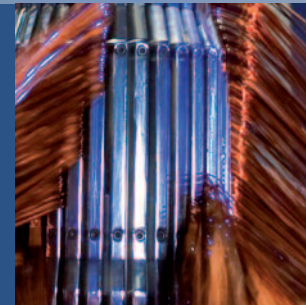
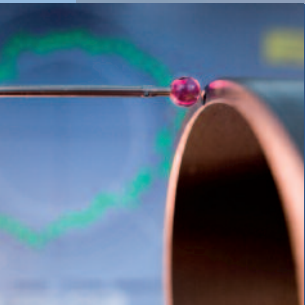


Alternate current machines

Direct current machines

Integrated drive systems



The power of e-motion

OUR APPROACH



STRATEGY AND GOALS



PEOPLE AND LEADERSHIP



ORGANIZATION AND PROCESSES



PRODUCTS AND INNOVATION



CUSTOMERS AND SUCCESS

All plans and activities in a company are subject to change and must be adjusted continuously to the quickly changing business conditions. We aim to meet the actual demands and respond to them promptly and flexibly, while also having to react appropriately to incidents and short term trends. We adhere to the values which we have defined in Our Approach. Our Approach does not explicitly define tasks or actions but it provides guidance for what we should do.

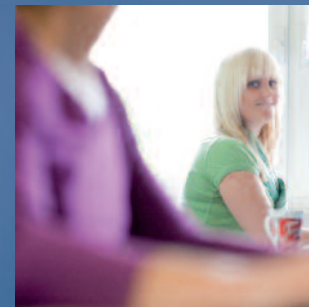
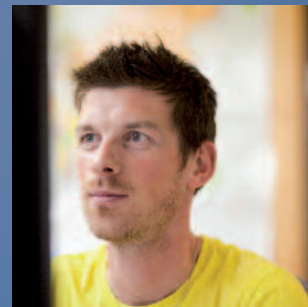
We put emphasis on being clear in what goals and strategy we follow.

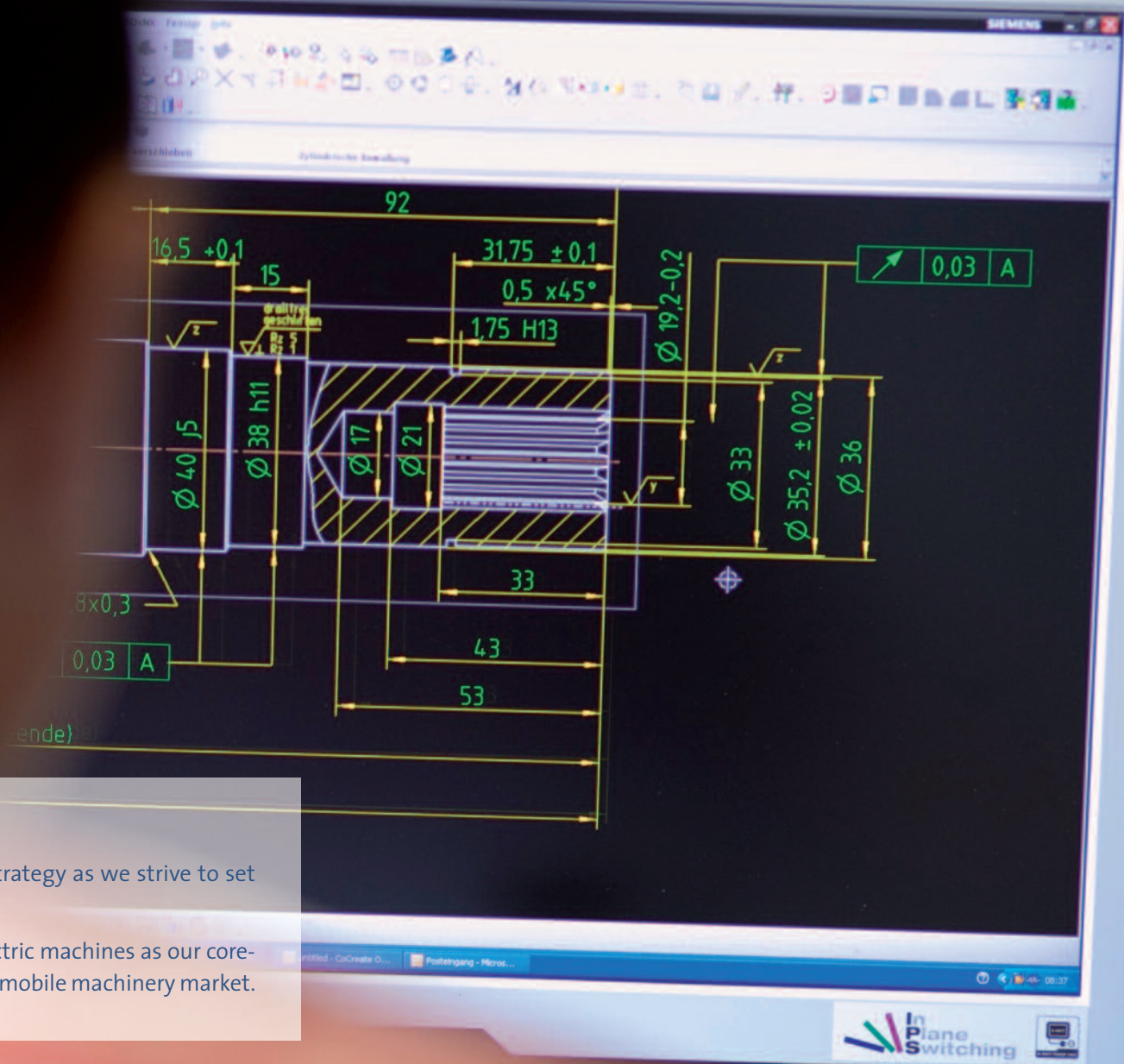
At the same time we recognize that everything starts with our people.

As a small company we maintain a lean organization that supports fast flexible decisions and actions. Through continuous improvement we maintain high quality standards for our processes and products. We develop our products in a seamless process from customer competitive edge through continuous innovation.

We ensure being a safe place to work and foster the responsible use of resources.

Finally we want to exceed our customer expectations. Our customer's success is our success.





STRATEGY AND GOALS

Our business is operated with a clearly defined strategy as we strive to set benchmarks in mobile electric drives.

We foster the development and production of electric machines as our core-competence to the benefit of our customers in the mobile machinery market.

COUNTERBALANCE TRUCKS

Electrically powered counterbalance trucks build the connection between indoor and outdoor handling. High power demands for this application require a compact motor design, often having a short length in combination with its high efficiency. Our designs are optimized to meet these requirements typically without forced air cooling.

Schabmüller motors comply with any design be it single or dual drive, axle or wheel hubs. Applications vary from 1 to trucks, over 2,5 to and 4-16 to trucks up to heavy reach stackers.



Drive Motors

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 170, 200, 240, 270, 300 mm
- Output Power: 5 ... 30 kW
- Rated Speed: 2.000 ... 5.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted brakes optional
- Mounting and shaft interfaces according to customer requirements



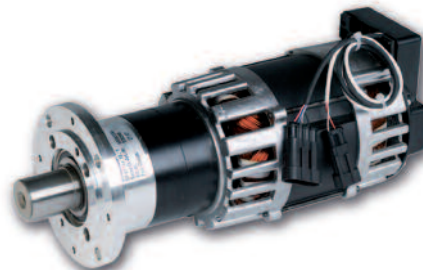
Pump Motors

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 170, 200, 240, 270, 300 mm
- Output Power: 5 ... 30 kW
- Rated Speed: 2.000 ... 4.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted pumps optional
- Mounting and shaft interfaces according to customer requirements



Steering Units

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 106, 120, 135, 150 mm
- Output Power: 0,2 ... 2 kW
- Gear Ratio: 18:1 ... 93:1
- Output Speed: 2 ... 40 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements



Generators

- AC-Induction, PM-Synchronous
- Terminal Voltage: 50 V ... 480 V 3~
- Stator Diameter: 390 mm
- Output Power: 20 ... 30 kW
- Rated Speed: 800 ... 3.000 rpm
- Water cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements



WAREHOUSE TRUCKS

These Trucks are used in warehouse applications to handle large amounts of goods. Precision and speed are the key performance indicators for this complex application.

Various designs of Reach to Narrow-Aisle trucks require specific designs to optimally accommodate the needs of the application.

Schabmüller offers a wide range of products for this application.



Drive Motors

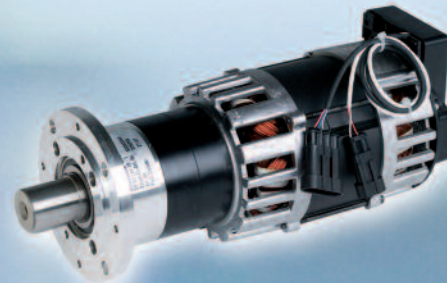
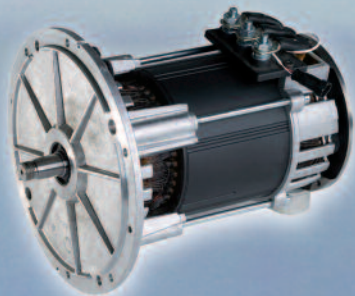
- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 170, 200, 240 mm
- Output Power: 5 ... 20 kW
- Rated Speed: 2.000 ... 5.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted brakes optional
- Mounting and shaft interfaces according to customer requirements

Pump Motors

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 170, 200, 240 mm
- Output Power: 5 ... 20 kW
- Rated Speed: 2.000 ... 4.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted pumps optional
- Mounting and shaft interfaces according to customer requirements

Steering Units

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 106, 120, 135, 150 mm
- Output Power: 0,2 ... 2 kW
- Gear Ratio: 18:1 ... 93:1
- Output Speed: 2 ... 40 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements



PALLET TRUCKS

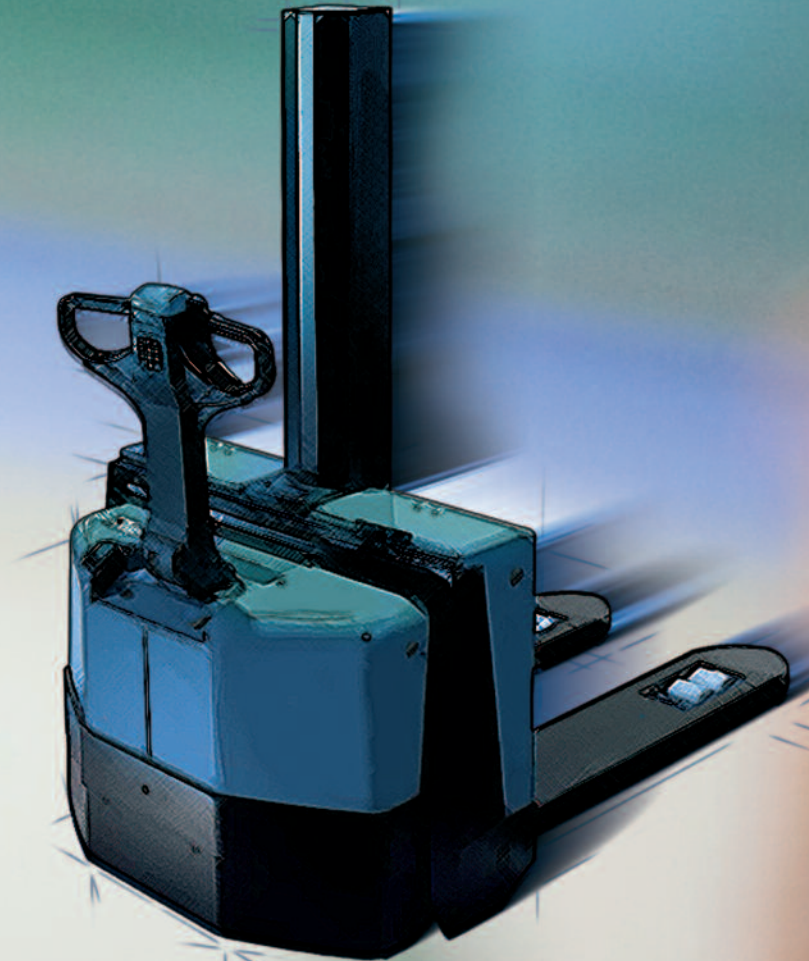
Pallet trucks are used to commission smaller amounts of goods. Depending on the distance, these compact trucks are built as either walk-with, ride-on, stand-in and seated models.

Easy handling and good manoeuvrability combined with good travel and acceleration speeds are needed to provide productive order picking.

Schabmüller motors designed for this application combine quality designs in a cost competitive way.

Drive Motors

- AC-Induction, PM-Synchronous
- Battery Voltage: 24 V, 36 V, 48 V
- Stator Diameter: 120, 135 mm
- Output Power: 1 ... 3 kW
- Rated Speed: 2.000 ... 5.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted brakes optional
- Mounting and shaft interfaces according to customer requirements
- Tiller adaption on motor optional.



AGRICULTURE AND CONSTRUCTION

Sophisticated electric drives are well suited for both agricultural and construction applications. Their high efficiency and excellent controllability help to increase productivity as well as save energy.

This combined with the avoidance of hydraulic oil helps to protect the environment and save resources.

New designs also reach levels of power density beyond general opinion. These machines are used for small and large auxiliary drives and in hybrid applications.

With the ability to customize designs, Schabmüller uses its proven technology to develop and produce electric motors and generators that meet the specifications of a wide range of agricultural or construction machines.



Drive Motors

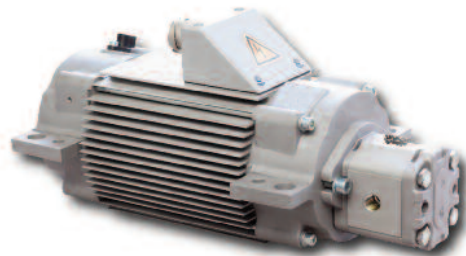
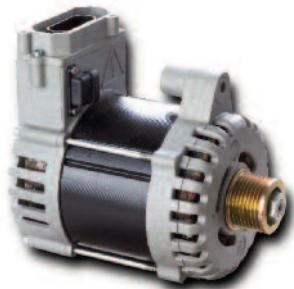
- AC-Induction, PM-Synchronous
- Terminal Voltage: 50 V ... 480 V 3~
- Stator Diameter: 150, 170, 200, 240, 270 mm
- Output Power: 10 ... 200 kW
- Rated Speed: 4.000 ... 10.000 rpm
- Air cooled, water cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements

Pump Units

- AC-Induction, PM-Synchronous
- Terminal Voltage: 16 ... 480 V 3~
- Stator Diameter: 150, 170, 200 mm
- Output Power: 5 ... 15 kW
- Rated Speed: 2.000 ... 4.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted pumps customized
- Mounting and shaft interfaces according to customer requirements

Generators

- AC-Induction, PM-Synchronous
- Terminal Voltage: 50 V ... 480 V 3~
- Stator Diameter: 390 mm
- Output Power: 20 ... 100 kW
- Rated Speed: 800 ... 3.000 rpm
- Water cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements



TRUCKS AND BUSESSES

The use of electric drives in on-road machines is gaining momentum. Of particular interest are machines for small and large auxiliary drives and in hybrid applications.

Hybrids help to recuperate energy especially in vehicles with high stop and go dynamics, as for example garbage trucks and street busses.

Auxiliary drives are often used for fan applications and also electro-hydraulic power steering.

Schabmüller uses its proven technology to develop and produce electric motors and generators that meet the specifications of a wide range of agricultural machines.



Drive Motors

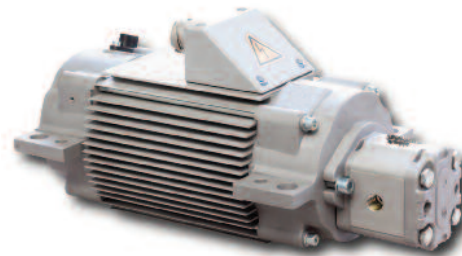
- AC-Induction, PM-Synchronous
- Terminal Voltage: 50 V ... 480 V 3~
- Stator Diameter: 150, 170, 200, 240, 270 mm
- Output Power: 10 ... 200 kW
- Rated Speed: 4.000 ... 10.000 rpm
- Air cooled, water cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements

Pump Units

- AC-Induction, PM-Synchronous
- Terminal Voltage: 16 V ... 480 V 3~
- Stator Diameter: 150, 170, 200 mm
- Output Power: 5 ... 15 kW
- Rated Speed: 2.000 ... 4.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted pumps customized
- Mounting and shaft interfaces according to customer requirements

Generators

- AC-Induction, PM-Synchronous
- Terminal Voltage: 50 V ... 480 V 3~
- Stator Diameter: 390 mm
- Output Power: 20 ... 100 kW
- Rated Speed: 800 ... 3.000 rpm
- Water cooled
- Integrated speed and thermal sensor
- Mounting and shaft interfaces according to customer requirements



UTILITY AND AGV

The mobile applications for electric drives are increasing continuously.

It ranges from ground support equipment on airports, baggage handling trucks, to neighborhoods vehicles, and even used in recreational equipment such as golf carts and buggies.

Schabmüller uses its proven technology in mobile applications to apply motors for individual machines.

Another typical application stems from the material handling market with Automated Guided Vehicles - AGV. For these applications complete units are available that provide both traction as well as steering motors.



Drive Motors

- AC-Induction, DC
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 170, 200, 240, 270, 300 mm
- Output Power: 5 ... 30 kW
- Rated Speed: 1.000 ... 5.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted brakes optional
- Mounting and shaft interfaces according to customer requirements

Pump Units

- AC-Induction, DC
- Battery Voltage: 24 V ... 80 V
- Stator Diameter: 125, 150, 170, 200, 240 mm
- Output Power: 2,5 ... 30 kW
- Rated Speed: 2.000 ... 4.000 rpm
- Air cooled
- Integrated speed and thermal sensor
- Mounted pumps customized
- Mounting and shaft interfaces according to customer requirements

Motor in Wheel Drive Units

- AC-Induction, PM- and DC
- Battery Voltage: 24 V ... 80 V
- Output Power: 0,2 ... 10 kW
- Vehicle Speed: 0,0015 ... 2 m/sec
- Wheel Load: 200 ... 3.200 kg
- Air cooled
- Long life lubrication
- Integrated speed, steering and thermal sensor

Vertical Drive Units

- AC-Induction
- Battery Voltage: 24 V ... 80 V
- Output Power: 1,5 ... 10 kW
- Vehicle Speed: 0,1 ... 3 m/sec
- Wheel Load: 800 ... 4.200 kg
- Air cooled
- Long life lubrication
- Integrated speed, steering and thermal sensor



SERVICE AND SPARE PARTS

Schabmüller motors are well known for their efficiency and durability. As motors are often used for 10 or more years with thousands of hours of operating time, replacing wear parts and general service is imperative for the seamless operation of trucks.

We manufacture spare parts ourselves and maintain their production over many years in parallel with our high volume series production. This provides us with a higher quality of standard for our parts and processes, giving us the opportunity to keep a very competitive cost level.

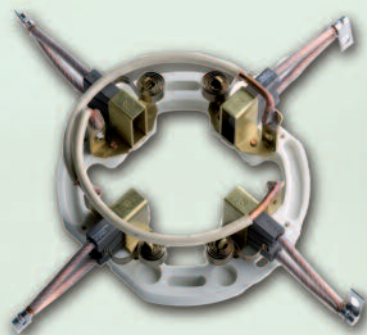
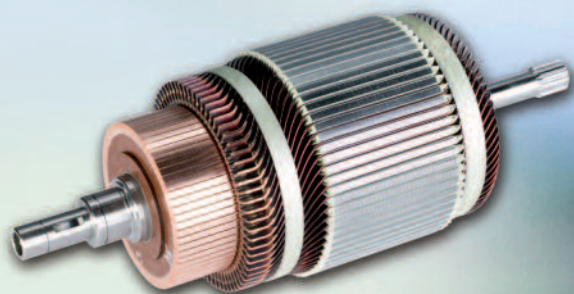
Furthermore our motors are not only optimized for cost and performance, we also take service aspects into consideration starting with the design.

Beside spare parts we also offer repair for our motors and complete units. Being specialized in these products and with the use of original parts that were tested and qualified to pass our rigorous performance criteria, the repaired product leaves our operation “as new” and with standard warranty.

In short: Our dedicated service department is organized to supply spare parts and exchange motors, or perform repair jobs on site - wherever that site may be.

We are fully equipped to support a modern service strategy that meets today's customer demands:

- Spare parts
- Preventive maintenance
- Machine optimization
- Problem analysis
- Repairs
- Remanufacturing
- Trainings



PEOPLE AND LEADERSHIP

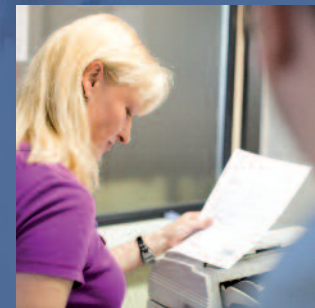
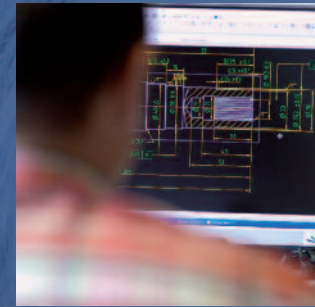
It is the people that fill our company with life and spirit. Through our engaged and competent employees, Schabmüller has acquired its outstanding reputation with customers and other business partners.

With this in mind, we have come to realize that it is the people that make up our company. Their motivation and individual capabilities are the basis for our success. At the same time we support the development of our people through training and education. Most of us have been with the company for many years and have grown from apprenticeships to high level management positions. Every year we employ a significant number of new apprentices with the intention of offering them a long term career within our company.

This tradition and consistency has formed the team which now works together and is called Schabmüller. Our work ethic is instilled in everyone working in the company and the experience gained over many years is preserved and continuously widened.

We enjoy what we do and identify ourselves within the companies culture, its vision, and its goals. As individuals we work together using a team approach and adhere to our common values, which form the foundation for our inspiration and teamwork.

Our leadership is based on trust and credibility, as we encourage individual responsibility and call for entrepreneurial spirit and behavior.



SCHABMÜLLER – DRIVE SOLUTIONS MADE IN GERMANY

- ALTERNATE CURRENT MACHINES
- DIRECT CURRENT MACHINES
- INTEGRATED DRIVE SYSTEMS
- WORLDWIDE SALES & SERVICE



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