

# ETO GRUPPE - Passenger Cars



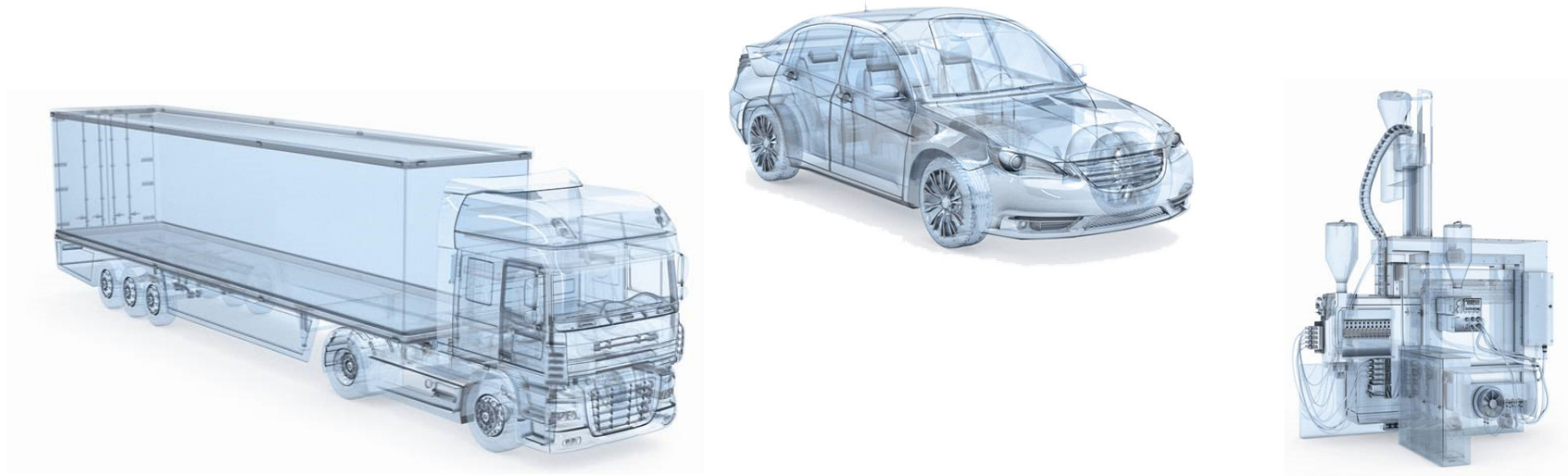
Actuators and Sensors



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# Who is ETO?





We can excite you with innovative actuators, sensors, electronics and software solutions.  
In the highest quality.

We move, measure, analyze and evaluate to achieve common success. Sustainably.

We create solutions for more safety, efficiency and ecology. With conviction.

We set new standards. Again and again.

We are the team on your side. Worldwide.



# CUSTOMER

internal/external

## COMPETENCE

- INNOVATIVE ABILITY
- RESPONSIBILITY
- READINESS FOR CHANGE
- CONFLICT ABILITY
- WILLINGNESS TO LEARN

## PASSION

- ENTHUSIASM
- OPEN MINDEDNESS
- PROACTIVITY
- CREATIVITY
- MOTIVATION

## CONFIDENCE

- RELIABILITY
- FAIRNESS
- APPRECIATION
- OPENNESS
- PARTNERSHIP

# ETO-TEAMSPIRIT





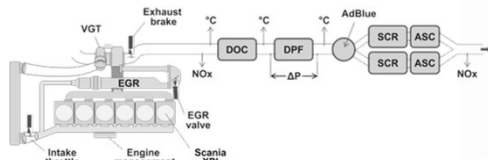
**Actuators**

**Sensors**

**Solenoid valves**

**Integrated valve  
modules**

## Motor/ Exhaust Gas Aftertreatment



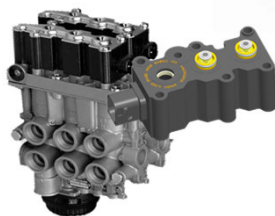
## Powertrain/Retarder



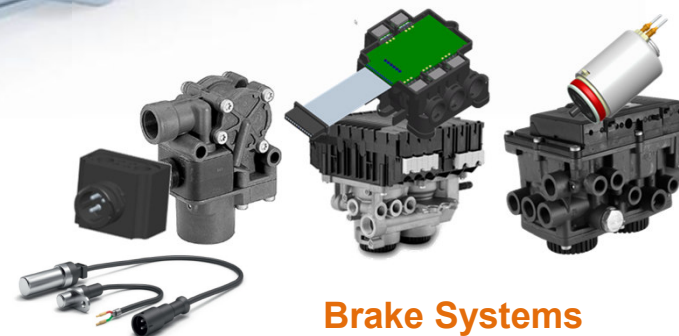
## Air Management



Valves



Air Suspension



Brake Systems



**We supply components for the commercial vehicle sector:**

ABS valves

Gear shift valves

Clutch actuator valves

Pressure sensors

Air dryer control valves and  
many more



**Valve Train**



**Oil-Pump**



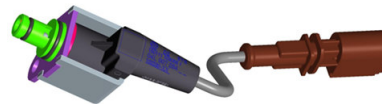
**Air Suspension**



**Steering**



**Water-Pump**



## Our products are utilized for the following systems:

Valve stroke control

Cam phaser

Engine oil pumps

Engine water pumps

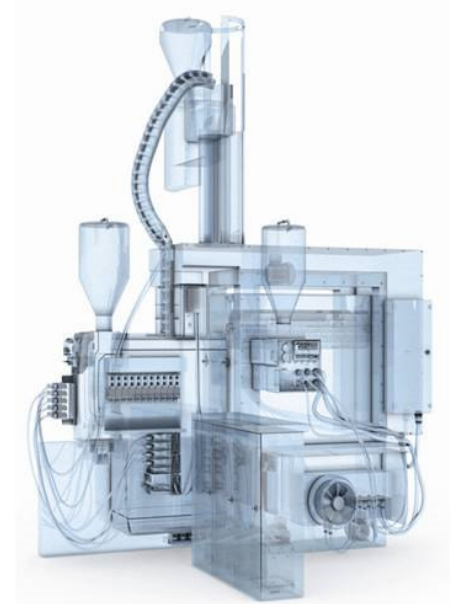
Power steering pumps

Transmission

Air suspension systems



Hydraulic for  
stationary and mobile  
applications



## Products provided for industrial production systems:

Proportional solenoids

Control solenoids

Hydraulic switching solenoids

Inductive position switches and  
many more





We constantly provide our customers with innovative products even more compact, durable, cost and energy efficient – making them successful in their target markets.



With the establishment of Elektroteile GmbH Oberuhldingen, the founders Christa and Hermann Laur started what today is the ETO GRUPPE.



**1955**

Production of solenoids for hydraulic control systems



**1968**

Formation of the Christa and Hermann Laur-Foundation



**1992**

Relocation of production site to Stockach, Germany



**2000**

Formation of new ETO branches in Naperville, IL, USA and Wrocław, Poland

**2002**

Acquisition of ETO SENSORIC KG in Nuremberg, Germany



**2007**

Fully integrated module containing pressure sensor and multiple solenoids

**1950**

**1960**

**1970**

**1980**

**1990**

**2000**

**2005**

**2010**



**1948**

Christa and Hermann Laur launch Elektroteile GmbH Oberuhldingen, Germany, focussing on development and production of transformers



**1967**

Production of AC solenoids



**1980**

Solenoid valves and wheel sensors for commercial vehicle anti lock brake systems



**1990**

Electronic position sensor for solenoids

**1999**

Change of Elektroteile GmbH in ETO MAGNETIC KG

Majority holding of EKS Elektromagnetik in Vaihingen/Enz, Germany



**2005**

Formation of ETO branch in Kunshan, Jiangsu, China

Acquisition of LDI, Inc. in Grand Rapids, MI, USA



**2010**

Global restructuring into Automobile, Commercial Vehicles and Industrial Technology business units

With the establishment of Elektroteile GmbH Oberuhldingen, the founders Christa and Hermann Laur started what today is the ETO GRUPPE.



**2014**  
Extension of production hall  
in Stockach, Germany



**2016**  
Formation of ETO branch  
in San Luis Potosí, Mexico



**2018**  
Extension of production hall in  
Stockach, Germany



**2020**  
New technology centre in  
Stockach, Germany

Formation of  
ETO MOTION TECHNOLOGIES  
INDIA Pvt. Ltd. in Bangalore, India

**2021**  
Change of  
ETO GRUPPE Beteiligungen GmbH in  
ETO GRUPPE TECHNOLOGIES GmbH

Formation of  
ETO DYNAMIC Connect GmbH and  
ETO DYNAMIC App Services GmbH  
in Stockach, Germany

2014 2015 2016 2017 2018 2019 2020 2021



**2015**  
Formation of ETO branch  
in Bangalore, India



**2017**  
Move to the new premises  
in Grand Rapids, USA



**2019**  
Move to new premises  
in Kunshan, China

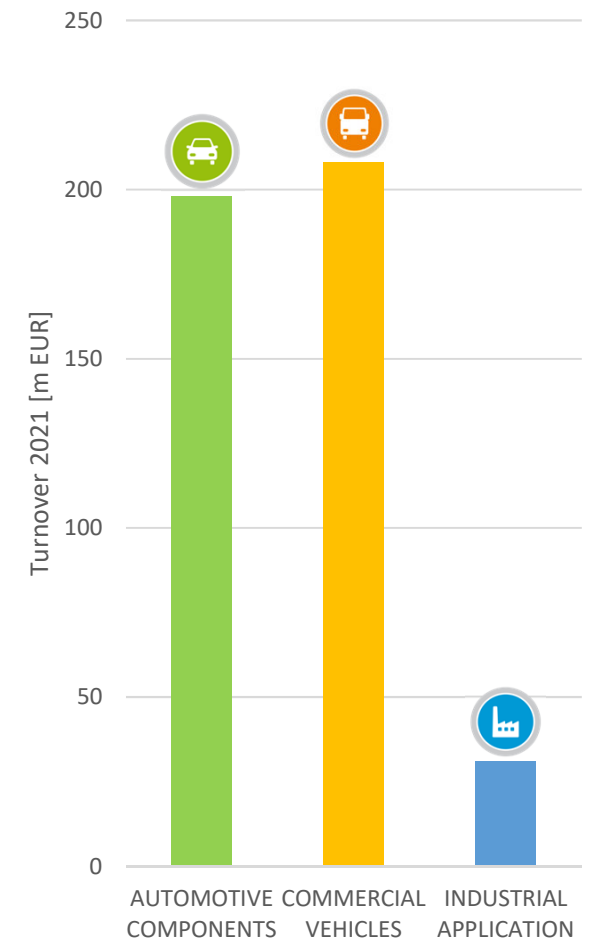
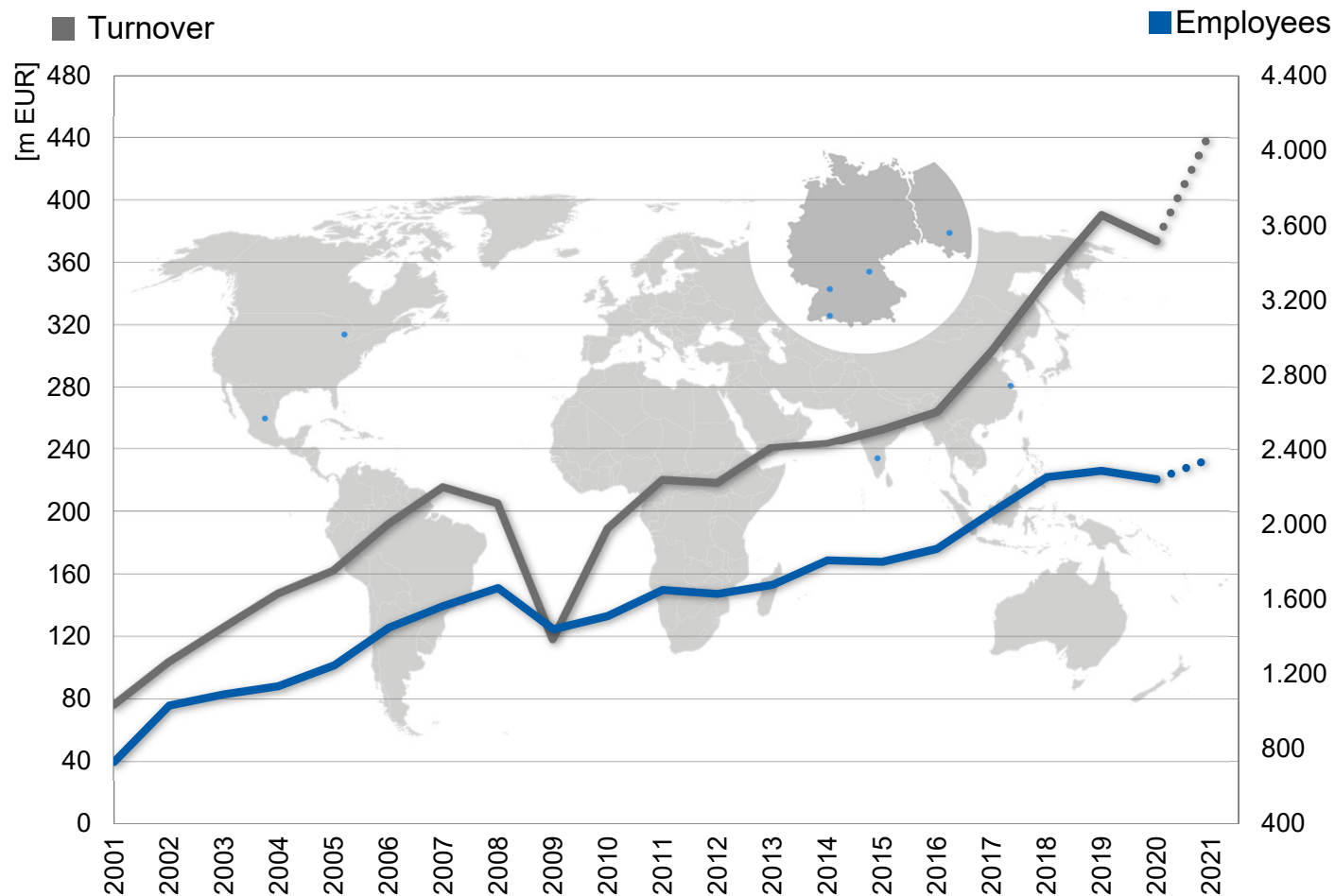


**2021**  
Takeover of companies  
inovel elektronik GmbH and inovel systeme AG  
in Friedrichshafen, Germany

Change of inovel elektronik GmbH in  
ETO DYNAMIC Digital GmbH and change of  
inovel systeme AG in farmunited GmbH



Its ongoing course of development and expansion in terms of personnel and sales volume gives the ETO GRUPPE its high degree of stability.



# International Coverage





## **ETO MAGNETIC CORP.** Grand Rapids

Founded: 1977, ETO 2000

Production area: 5,400 m<sup>2</sup>

Employees 2022: ~100





## ETO MAGNETIC Mexiko

S. de R.L. de C.V.

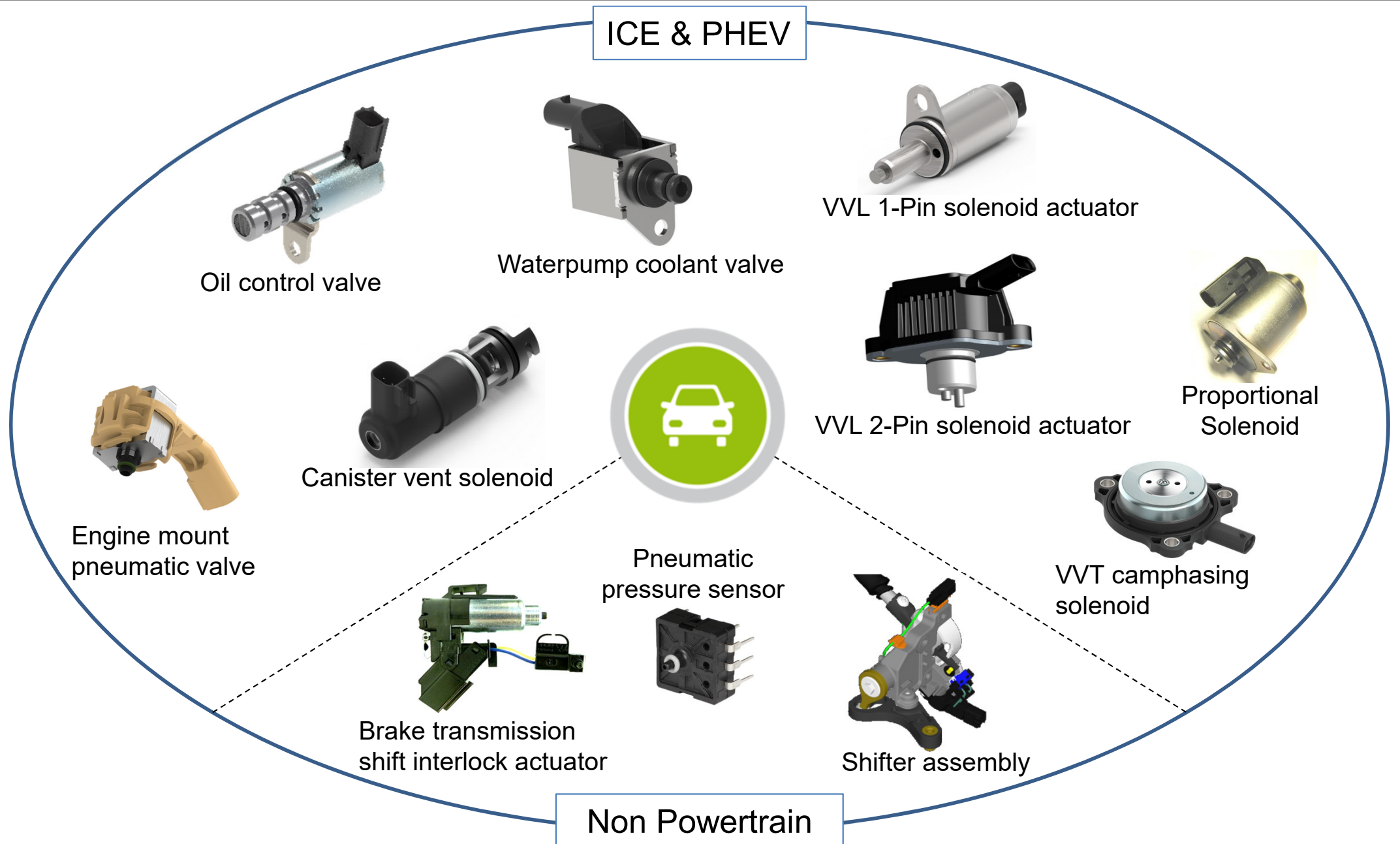
Founded: 2016

Production area: 3,300 m<sup>2</sup>

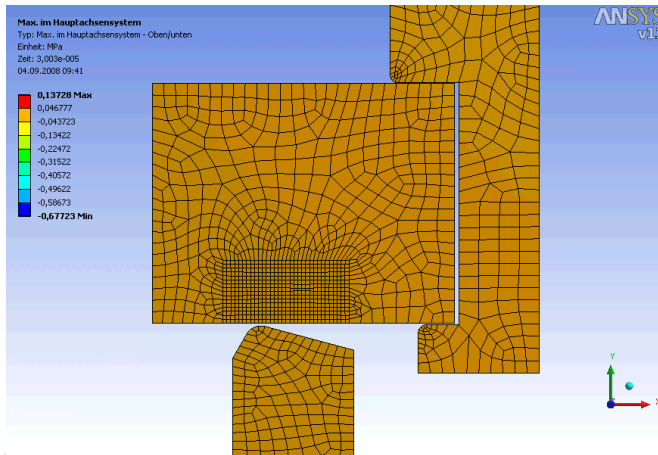
Employees 2022: ~50

Certified according to IAFT 16949

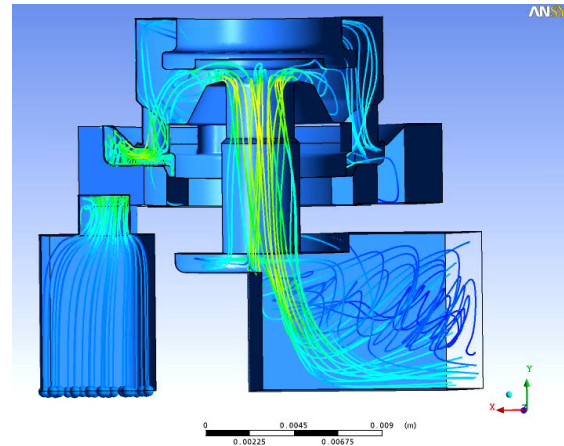




## Reduction of time-to-market and reduction of development loops by using modern simulation technology in early design stages

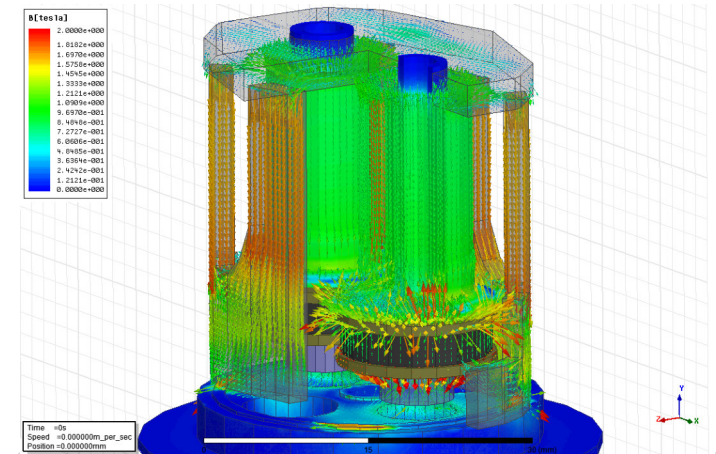


**ANSYS MP**  
Linear/non linear structural mechanics

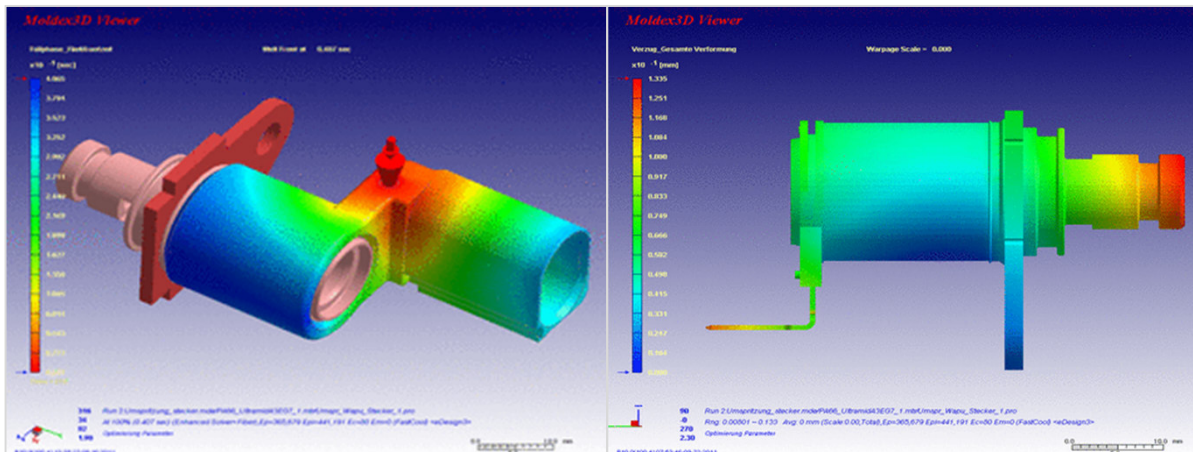


## CFX

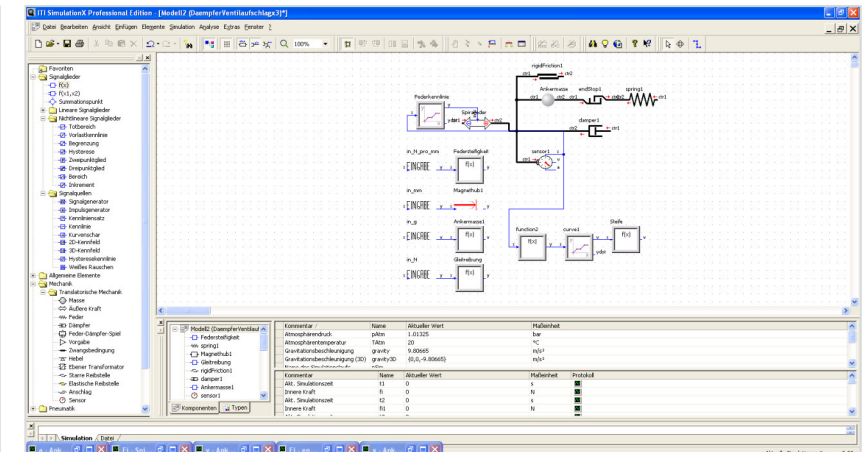
### Flow simulation



**Maxwell / FEMM**  
Magnetic field simulation



**Moldex 3D**  
Plastic simulation e.g. plastic flow with effect of inserts



**SimulationX / MatlabSimulink**  
Simulation/analysis of physical effects and systems





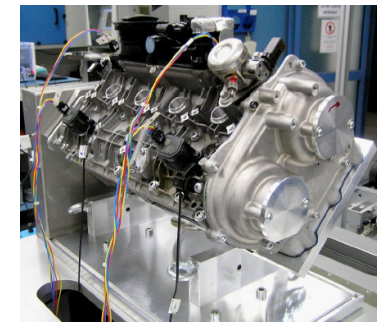
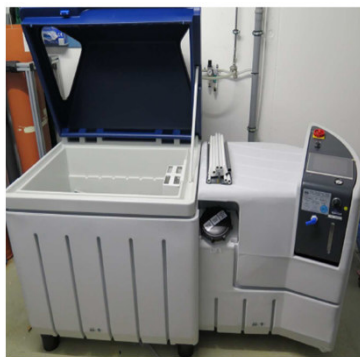
Thermal

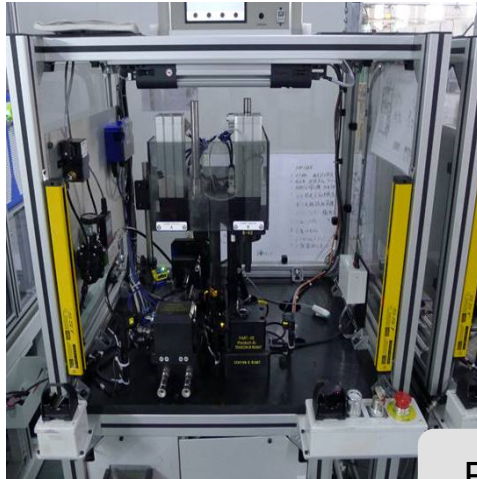
Mechanical

Testing  
Fields

Environmental

Electrical





End of line testing



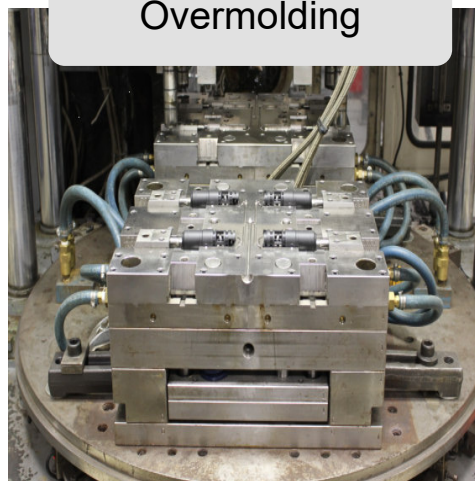
Machining  
Turning



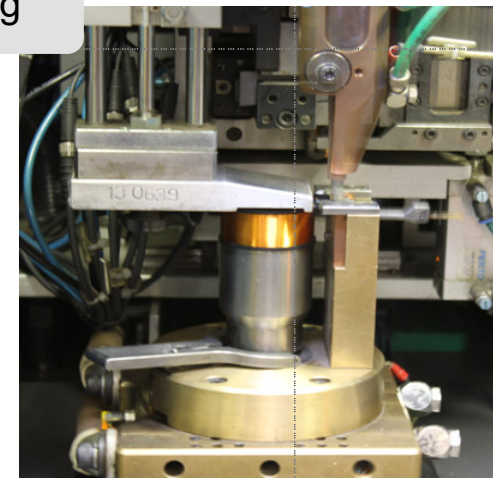
Coil winding



Full- and semi-  
automated assembly



Overmolding



Contact welding