

### Are you looking for an

## Engineering Service Provider?

Our dedicated engineers develop individual, unique solutions for you!

### SPECIAL MACHINERY

We tackle **Special Machinery** tasks professionally and provide you with the best solution from a single source

# INDUSTRIES

#### Automotive



The automotive industry is speedily moving toward digitalization and electrification.

Sectors, such as automotive consumer electronics, but also artificial intelligence in the automotive

production process are strongly growing segments. Our customers can take full advantage of our experience in our capability to design and produce cost-effective and innovative manufacturing processes from prototyping to mass production.

#### **Environmental & Energy**



Electro and hybrid technologies are beacons of trends nowadays. All producing industries must be ready to comply with strict climate protection and emission regulations.

Subjects as improved fuel injection, secure handling of high pressures, expertise in precise dosage and intelligent, fast controls are required. Energy efficiency is a decisive factor. Therefore, we offer our customers a detailed view of the solution right at the start of the project as well as tuned development steps that are always a multidisciplinary matter and require precise measurement technology.

Here we set new standards with other innovative solutions, for example in the large-scale use of waste heat from industrial processes.

#### **Mechanical Engineering**



The mechanical engineering field holds several major trends, such as additive manufacturing / 3D printing, nano-technology, electric vehicles including battery-based power systems. All of these sectors need special machinery construction and micro dispensing.

Our strength lies in realising machines, equipment and test stands that are no longer possible with regular construction kits.

Place your confidence in an extraordinary quality team when it comes to very special requirements and/or trouble shooting.

### PROJECT EXAMPLES >>>>>

- Mass flow measurement and micro-pressure regulator for
- Emission control device
- Special-purpose, fully automated microdispensing for high temperature lubricant
- Flow regulation device
- DNA/RNA analysis device
- Endodontic treatment device

• Fatigue testing device

- Chain pitch measurement system
- Measurement system for conductivity of printing machine cylinders
- Automated procedure for wound dressing patches
- Tensile specimens polishing machine for material testing

#### Medical / Pharmaceutical



Very few technical fields are subject to as many regulations as the production of medicines and pharmaceutical substances. There could be more regulations for Good Manufacturing Practices (GMP) than guidelines for their implementation. The development of medical products requires the transparent and consistent documentation of each individual step from the very start. Therefore, GMP-compliant production and validation as well as development and optimisation of processes play a prominent role if scientific engineering principles and rules are used in pharmaceutical and biological technology.

#### Thus, our developers focus in particular on

- The definition of a consistent systematics, a project architecture and a software lifecycle,
- The creation of performance and functional specifications in accordance with approval requirements, and,
- The use of digital versioning and documentation software (SVN).

## WE OFFER

#### **Product & Device Development**

From the idea through to the design and implementation of machines and solutions everything comes from a single source. Our team of Special Machinery specialists support our customers from the initial concept to prototyping and finally through to a stable volume production.

Inhouse design by our mechanical and electrical engineers

- Project Management incl. milestone controls & customer assessments
- Engineering, manufacturing, assembling, testing
- Installation at the customer site and start-up support



#### **Test & Analysis Systems**

A a test or analysis system development consists of several phases and stages. We help companies to define clear measures to achieve a specific test or analysis task. Our teams consider with our customers the functional requirements of the project or solution. The engineers clarify the different phases of the development process.

In the next stage the necessary specifications and features will be put into a formal proposal. Then the development phase starts which also involves system testing and onsite system integration. Finally, we support our customers during implementation, fine-tuning and last not least operations and maintenance.





#### **Production & Automation**

When new procedures have to be incorporated into traditional production machinery constructions new material, set-ups and procedures are required. This is where our broad experience in cross-sector technologies and the wealth of expertise within our team comes in.

We offer both software development through our experienced software engineers combined with machine construction from our mechanical builders, all from a single source.

Realising unique complete solutions through interdisciplinary cooperation: one of our formulas for success.

#### Microfluidics & Dispensing Technology

Microfluidics and dispensing technologies have been our core know-how for many decades. Automated fluid handling is a key technology to several industries. The development of a special-purpose machine for fully automated microdispensing is one of our strong expertises.

We develop and manufacture cost efficient systems and support our customers with all our rheology experience, including flow regulation tasks, liquid, but also soft solid dispensing challenges.



#### **Energy Efficiency**

Electro and hybrid technologies are beacons of trends nowadays. All producing industries must be ready to comply with strict climate protection and emission regulations. Subjects as improved fuel injection, secure handling of high pressures, expertise in precise dosage as well as intelligent, even faster controls are required.

Energy efficiency is becoming a decisive factor, not only for motor vehicles, but also for machines and components. Therefore, we offer our customers a detailed view of the solution right at the start of the project as well as tuned development steps that are always a multidisciplinary matter and require precise measurement technology.

Here, we provide our interdisciplinary expertise and set new standards with other innovative solutions, for example in the large-scale use of waste heat from industrial processes.

Germany +49 (0)8024 644 - 0 info@vermes.com USA +1 408 520-2555 america@vermes.com Korea +82 (0)32-246-1500 korea@vermes.com Malaysia +60 4 358 096 info@vermes.com

VERMES

Rudolf-Diesel-Ring 2 83607 Holzkirchen Germany +49 (0) 8024 644 - 0

sales@vermes.com www.vermes.com