



## Your strong partner

for the food and beverage industries



GEA Process Engineering  
**GEA Diessel**

Ring in



**Food and drink hold body and soul together,** people have said since time immemorial. But fashions are always changing. New trends determine what tasty delights are “in” at any given time, and the most up-to-date ways of preparing them, packaging them and offering them for sale. Processing technology brings together traditions dating back thousands of years and product innovations that are here today and gone tomorrow, overtaken by the next bright idea. As a specialist in all kinds of free-flowing foods and beverages – from yoghurt to soft drinks, from beer and beer mix drinks

to high-grade spirits – GEA Diessel has been helping the industry for decades to be actively involved in these developments, and to stay ahead of the trends. GEA Diessel supplies tailor-made process plant and components, and delivers them reliably on schedule. They represent the economic solution for every task in the areas of metering, analysis, blending, distribution, monitoring and cleaning. All over the world, we get liquids into shape. We are leaders at all stages from the initial planning to the after-sale service. And just as we have always been, we remain open to any new innovations.

# Sparkle

Use in the beverage industry

**Cool and refreshing – that’s the way we like it!** Whether with conventional technology or modern in-line processes: all the components and complete systems required in the soft drinks industry are well represented in GEA Diessel’s range of products. From the individual flow meter to in-line analysis devices, from mixers, water deaeration or CIP systems all the way to the economic modernisation of soft drink manufacture – GEA Diessel offers the complete range of equipment for the syrup room.

- Internationally experienced project and service teams
- Monitoring of quality assurance and optimum exploitation of raw materials
- The shortest possible changeover times for the greatest possible flexibility



# Freshness

Use in the dairy industry

4|5



**You can't do without milk!** GEA Diessel has made a vital contribution to the automation of the dairy industry with its numerous crucial innovations over a period of decades. Metering devices and systems based on ideas originating from GEA Diessel, by which many processing steps in the making of yoghurt, fruit-flavoured curds and the like can be optimised, are now firmly established in the dairy industry all over the world. Especially in the field of mobile metering and data technology on milk tankers, but not only there by any means, GEA Diessel has been recognised as a pioneer for decades.

- Volumetric metering with weights and measures approval for invoicing purposes
- Quality assurance through sampling as per regulation (EC) 178/2002
- Secure documentation recognised by the authorities according to regulation (EC) OIML R117-1
- Thousands of units in use worldwide



# Spirit

Use in the spirituous liquors industry



## Cheers! Here's to a fruitful partnership!

There is scarcely a sector of industry that can look back on such ancient traditions and trading relationships as the manufacture of spirituous liquors.

GEA Diessel has earned itself a leading position among connoisseurs in this field throughout the world, with the courage to adopt new ideas and the ability to put these ideas into practice. We offer both individual components and complete production plant for everything from the processing of various kinds of alcohol right down to the production of the finished spirit. It goes without saying that all national and international regulations and standards are observed to the letter.

- Specialists in metering tasks for customs and excise purposes
- All the required equipment from the intake of alcohol to the finished product
- Creation of a spirit starter area from new, or modernisation of an existing one



# Flavour

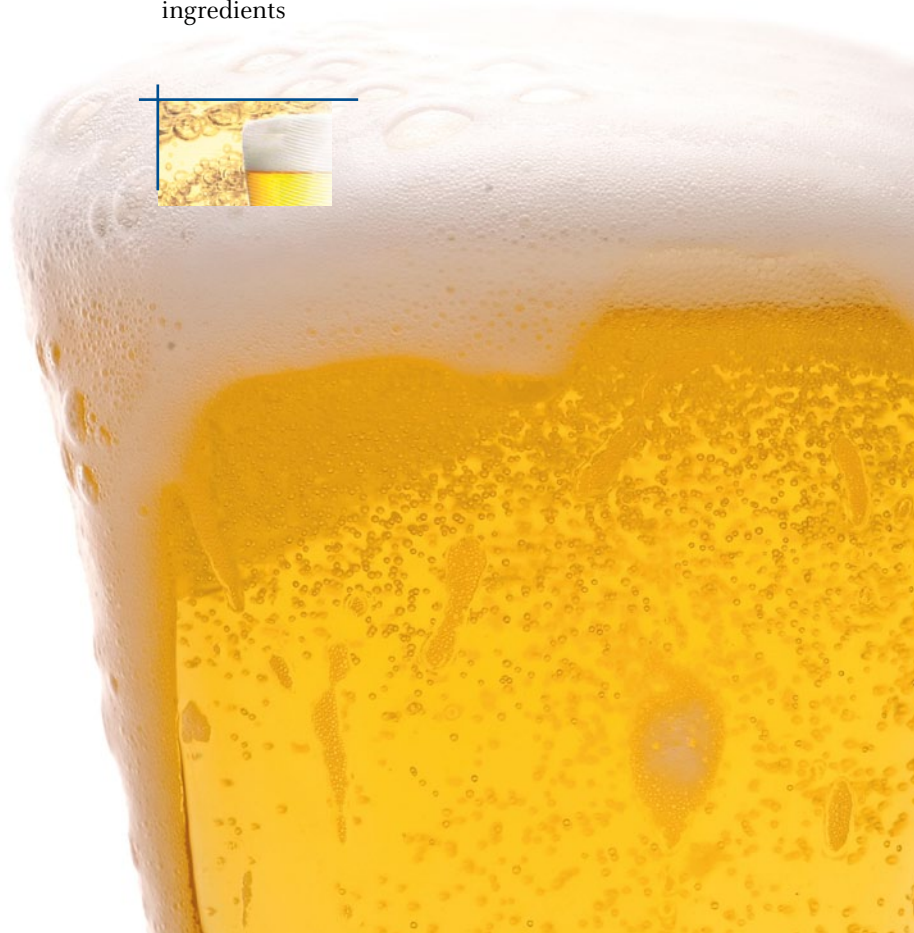
Use in the brewing industry

6|7

**Your good health!** GEA Diessel metering devices monitor and control important areas within the highly sensitive brewing processes. They enable brewers to implement the most flexible and reliable procedural solutions with efficiently automated processes. The straightforward control panel with its clear layout helps you to ensure uninterrupted operation with low manpower costs.

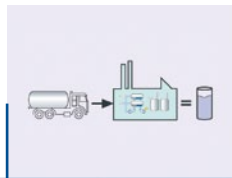
It is precision that gives beer its flavour – and GEA Diessel's competence provides the warranty for it.

- State-of-the-art process and automation technology
- All-round surveillance and centralised logging of processes
- Precise compliance with recipes economises on ingredients



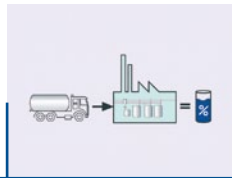
# Getting a grip on

## Process plant for the soft drink industry



Whether conventional technology or in-line processes: GEA Diessel has the right solution for every need anywhere in the manufacturing process. From the intake and storage of crystal sugar all the way to continuous blending to produce the finished beverage. From planning to commissioning, we supply the complete solution all from the same address.

## Process plant for the spirituous liquor industry



GEA Diessel supplies both individual components and complete systems for the entire production of spirits. It holds domestic type approval for equipment to meter alcohol/water mixtures for both customs and excise and commercial purposes: spirit concentration meters can be replaced.

## Preassembled process units



For the optimum input of raw materials and output of product, GEA Diessel's preassembled units bring together the company's combined experience in flow technology and inline analysis techniques. The units are assembled and tested before delivery, leading to a decisive shortening of installation and commissioning time. They are adapted to the individual situation, so that they can be integrated seamlessly into the process.

## Batch mixing



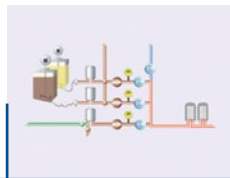
GEA Diessel's batch mixing equipment is principally used to ensure that the mixing of syrup base is subject to precise control. The DIMA™ and DI-BATCH™ devices convey the liquid components through pipes to the mixing tanks one after another. Theoretically, any number of components can be connected up and mixed. The equipment works on the full-hose principle, so that product losses are practically excluded.

# anything that flows

Technological solutions for all modern processes

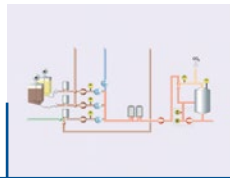
8 | 9

## Continuous blending



The DICON™ and DIVA™ components are used in the continuous blending of finished beverages. The liquid media are blended in the correct proportions in-line in the pipe. Digital regulators keep the blending proportions constant, even when the total throughput fluctuates.

## Blending and carbonation



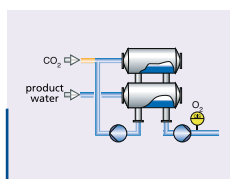
The beverage blender DIMIX™ is designed for the highly accurate continuous blending and carbonation of soft drinks. The streams of liquid are recorded by accurate flow meters and conveyed onwards. The digital regulators ensure that the recipe values are precisely complied with. The attached saturator adds CO<sub>2</sub> gas to the already blended beverage, and ensures that it is finely distributed and mixed homogeneously into the product.

## Carbonation of beverages



Components of the DICAR™ type are designed for the highly accurate continuous carbonation of soft drinks. The special injection process uses CO<sub>2</sub> very efficiently, thus saving costs and reducing the impact on the environment. The finely effervescent distribution of the gas ensures a taste experience to tickle the palate.

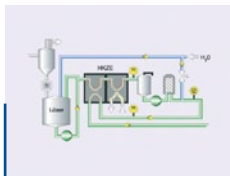
## Deaeration of water



The requirements for the shelf lives of beverages have been constantly tightened up over recent years. The removal of oxygen is an essential element in meeting these demands. GEA Diessel offers just the right technical solution, depending on the limit value required and the nature of any further processing, with its DIOX™ and VARIDOX™ units.

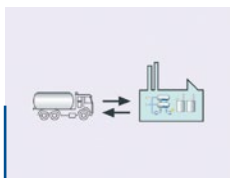
# Getting a grip on

## Dissolving sugar



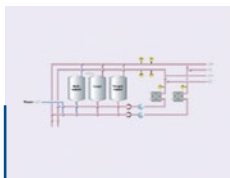
Dissolving granulated sugar is an economically interesting alternative to the purchase of liquid sugar. With the DI-SUGAR™ family, GEA Diessel supplies customised dissolving technology for any application. Whether continuously or in the tank. Whether cold or hot – we'll solve it.

## Intake/Discharge of product



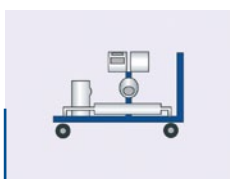
Stationary reception systems for road tankers and mobile metering equipment mounted on the vehicles are available for any purpose with a variety of additional components, either in a weights and measures approved version or otherwise. These devices are based on GEA Diessel metering technology which has led the way for decades, having originally been patented in 1957, and which became a byword in breweries under the name "Diessel meter".

## Cleaning



For modern CIP (cleaning in place) and disinfection, GEA Diessel relies on the DICIP-E™ and DICIP-S™ storage tank/recycling systems, which are more economical and versatile than single-use systems while offering a convincingly high standard of reliability. Tank capacities and the number of circuits can be adapted precisely to the operating conditions and the various demands of the equipment to be cleaned.

## Metering with mobile devices



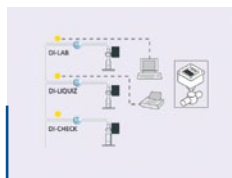
Mobile metering units are required every day in almost all branches of wine-making, brewing and the fruit juice and soft drink industries. GEA Diessel's DI-MOBIL™ metering equipment operates by electromagnetic flow metering (in litres) or by mass flow metering (in kg or litres) and offers the possibility of preselecting quantities, with automatic pump cut-off and an electric stop valve.



# anything that flows

10|11

## In-line analysis



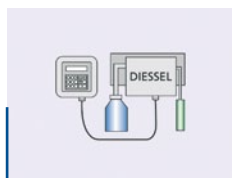
In-line analysis devices, numerous varieties of which are available from GEA Diessel, ensure absolutely accurate phase switching, the carefully controlled dosing of first and last runnings and perfectly regulated product concentrations in the manufacturing process. All the data relevant to operations is automatically documented and the quantities used accounted for precisely.

## Measuring flow



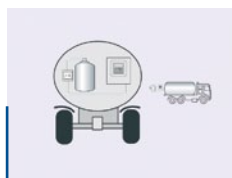
The electromagnetic flow meter occupies a special position in industrial flow metering technology. The metering device is maintenance and wear free, and is not rendered inaccurate by changes in density, viscosity or temperature. It is designed in such a way as to avoid any additional pressure loss, and offers completely hygienic conditions. GEA Diessel offers the perfect metering component: the flow meter type IZMAG™.

## Sampling



In production and on tanker vehicles, samplers of the MS™, KS™ and PS™ types are used to enable the quality of the product and its ingredients to be monitored in the laboratory. On the basis of its many years of experience in various applications, GEA Diessel implements with the SampleGuard™ system complete solutions from sampling to bottle identification and automated bottle transportation, for example on a turntable.

## Loading milk tankers



To fulfil the special requirements attached to the metering of liquids such as milk on road tankers, GEA Diessel supplies mobile metering devices which, on the basis of a variety of device and control unit concepts which the customer can choose between, can achieve very high product throughputs of up to 75,000 l/h and more, while still maintaining the degree of accuracy required by the weights and measures authorities. Additional support is provided by the associated ZEVODAT -flash™ data capture system.

# Your strong partner

for the food and  
beverage industries

*GEA Diessel is the process plant specialist  
for free-flowing products.*

*Since 2004 we have been part of the GEA Group  
segment GEA Process Engineering, which is  
represented in over 50 countries and employs  
around 4,500 people in all. We can thus offer  
our customers not only our unsurpassed experience  
in process plant construction, but also the  
expertise of the powerful GEA Group with its  
unrivalled technological resources worldwide.  
The certification according to DIN EN ISO  
9001:2008 documents our quality standards.  
This is the key to a technical performance on the  
highest level which enables us to develop modern  
and economic solutions for our customers.*



GEA Process Engineering

**GEA Diessel GmbH**

Steven 1 · 31135 Hildesheim · Germany  
Phone +49 5121 742-0 · Fax +49 5121 742-153

info.geadiessel.de@geagroup.com · www.geadiessel.com