



ZELLER+GMELIN

Smart lubricant management

Complete solution for Industry 4.0



Zeller+Gmelin

Die Marke mit dem spürbaren Plus

Zeller+Gmelin is a medium-sized, international manufacturer of lubricants, printing inks and chemicals. The company with its head office in Eislingen/Fils, which was founded in 1866, is still family-owned. With 19 subsidiary companies and many partners, we are well connected throughout the world and deliver our high-quality products to more than 80 countries. We have understood and solved your problems for more than 150 years and will continue to do so in the future. This is how we create a tangible plus for our customers. Because we understand the customer and develop solutions – reliably, flexibly and tailor-made.

SÜDÖL GmbH is a subsidiary of Zeller+Gmelin GmbH & Co. KG. We have been collecting and recycling lubricants and cleaners since 1935. The SÜDÖL company currently maintains a tanker fleet of around 20 vehicles.

Another subsidiary is ZG Fluidmanagement GmbH. As experts in fluid management, they offer a complete service for the management of liquid process media.

Smart lubricant management



Table of contents

+ Full-Service	4
+ Fluid management	6
+ Lubricant and stock management	8
+ LABUS	10
+ ZG-Fluid-Check Pro	12
+ Recycling of used oils	16
+ Save resources and protect climate	18
+ Our way to Net-Zero	20
+ Locations	22



Full-Service

Complete solution for your lubricant management

Operational safety and the production of high-quality products are among the most important success. This applies to companies in all industries. Success begins with optimizing system performance and an effective, well-founded lubricant management is the basis for this. Together with our subsidiary ZG-Fluidmanagement, we offer the complete solution for effective lubricant management from the development and production of lubricants, through fluid management to recycling and reintroduction into the production process.

In addition to our excellent specialty lubricants, we offer you a comprehensive package of services. Adapted to your individual requirements, our experts support you with your lubricant management.

1.



Development of high-performance and economical lubricants

2.



Production of lubricants using modern CO₂-neutral production processes

3.



Professional quality assurance

4.



Complete solution for fluid management: Advice, service, process analysis, product recommendations, lubricant management, etc.

5.



Collection of used oil and cleaning mixture by our subsidiary Südöl

6.



Recycling of machining oils and reintroduction into the production process

Fluid management

Long-term increase in your process efficiency

The optimized use of cooling lubricants is an important factor for your process efficiency. Zeller+Gmelin brings your fluid process decisively forward – holistically, cost-optimized, resource-saving and sustainable.

Fluid management process chain

ADVICE: Complete process analysis by our experts on site. Inventory of machine conditions using checklists.

PLANNING: Übersichtliche Konzepterstellung für ein ganzheitliches und individuelles Fluidmanagement.

IMPLEMENTATION: Through our professional service team at your location. Depending on your needs, even daily.

OPTIMIZATION: Long-term optimization of manufacturing processes. Measurement and monitoring of processes by constant control and adjustment of the cooling lubricant key figures. IT documentation after implementation in accordance with applicable guidelines and regulations (e.g. TRGS 611, TRGS 900, BGR/GUV-R143). Examination of the cooling lubricants in our own service center. Special analysis as required.

Your advantages

- + Increasing productivity through long-term optimization of manufacturing processes
- + Transparency in fluid processes due to key figure-based fluid management
- + Extending fluid service life through targeted product selection
- + Minimization of tool and machine wear
- + Optimized disposal and recycling management
- + Compliance with EU directives: occupational safety, health and environmental protection
- + Access to valid fluid management Know-how



Advice

Planning

Implementation

Optimization

Lubricant and stock management

Product selection: Selecting the right cooling lubricant depends on many parameters. We support you in selecting the optimal product for your specific application.

Maintenance and service: Machine and system cleaning from individually filled machines to large central systems (100 m³). Disinfection by adding suitable adjusting agents.

Stock management: The storage of cooling lubricants has to meet many requirements. This includes supporting storage and handling regulations as well as professional and environmentally friendly disposal. We support, advise and, if you wish, also take responsibility for your entire cooling lubricant stock.

Bypass filtration of used oils

In the “bypass filtration” process, oil-water phases are separated and deposits are removed and cleaned by filtration. The result is a clean product that is suitable for direct reuse.

By analyzing, defining the criteria together and then processing your used oils, you can optimize a significant part of your costs that would be incurred for the disposal and purchase of new oils.

The experts from ZG Fluidmanagement would be glad to visit you and create a concept for reprocessing your oils using filtration.

Save costs and protect the environment at the same time?
Get in touch with us!

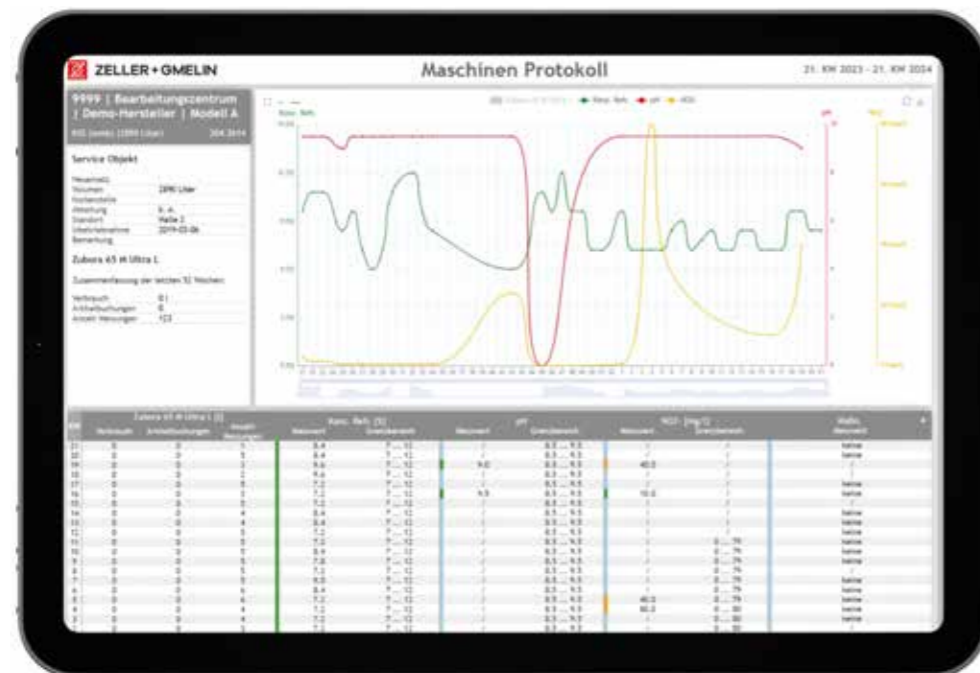


LABUS

Digital cooling lubricant monitoring

LABUS Service Portal und Service App

LABUS integrates your lubricant management into the digital working world. It is a smart laboratory testing system where you can digitally manage lubricant samples quickly, easily and flexibly. Equipped with simple functions, LABUS is mobile and can be operated and expanded via the web.



- + Digital monitoring of your cooling lubricant
- + Increasing productivity through sustainable process optimization
- + Transparency due to key figure-supported fluid management
- + QR codes simplify access to the app's functions
- + Automated Reporting – Reports are sent to recipients automatically
- + Label printing – abrasion-resistant labels quickly identify lubricant samples
- + Complete control, self-sufficient and mobile from anywhere in the world
- + Advice and support from the ZG experts
- + High quality and professional communication with the customer

Process stability

- + Definition of target values for the process media
- + Measurement (Measure): own measurement or laboratory analysis by Zeller+Gmelin R&D
- + Analyze • Remote diagnosis • Personal support in your production
- + Correction (Improve)
- + Control



Smart data collection

The data is recorded and regularly synchronized via an app from the App or Play store.

- + QR code connection through labels or protocols
- + Assisted entry of process data
- + The measured values are evaluated
- + Data can be recovered quickly and without a permanent internet connection

ZG-Fluid-Check Pro

Smart fluid management for the tomorrow's industry



Stable and economical machining processes require a consistently high quality of cooling lubricant! With the newly developed, compact fluid management system "ZG-Fluid-Check Pro" the cooling lubricant supply to machines and systems can be monitored, organized and controlled automatically. By collecting data, the system is able to support you in holistic process management.

Everything at a glance: The values can be read either directly on the touch panel of the device or from outside – for example on a PC or via a tablet. A user-friendly dashboard shows, among other things, the ideal concentration, pH value, conductivity and temperature of the cooling lubricant in real time.



With the ZG-Fluid-Check Pro we have a compact device that can not only monitor the entire cooling lubricant cycle of up to ten machines as well as central systems at the same time, but also intervenes independently and in a regulating manner in the event of deviations.

Advantages of the cooling lubricants condition monitoring "ZG-Fluid-Check Pro" at a glance:

Productivity & profitability

Resource conservation

Quality assurance & transparency

Health protection/PPE



- + Level monitoring
- + All measured values are measured in real time:
 - pH value, conductivity and temperature
- + Accurate display of consumption quantities
- + The values can also be displayed on mobile devices
- + Automatic dosing
- + Minimizing the risk of under/over concentration
- + Minute display of current measured values
- + Automatic readjustment
- + More transparency through graphic visualization
- + All measured values can be displayed on the dashboard
- + Complete and clear documentation
- + Quick and easy assembly and connection to the machine tools

"Manage cooling lubricants intelligently!"

ZG-Fluid-Check Pro

Smart fluid management for the tomorrow's industry



Extension Modul 2.3

The Extension Module 2.3 is a stationary device for automating the supply of cooling lubricant. For this purpose, the tank level is monitored and refilled automatically. By refilling the tank with ready-mixed emulsion, the specified tank level in the system can be kept almost constant at the target values. The cooling lubricants proportional mixing device is connected to the fluid controller. The applied line pressure is recorded. In the event of an error, an error is output via the status LED and the fieldbus interfaces.

An intelligent refill concept enables trouble-free fluid management. The Fluid Controller can also be used as a system extension of the Fluid Check Pro 2.3.

Areas of application

- + Monitoring/control of coolant tanks
- + Automation of fluid management on linked, decentralized systems
- + Direct compatibility with Fluid Check Pro. 2.3

Advantages

- + Ensuring a defined tank level
- + Documentation of system-specific data
- + Cost efficiency through high levels of automation
- + I4.0-Ready through direct cloud connection



Recycling of used oils

Save costs and protect the environment

The idea of recycling is deeply rooted at ZG. Through our subsidiary Södöl, used machine and engine oils are recycled and processed into new base oils and fuels.

Södöl has been collecting and recycling lubricants and cleaners since 1935. The company SÜDÖL currently maintains a tanker fleet of 25 vehicles with a carrying capacity of 28 m³ of loading volume.

Our thought:

As a rule, large quantities of high-quality metalworking oil are carried out. The used machining oil is in your parts washing system after the work process has been completed. It contains water, surfactants and solid particles and until now had to be disposed of at great expense.

This is exactly where our concept comes in. Waste oil is a valuable raw material!

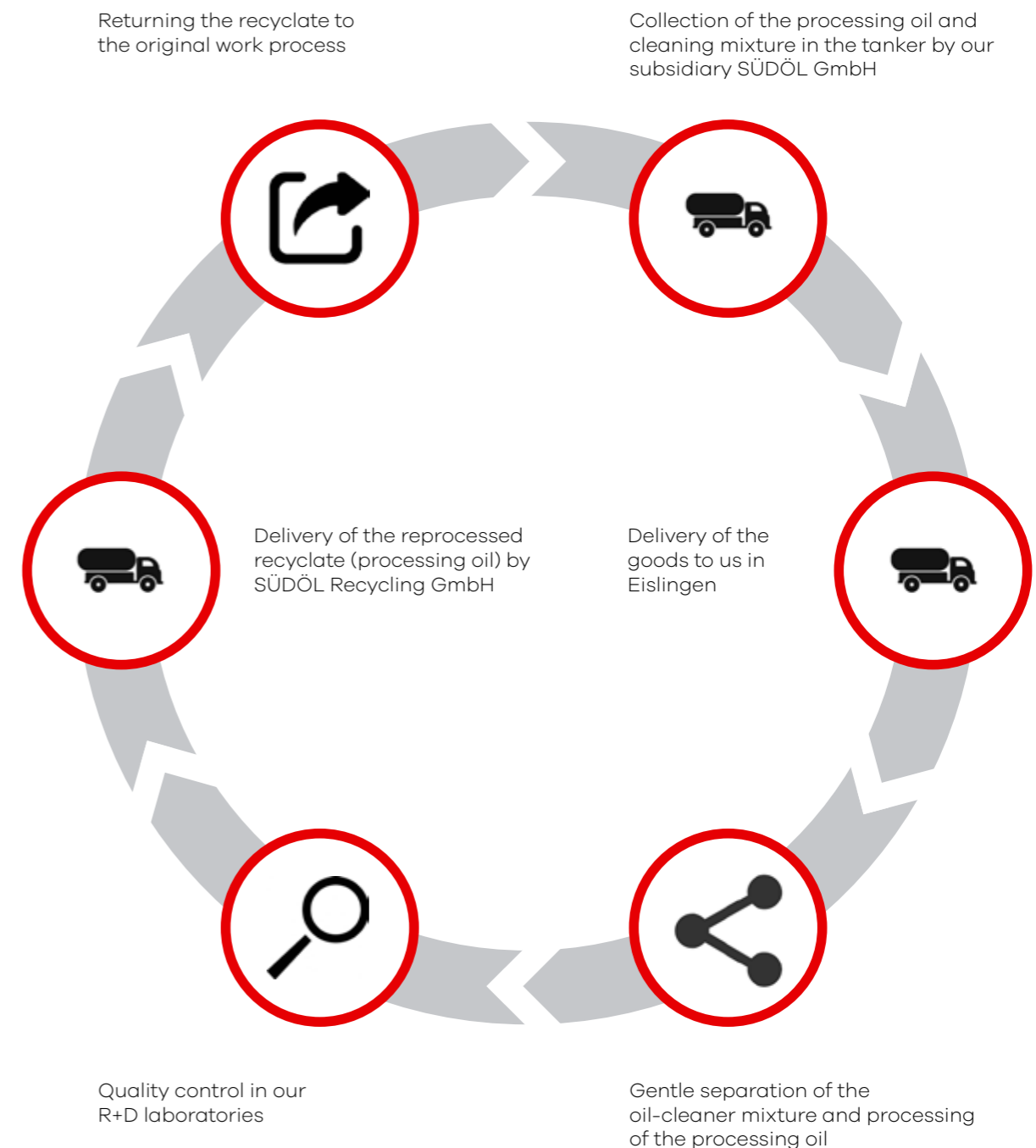
We take back used products, process them and recirculate them. At the same time, we improve your waste balance and CO₂ footprint.

Your advantages:

- + CO₂ savings
- + 30–50 % cost savings when using recyclate compared to fresh oil
- + As you use your own raw material (recyclate), you are largely independent of rising base oil prices
- + Planning security on the procurement side
- + No disposal costs! Instead of expensively disposing of your oil-cleaning mixture, we recycle it for you
- + Environmentally friendly use of our resources through the use of recycled materials in product manufacturing
- + Consistently high quality of the recyclate through constant testing in our research and development laboratories
- + No gradual deterioration of the process oil in circulation

“Many valuable resources are lost through disposal. We pursue the goal of less disposal through recycling!”

We transport the used oil directly to you and take care of its economical and ecological recycling for you.



Save resources and protect climate

The return of used raw materials and products into the economic cycle is an important building block for increasing resource efficiency, conserving natural resources and ultimately securing our future.

Carbon footprint

The product CO₂ footprint is an important approach to assessing or comparing the resource efficiency of a product. The Product Carbon Footprint records the greenhouse gas emissions that occur throughout the entire product life cycle. It captures the effect of:

- + raw materials and prefabrication
- + production
- + distribution and sales
- + use phase
- + recycling and recovery

The product CO₂ footprint of our **Multicut Recyclat MB UT** cutting oil is 0.0245 kg CO₂ per kg. In comparison, the value for a conventionally produced primary raffinate is over 1.0 kg CO₂ per kg – i.e. over 40 times higher.

The use of our cutting **Multicut Recyclat MB UT** increases resource efficiency, protects resources and the environment and improves our customers' CO₂ footprint!



Process oil at a German premium automobile manufacturer before and after recycling



Process oil at a German manufacturer of common rail injection systems before and after recycling



Our way to Net-Zero

Zeller+Gmelin stands for healthy and sustainable growth. This means acting in a socially and ecologically responsible manner. The conscientious use of resources and responsibility towards future generations are central components of the company philosophy.

For years, we have been working successfully to reduce our ecological footprint and are continuously improving our CO₂ balance. Now we are taking the next step: Through process optimisation, we aim to further reduce our energy consumption and achieve Net-Zero emissions – not through offsetting, but directly by adapting our processes.

In a comprehensive project, Zeller+Gmelin and its subsidiaries Südöl and Fluidmanagement determined the CO₂ balance at their Eisingen site. The three-pronged approach of the Kyoto Protocol, which entered into force in 2005, was applied. The Kyoto Protocol was superseded by the Paris Agreement in 2015.



Strategic triangle approach to resource conservation

In the long term, we also aim to sell CO₂-reduced products to our customers. The research and development departments are continuously working on innovative solutions that reduce the burden on the environment and improve customers' processes.



At home + Abroad

We are your plus.

Zeller+Gmelin has got offices worldwide, plus its head office in Eislingen in Baden-Württemberg. Our name stands for reliability and quality, at all times. Our subsidiaries and partners with all their employees ensure this on a worldwide basis.

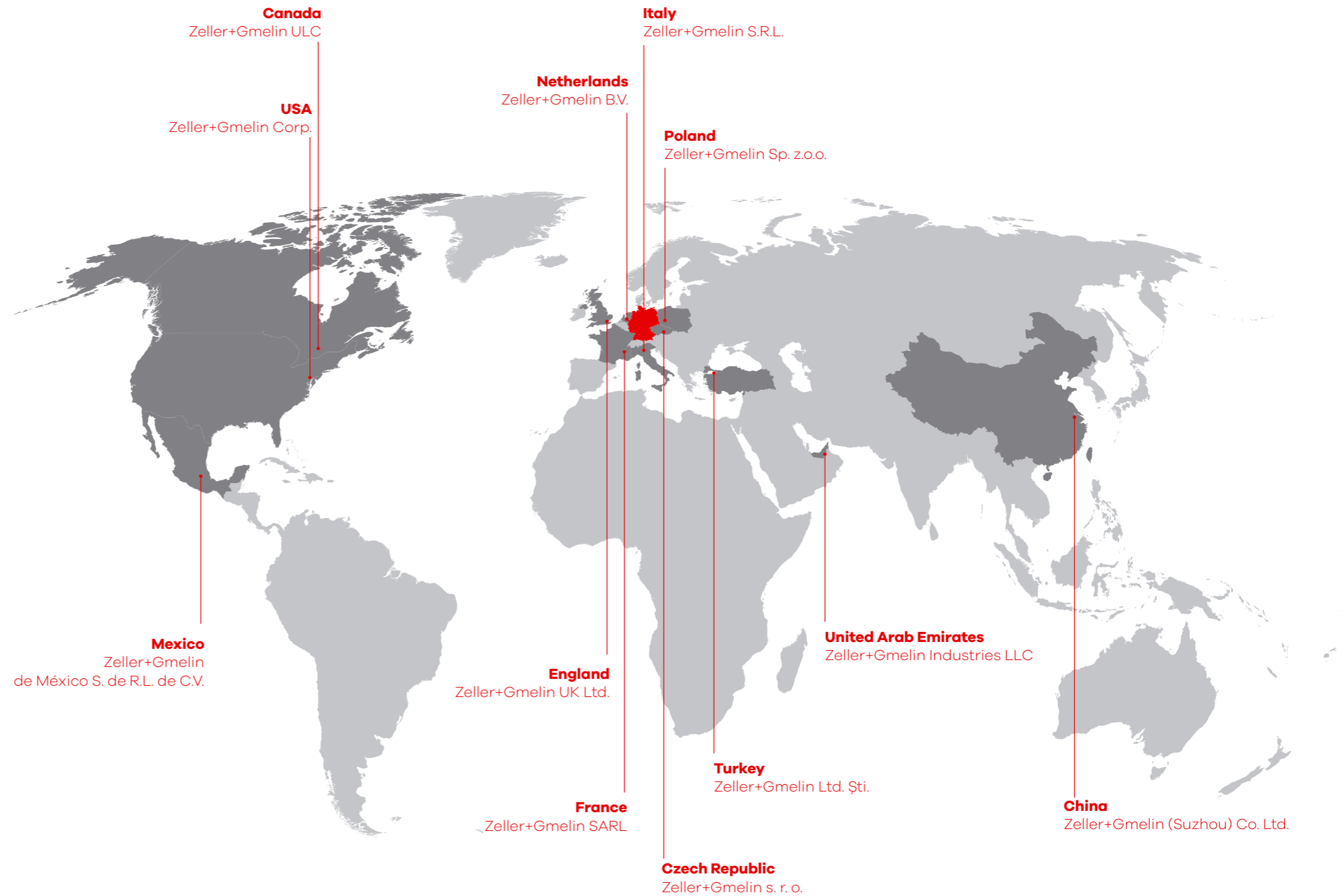
The distinct expertise of our sites and our smooth cooperation are beneficial not just to us, the company as a whole – but also to you, the customer.

The concentrated competence and understanding of processes, application and development, coupled with problem-solving skills and personal advice, are what make Zeller+Gmelin a global figure when it comes to understanding and solving your problems.



Germany

Zeller+Gmelin GmbH & Co. KG
ZG Fluidmanagement
SÜDÖL Mineralöl-Raffinerie GmbH
SÜDÖL GmbH
SÜDÖL Recycling GmbH



EXPERTLY DONE.

Zeller+Gmelin GmbH & Co. KG · Schlosstraße 20
73054 Eisligen/Fils · Germany
Phone: +49 7161 802-0 · info@zeller-gmelin.de
www.zeller-gmelin.de

