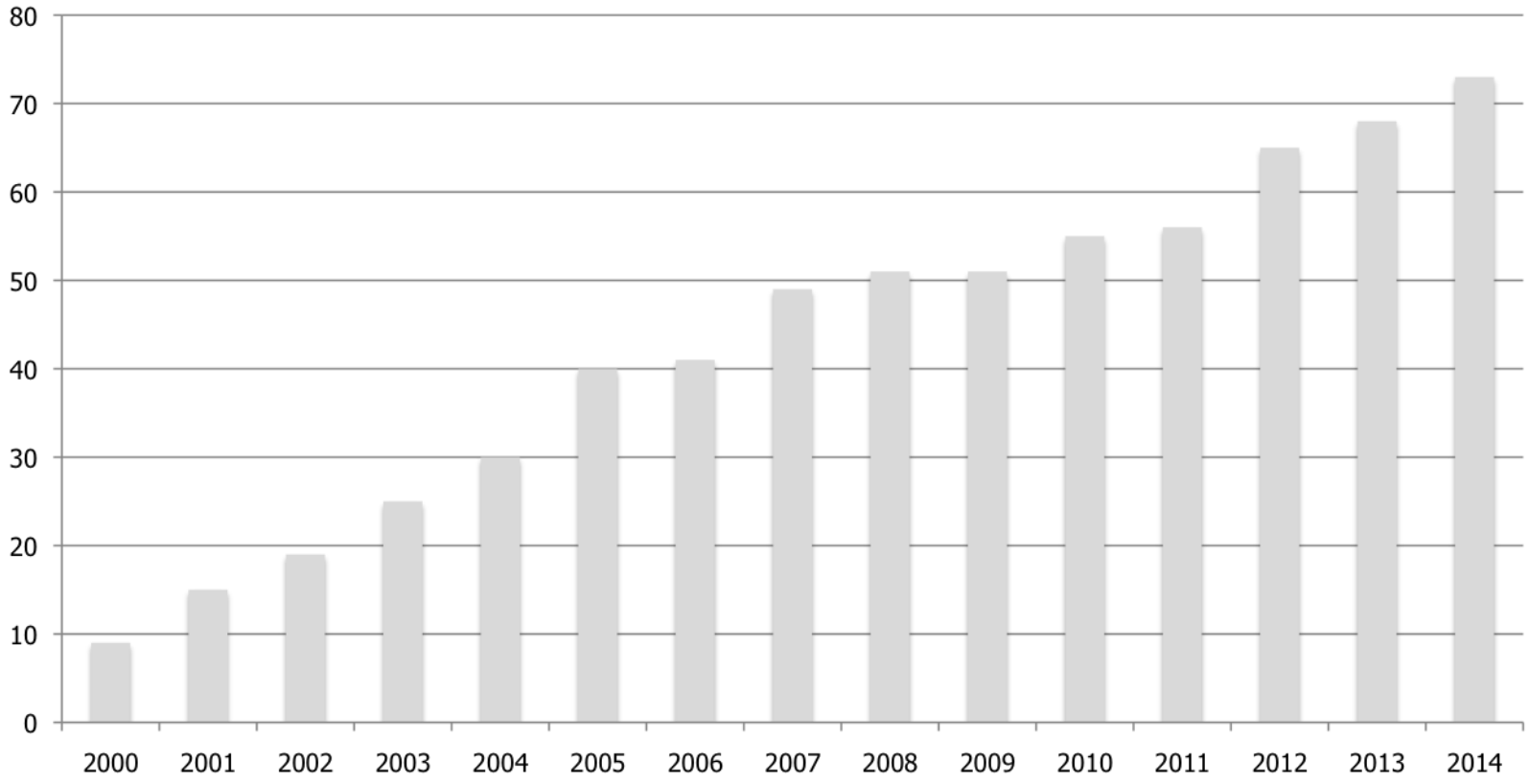
2008 Micro drive with 1 Mio. rpm = World record

2012 Launch of the new product lines „FS" and „RL"

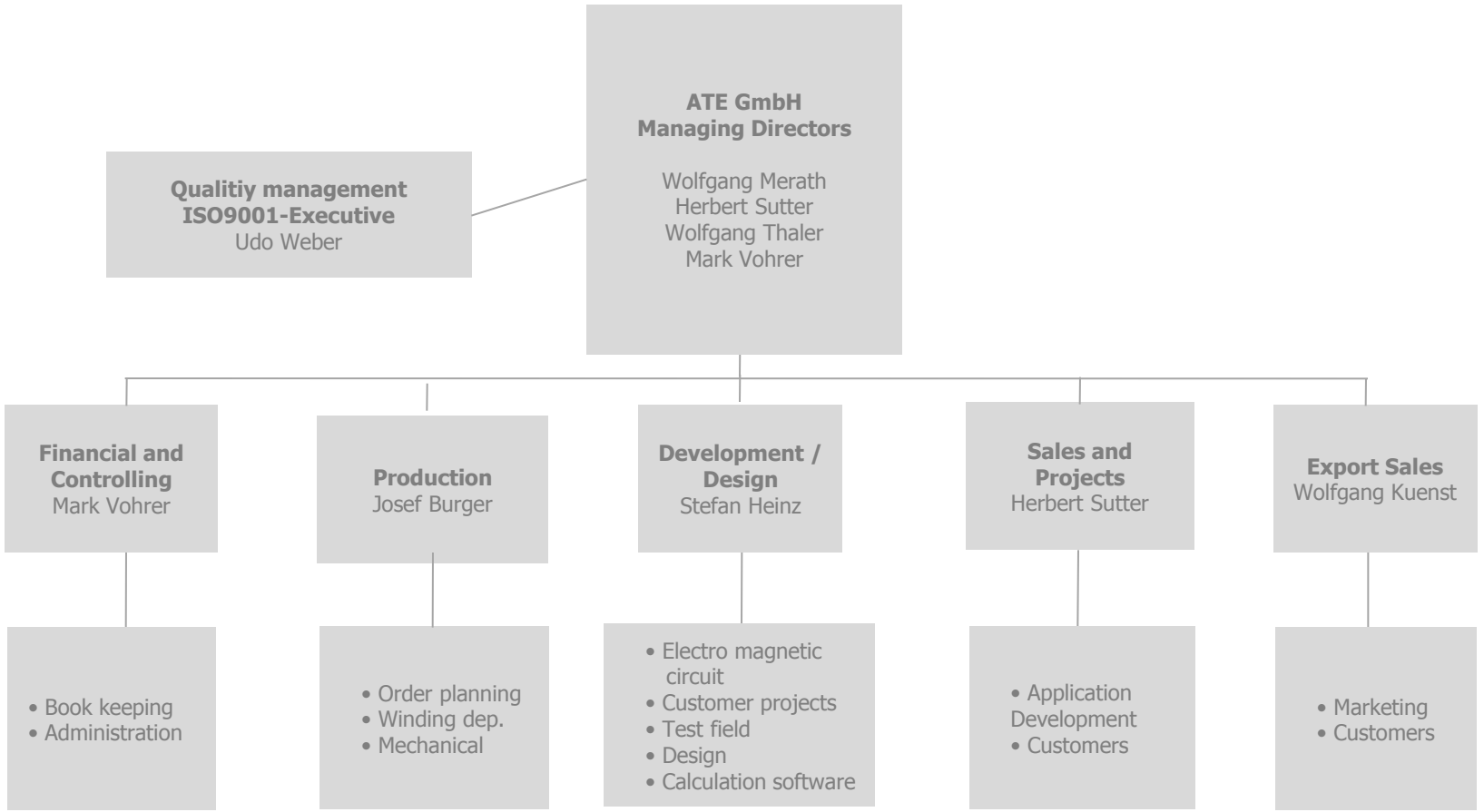
2013 Movement in new facility

2014 ATE´s „biggest" Motor Ø 1.600 mm, 300 kW

Employment development



ATE organization diagram

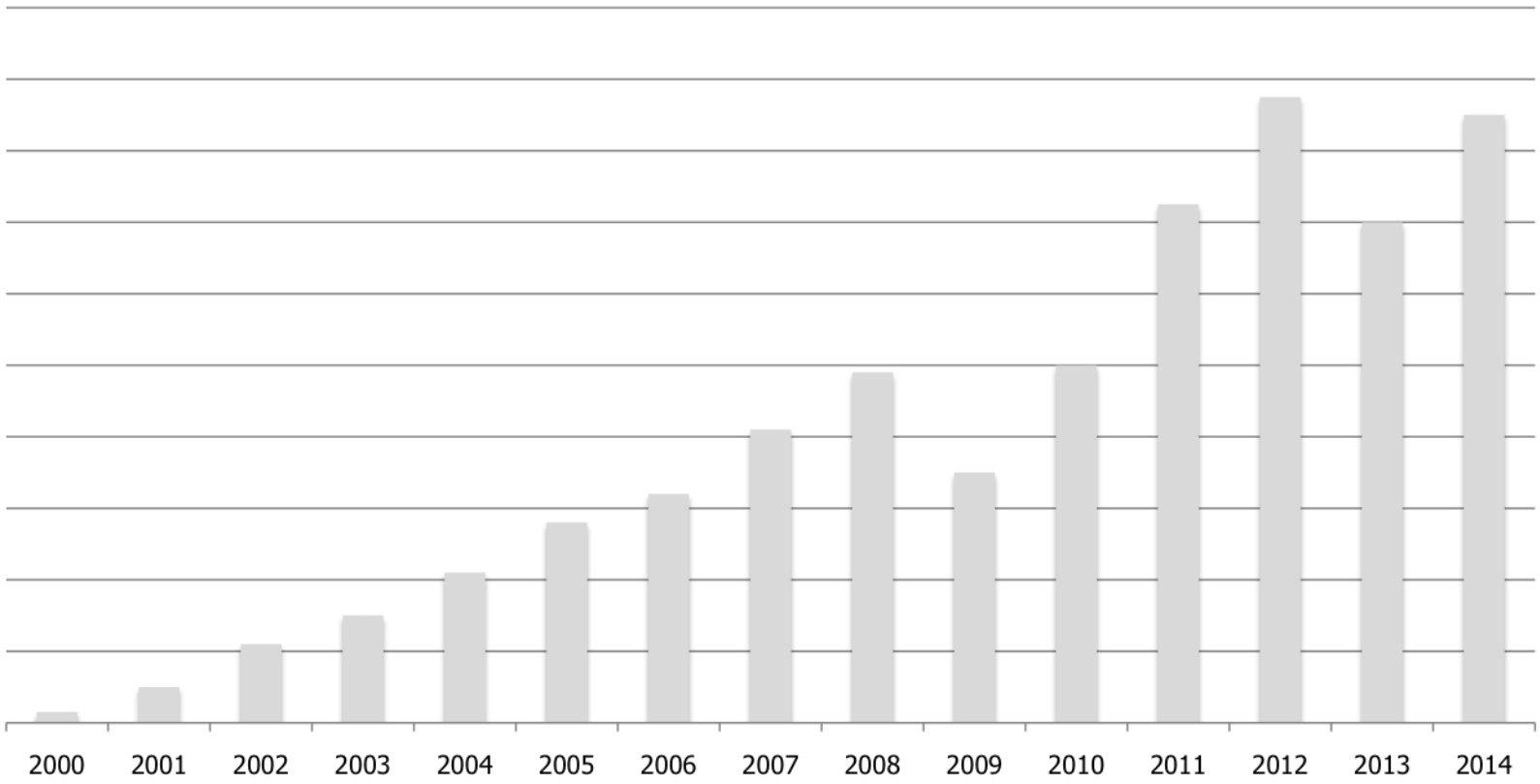


General information

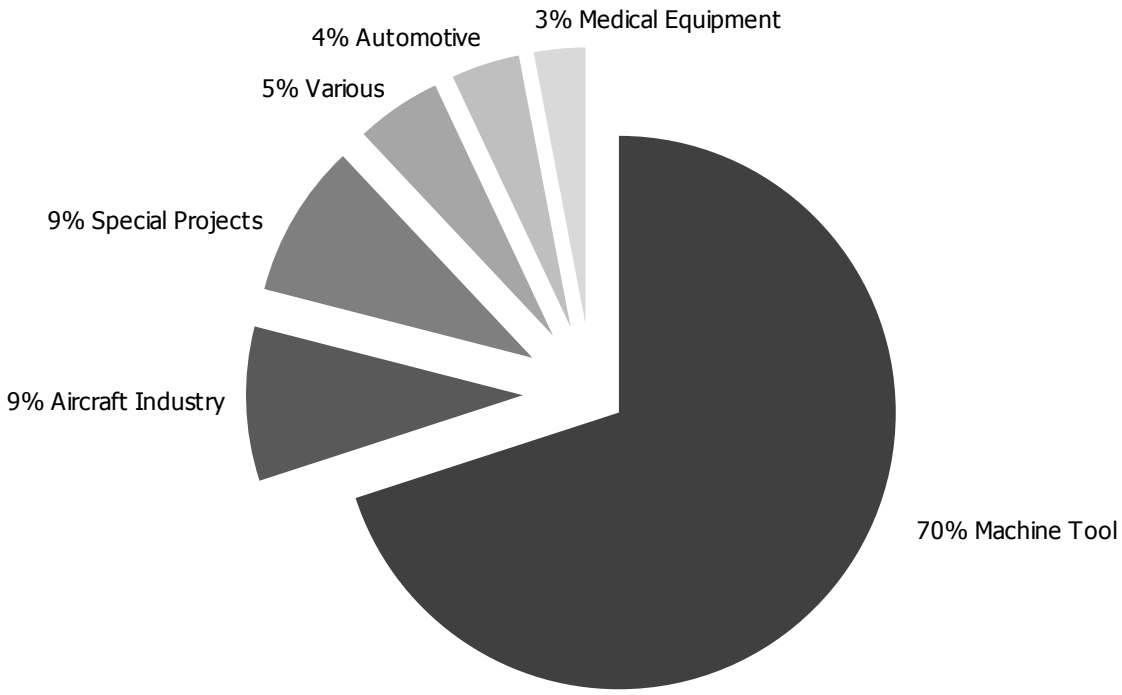
Employees

- Development: 10
- Sales: 6
- Production planning and logistics: 6
- Production in total: 51
  (30 winding dept. / 21 mech. dept.)

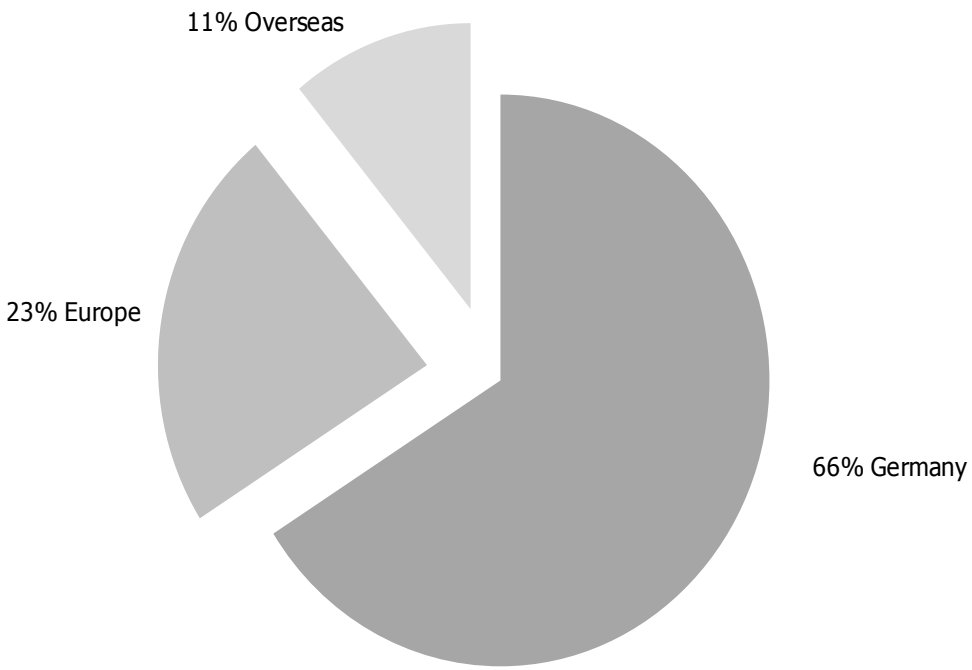
Turnover development



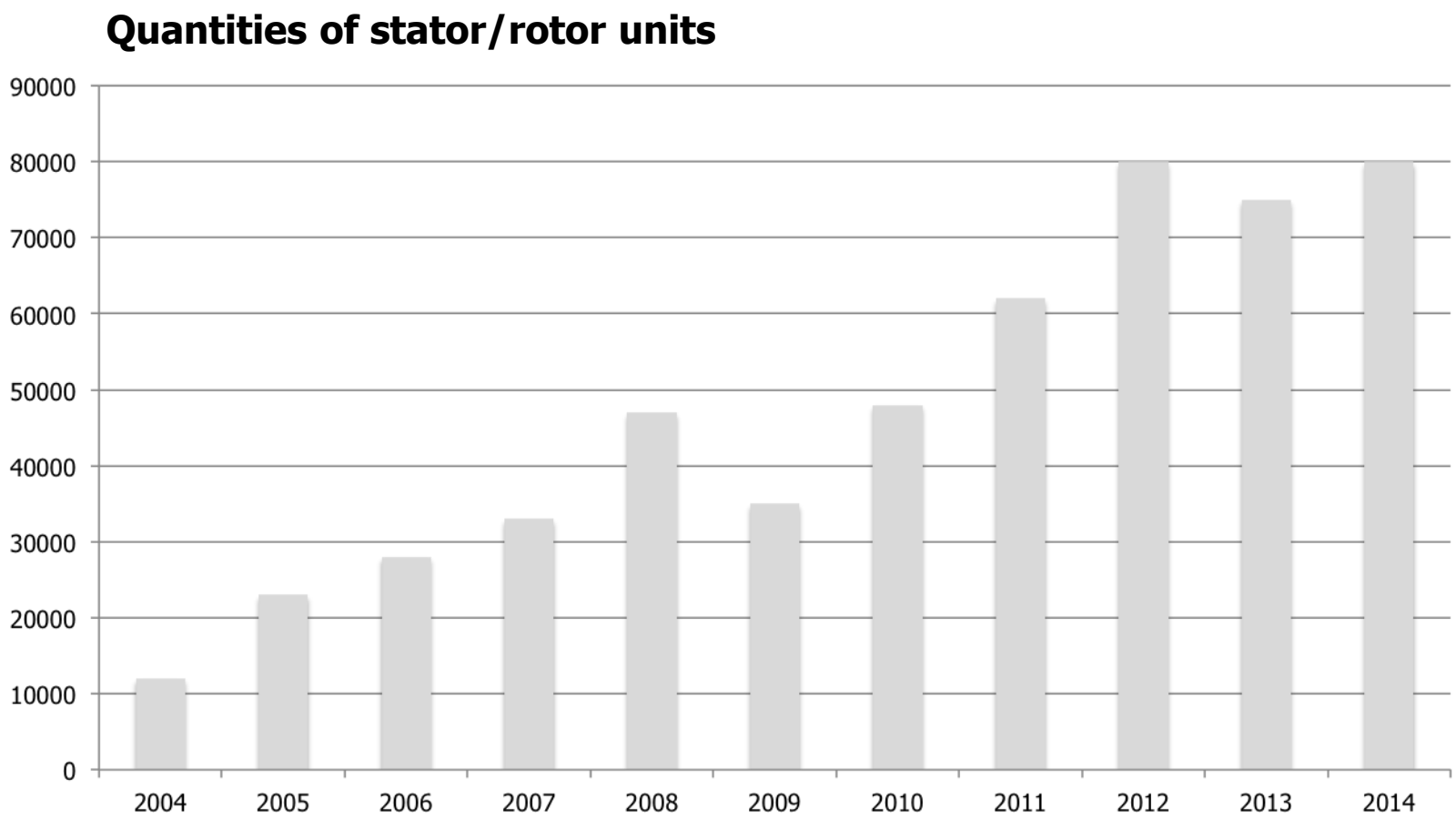
Turnover distribution in applications



Turnover distribution in markets

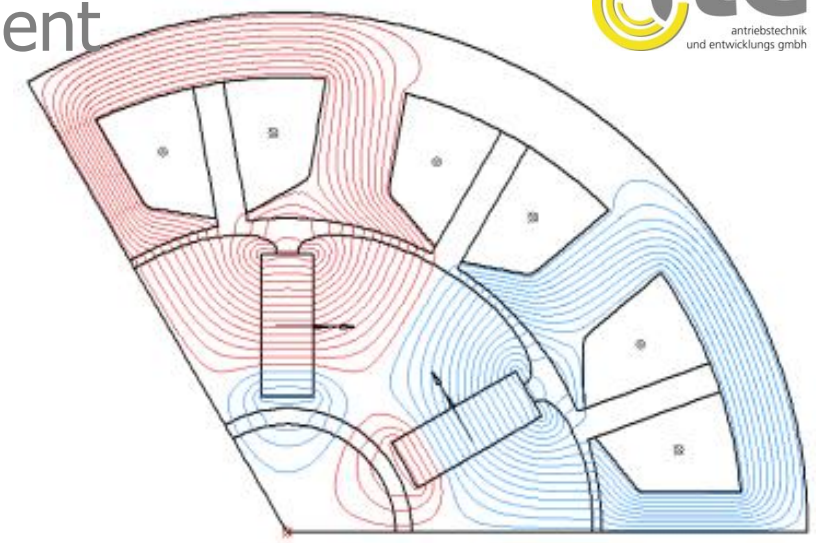


Manufactured quantities

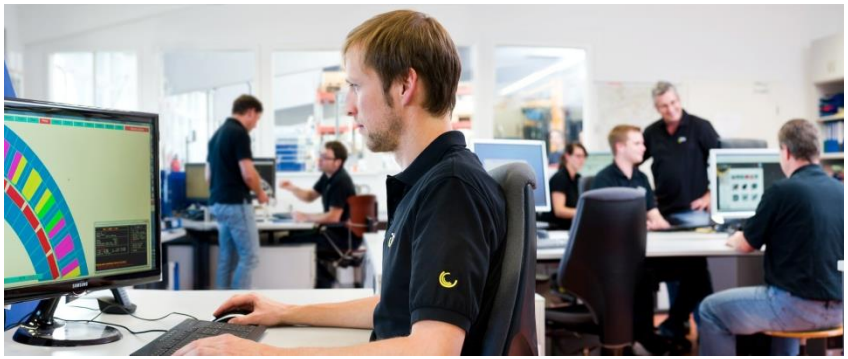


DEVELOPMENT & PRODUCTION

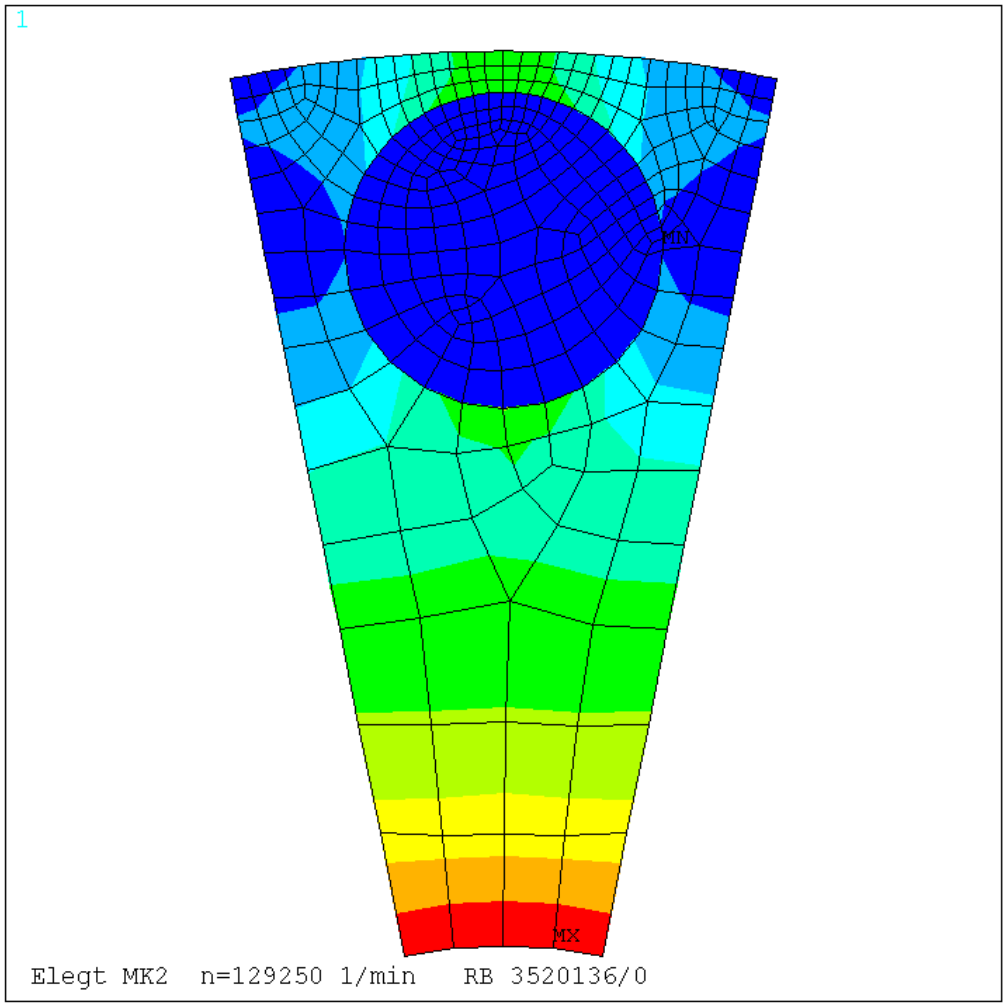
Engineering and Development



- Calculation of the electrical drives with ATE owned written software tools
- Finite element software tools for the design of electrical machines
- Mechanical stability calculation (analytic and with finite element)
- Taylor made designs(CAD)



Example for Stability Calculation



ATE machinery and manufacturing possibilities

Mechanic

- Mechanical Lathe
- NC Lathe
- CNC Lathe
- External grinding machines
- Internal grinding machines
- Milling machines
- Honing machines

ATE machinery and manufacturing possibilities

OTHERS

- Moulding equipment under vacuum
- Laser cutting machine
- Varios coil winding machines
- Welding and soldering
- Various test equipment
- Test field with torque and power measurement equipment

PRODUCTS
& APPLICATIONS

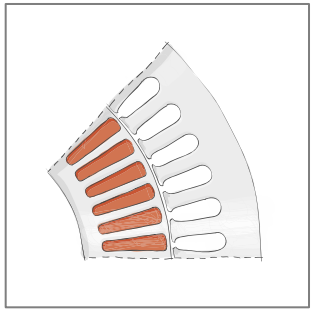
Induction Motors (AC)

Stator diameter:	24 – 580 mm
Speed range:	up to 300.000 rpm
Shaft power:	up to 500 kW
Cont. torque:	up to 5.000 Nm

Stator standard impregnated

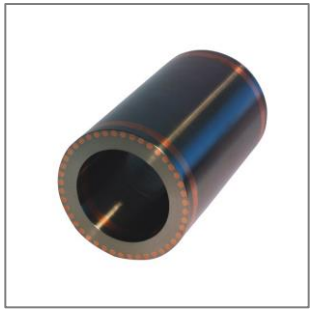
Stator excluding cooling jacket

Stator including cooling jacket

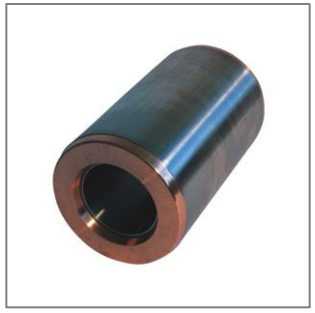


Sectional view AC motor aluminum casted or copper barred or copper casted

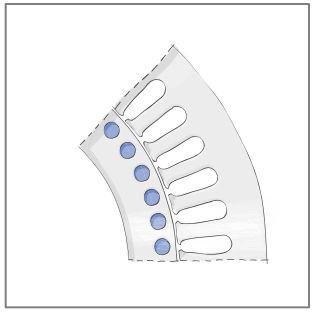
Aluminum rotor



Copper barred



Copper casted



Sectional view AC motor copper barred or copper casted

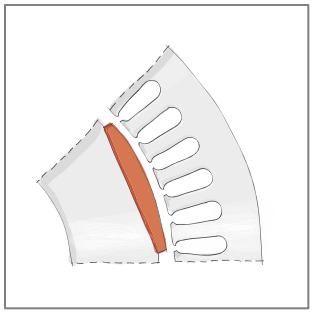
Permanent Magnet Motors (DC)

Stator diameter:	8 – 900 mm
Speed range:	up to 1.000.000 rpm
Shaft power:	up to 500 kW
Cont. torque:	up to 5.000 Nm

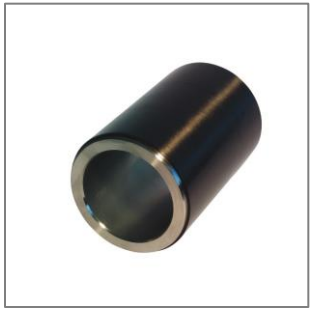
Stator standard impregnated

Stator excluding cooling jacket

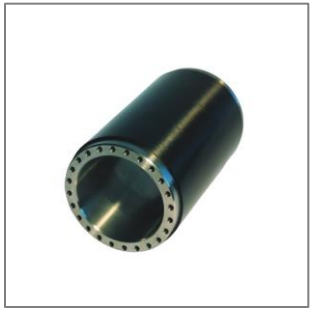
Stator including Cooling jacket



Sectional view DC motor with surface magnets (loaf)

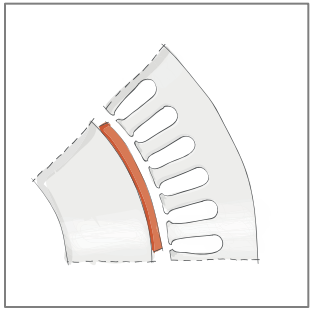


Permanent magnet rotor assmbled on sleeve and retained



Permanent magnet rotor assembled on magnet carrier and retained

Permanent magnet rotor assembled on shaft and retained



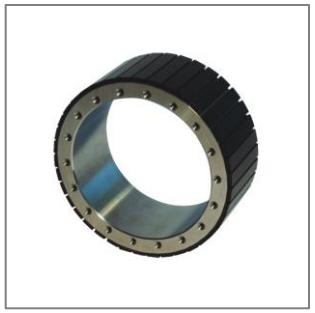
Sectional View DC motor with surface magnets (shell)

Torque Motors (MS/AL)

MS = Modular Synchronous / AL = External rotor

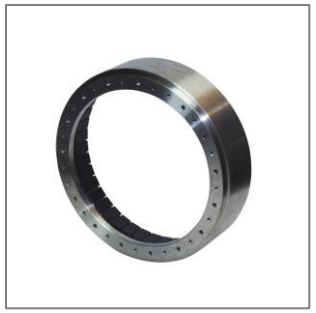
MS	Stator diameter:	21 – 900 mm	**AL**	Stator diameter:	60 – 900 mm
	Number of poles:	up to 132		Number of poles:	up to 66
	Speed range:	up to 100.000 rpm		Speed range:	up to 2.500 rpm
	Cont. torque:	up to 5.000 Nm		Cont. torque:	up to 5.000 Nm

Stator MS 210/70/38 including cooling jacket

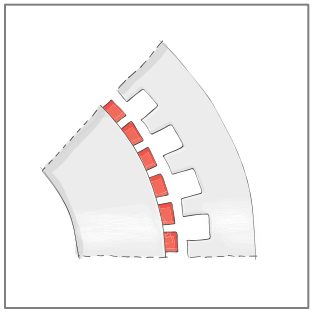


Rotor MS 210/70/38 with magnet carrier

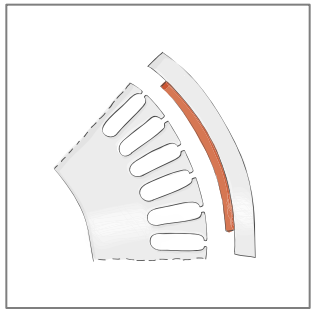
Stator MS 200/15/44 with cooling jacket



Rotor AL 200/15/44

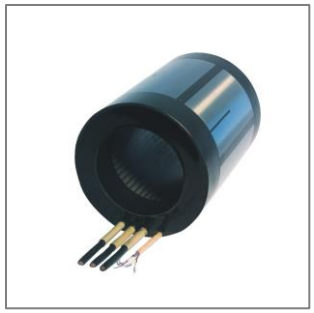


Sectional view MS motor with surface magnets and tooth winding (internal rotor)



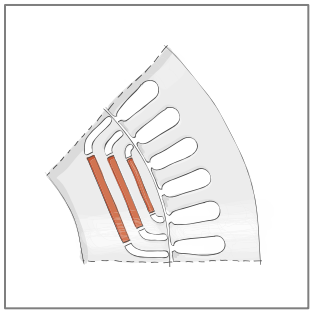
Sectional view AL motor with surface magnets and tooth winding (external rotor)

Synchronous motors field weakening (FS/RL)



Stator excluding cooling sleeve

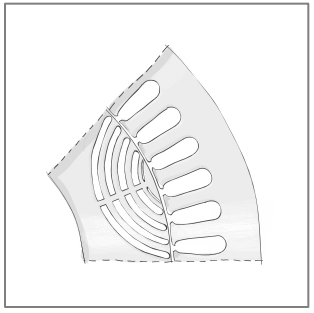
Stator including cooling sleeve



Sectional view FS motor with embedded magnets and reluctance use

FS rotor on magnet carrier

FS rotor on sleeve



Sectional view RL motor with reluctance use, no magnets necessary

Complete drives

Micro drives

Stator diameter:	8 – 21 mm
Speed range:	up to 1.000.000 rpm

Motor for medical application

Traction motor

Stator for micro gas turbine

Stator for micro machining spindle

Water pump automotive industrie

Rotor for micro machining spindle

Main Application for ATE motors

MACHINE TOOL INDUSTRY

- Grinding/milling/lathing spindles
- Main spindle drives
- Axis
- Clamping systems
- Rotary tables

AIRCRAFT INDUSTRY

- Pumps and compressors
- Air condition systems
- Actuators

Main Applications for ATE motors

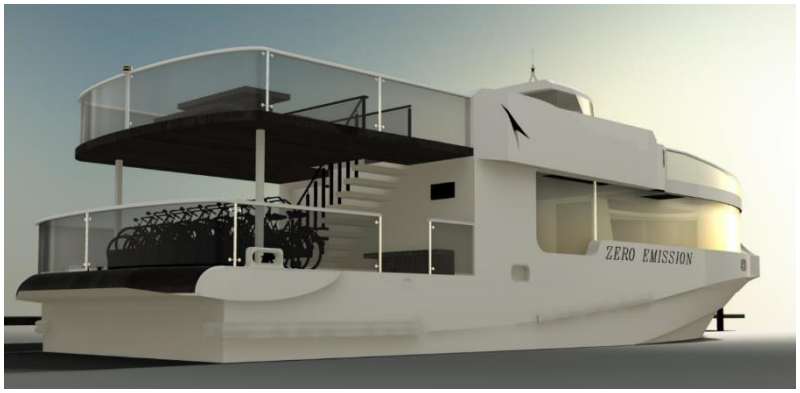
MEDICAL INDUSTRY

- Sterilization drives
- Pumps

AUTOMOTIVE INDUSTRY

- Turbo chargers
- E- Booster
- Fuel cells
- Electrical drive motors
- Motor test benches
- Heavy-duty vehicles
- Special Hybrid

Main Applications for ATE motors



BOAT DRIVES

- Diesel-/Hybrid
- Pod drives
- Inboard drives

ENERGY RECOVERY

- ORC processes
- Expansion drives

Main Applications for ATE motors

POSITIONING DRIVES

- Telescopes
- Axis

REGENERATIVE ENERGIES

- Wind mills
- Water power
- Power air conditioning systems
- Micro gas turbines
- Flywheel-/energy storage

Thank you very much
for your attention!