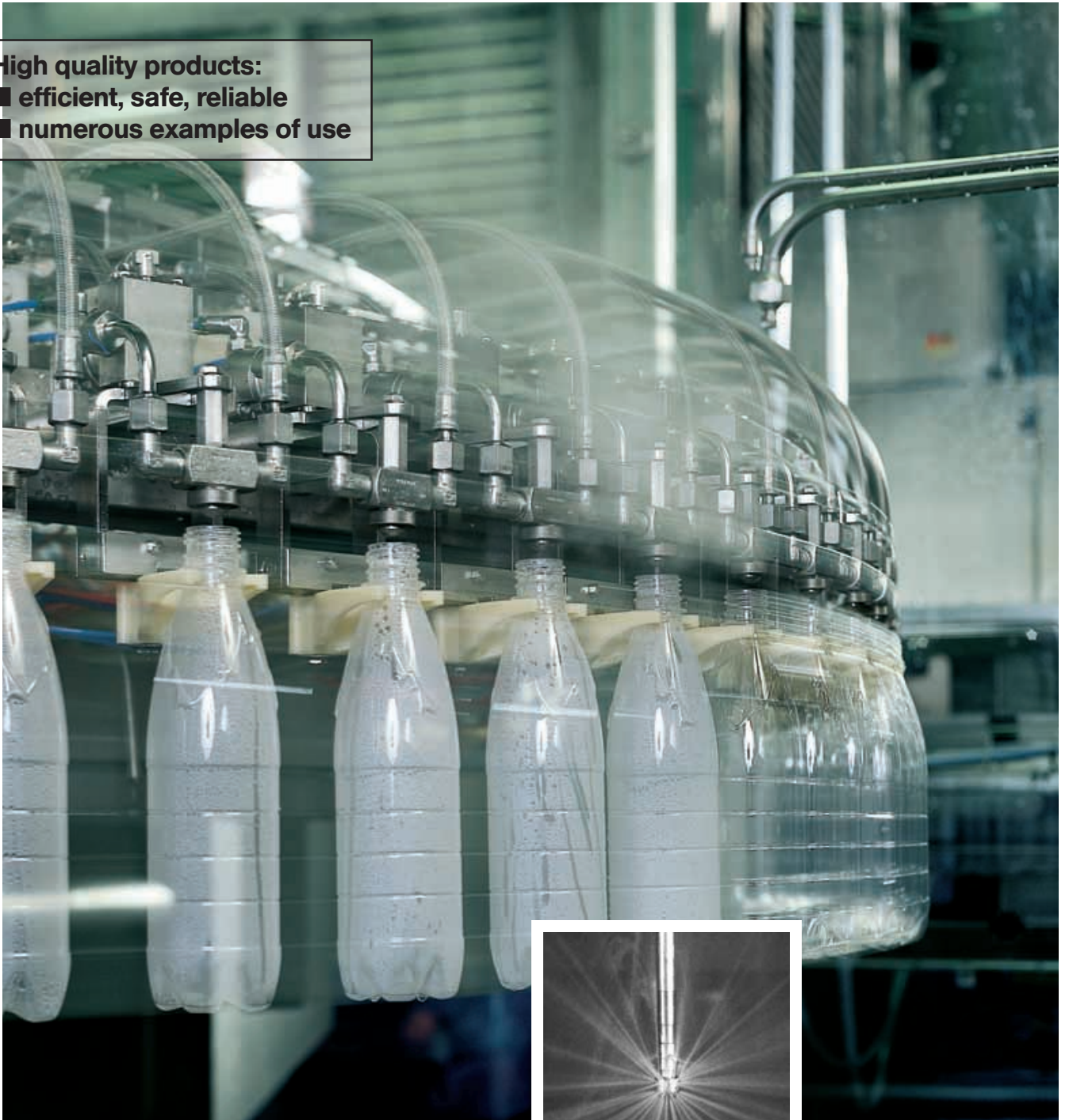




## Spray Nozzles for the Beverage Industry

High quality products:

- efficient, safe, reliable
- numerous examples of use



# Advanced spray technology based on 125 years of experience



## Today's producers have to operate in a tougher environment than ever before, driven by:

- Customer demand for improved quality
- Constant pressure on costs
- Tighter pollution controls

Lechler nozzles and spray systems are used in virtually every stage of beverages production and their performance can have a major impact on product quality and manufacturing costs.



Today, Lechler offers the most comprehensive range of nozzles and spray systems available to industry worldwide.

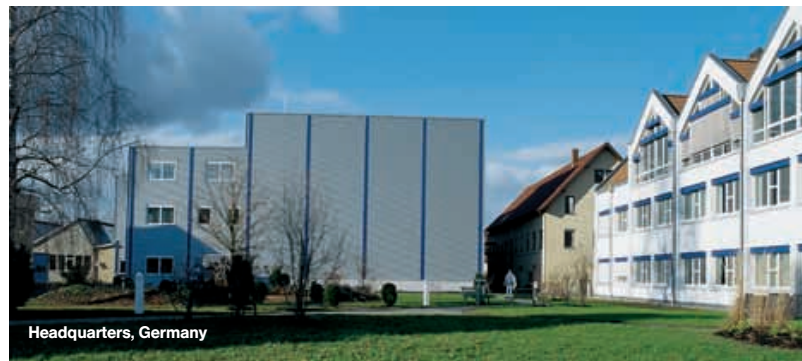
## Serving industry worldwide

Lechler is a truly international company, offering sales and technical support to diverse industries throughout the world. In addition to 300 employees at our Metzingen headquarters in Germany, subsidiary companies have plants and offices in the UK, the USA, India, China, France, Belgium, Spain, Sweden, Finland and Hungary. We also have a network of sales offices and representatives covering many other countries.

Wherever you are, Lechler seeks to establish a partnership, helping you to enhance product quality through the application of expertise in advanced fluids engineering.



For over 125 years, Lechler has pioneered developments in spray technology for all industries, designing, developing and manufacturing products of outstanding reliability and performance. All accompanied by expert advice based on thorough knowledge gained through experience in providing both conventional and innovative solutions.



## Some examples: How you can profit from our know-how

Lechler atomizing nozzles are the kind of system component that often have a decisive role in the reliability and economic efficiency of entire processes. The main prerequisites, of course, are precision and quality – and Lechler's atomizing nozzles are well-known for both.

Lechler has a broad range of high-precision nozzles to offer. Together with the competent consultancy services provided by our atomizing experts, they yield intelligent solutions tailored to your particular needs.

Indeed, Lechler-made solutions ensure optimal benefits at affordable prices.



### Cleaning of tanks and systems

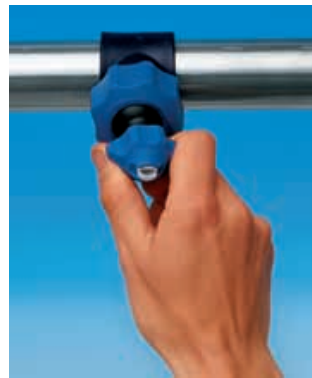


Various types of cleaning nozzles, Special CIP nozzles

**Advantages:**  
the right nozzle for every application

**Benefits:**  
reliable, cost-effective cleaning

### Mounting technology



Numerous intelligent mounting options

**Advantages:**  
quick, accurate aiming of the spray jet

**Benefits:**  
lower installation and maintenance costs, optimal process efficiency

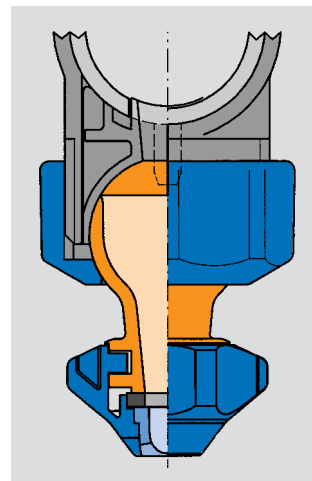
### Pasteurization



Tangential hollow-cone nozzles, available in diverse sizes, angles and materials

**Advantages:**  
non clogging design, uniform distribution of liquid

**Benefits:**  
high process efficiency, reliable function



#### Your advantages at a glance:

##### Safety:

- time-tested, reliable operation
- defined performance

##### Economic efficiency:

- optimized spray characteristics
- long service life

##### Easy handling:

- quick installation
- uncomplicated maintenance

##### Reliable Service:

- competent consultation services
- short-notice availability

#### ...more examples

##### Belt lubrication and disinfection:

special minimum-flow, non clogging flat fan nozzles

##### Drying, sorting, blowing off:

quiet air nozzles with low air consumption

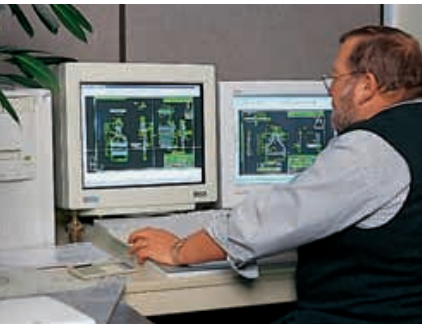
##### Moistening and disinfecting:

Twinfluid nozzles and accessories for superfine atomization of fluids

# Lechler solutions for safe, reliable, economical production

## Our experience for your benefits

On the market for many years already, Lechler atomizing nozzles have proven very successful and dependable in the service of machine manufacturers, dealers and system operators the world over.



## New approaches for heightened demands

Sensitized consumers are demanding high-quality, reasonably priced, safe food with an eco friendly background. Calls for longer shelf life, for example, are satisfied by strict hygiene standards, laws, regulations and guidelines. These standards exert a great influence on the design of machines and processes. Increasing international competition makes it necessary to fully exploit rationalizing potentials, e.g., in connection with cleaning processes: Clean In Place systems accelerate throughput and shorten downtime resulting in higher production quantities and increased product diversity. Innovative enterprises rely on nozzle technology from Lechler.



## Lechler-engineered approaches to tomorrow's innovations

Be it the increasing diversity of products and taste trends or such modes of packaging as laminated cartons and plastic bottles, often, the filling, processing, storage or handling technology calls for new kinds of machines and processes.

**Intelligent spraying can make a major contribution toward the efficient implementation of innovative products and processes.**

**The advance of two-way packages, in combination with general hygiene requirements, makes it necessary to thoroughly clean all portable receptacles. High throughput rates in turn require efficient cleaning, filling and handling systems. Lechler have the nozzles required to guarantee a smooth process in such areas as:**

- cleaning of tanks and vessels
- once-through washing of containers
- cleaning of filling/bottling machines
- lubrication and disinfection of conveyor belts
- pasteurization
- blowing off of labels
- high-pressure cleaning





## Brewing technology

In any modern brewery, liquid atomizers are indispensable for brew kettle and bottle store alike. Lechler has numerous efficient solutions to offer for this sector, too.

### Typical applications

- rinsing of fermenters and lager cellars
- air-conditioning and moisturization
- cleaning of bottling machines
- cleaning of keg exteriors
- container washing machines
- pasteurization



## Alcoholic beverages

Agricultural nozzles by Lechler safeguard the high quality of raw materials in numerous vineyards and orchards. And – in large wineries, for example – subsequent processing also relies on Lechler's cleaning nozzles.

### Typical applications

- cleaning of tanks, machines and casks
- for storage
- mixing/separation
- maturing
- handling



## Soft drinks

Apple juice, mineral water, carbonated beverages and sundry soft drinks are becoming increasingly popular, and the number of innovative beverages and blends is constantly expanding. Consequently, production equipment is having to be cleaned at increasingly short intervals. For such jobs as well as for the production of concentrates and powders, Lechler has lots of attractive solutions to offer.

### Typical applications

- cleaning and disinfection of mixers, storage tanks and bottling facilities
- spray lances for beverage-powder production



## Milk drinks

The processing of milk drinks and soy-based beverages imposes strict requirements on the hygienic design of the equipment involved.

For this area, Lechler has engineered a range of special-purpose CIP cleaning nozzles that satisfy the strictest sanitary requirements of the American 3A association and, hence, are superbly suited to diverse cleaning tasks.

### Typical applications

- cleaning of mixers, storage tanks and bottling/filling equipment



## Typical applications: We have the answers to your every need

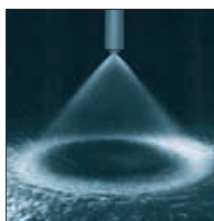
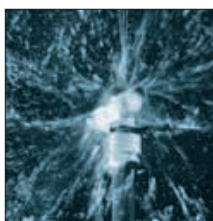
The following tables show some examples of problem solutions in the beverage industry and will help you find suitable products for your own applications. Please contact us now to get detailed ordering information.



The Lechler Spray Controller 360i is a powerful PID control unit dedicated to optimising the performance of Lechler spray products for various applications.

Cleaning and process technology in general				
Application	Technical requirements	Nozzle series	Typical duty parameters	Catalogue chapter/ brochure
<b>Pasteurization</b>	Uniform sprinkling, no clogging	Tangential-flow hollow cone nozzles series 302	Approx. 20 l/min, 1.5-2 bar, $\sphericalangle$ 90°-130°	Chapter 2
		Tangential-flow full cone nozzles Series 422		Chapter 3
<b>Cleaning of small tanks and pieces of equipment (<math>\leq 1</math> m diameter)</b>	High flushing effect, compactness	Self-rotating tank cleaning nozzles, spray balls	20-60 l/min, 1-2 bar, $\sphericalangle$ 180°/360°	Tank cleaning
<b>Cleaning of medium-size tanks and pieces of equipment (<math>\leq 3</math> m diameter), e.g., mixers and fermenters and Sugar tanks</b>	High jet force, low water consumption	Self rotating tank cleaning nozzles, spray balls	60-200 l/min, 1.5-2.5 bar, $\sphericalangle$ 180°/360°	Tank cleaning
<b>Cleaning of large tanks and pieces of equipment (<math>&gt;3</math> m diameter), e.g., vessels and beer tanks</b>	High jet force, wide throw, low water consumption	Rotating-controlled tank cleaning nozzles	150-400 l/min, 2-5 bar, $\sphericalangle$ 360°	Tank cleaning
<b>Acceleration of drying and cooling processes</b>	High blowing power, noise reduction	Whisperblast compressed air nozzles	Diverse models, approx. 1-5 bar, 10-35 Nm <sup>3</sup> /h	Chapter 6
<b>Alignment of mounts and nozzles</b>	Ease of installation/removal, fast and accurate jet adjustment	Quick-mounting systems	Div. models and materials	Chapter 4/9
		MEMOSPRAY® series 676	Div. models and materials	Chapter 4
		Easy Clip series 676	Div. models and materials	Chapter 4
		TWISTLOC series 092	Div. models and materials	Chapter 9
		Eyelet connectors ball joint	Div. models and materials	Chapter 9
<b>Spray drying of concentrates</b>	Ultrafine atomization	Twinfluid nozzle 721, hollow cone nozzle series 2SP	Process-dependent	On request

The parameters mentioned in the table are only typical examples. They have to be adjusted to each different process.



Filling/bottling and packaging				
Application	Technical requirements	Nozzle series	Typical duty parameters	Catalogue chapter/brochure
<b>Cleaning of filling/bottling and packaging machines</b>	High cleaning power, compactness	Self-rotating tank cleaning nozzles, spray balls	15-40 l/min, 1.5-2 bar, $\angle$ 180°/360°	Tank cleaning
<b>Cleaning of bottle exteriors</b>	High jet force, accurate aim	Flat fan nozzles series 632/652	10-15 l/min, 5-10 bar, $\angle$ 30°	Chapter 4
		Ball joints series 092		Chapter 9
<b>Degassing of liquids</b>	Superfine droplets for large reaction surface	Cluster-head nozzles series 502	5-10 bar, $\angle$ 130°	Chapter 3
		Hollow cone nozzles series 212		Chapter 2
<b>Disinfection</b>	Fine distribution of miniscule quantities	Twinfluid nozzles series 136*	0.2 l/min, $\angle$ 20°	Chapter 1
		Hollow cone nozzles series 212		Chapter 2
<b>Bottleneck venting/foaming</b>	Concentrated solid jet	Solid stream nozzles	0.05-0.1 l/min, 4-15 bar	On request
<b>Delabeling</b>	High jet power, accurate aim	Flat fan nozzles series 632/652 Ball joints series 092	3-5 bar, $\angle$ 30°	Chapter 4 Chapter 9
<b>Moistening of labels</b>	Fine distribution of miniscule quantities	Twinfluid nozzles series 136*	Approx. 0.2 l/min	Chapter 1
		Hollow cone nozzles series 212		Chapter 2
<b>Drying of labels and bottles</b>	High blowing power, noise reduction	Whisperblast® compressed air nozzles	2-5 bar, 10-35 Nm <sup>3</sup> /h	Chapter 6

Handling/Conveying				
Application	Technical requirements	Nozzle series	Typical duty parameters	Catalogue chapter/brochure
<b>Once-through washing of handling and conveying equipment (containers)</b>	High cleansing power, accurate aim	Flat fan nozzles series 632/652	3-10 l/min, 3-5 bar, $\angle$ 60°	Chapter 4
		Easy Clip system series 676		Chapter 4
		MEMOSPRAY® series 676		Chapter 4
<b>Conveyor-belt lubrication and cleaning</b>	Minute-volume atomizing, no clogging	Flat fan nozzles series 652.185-275, with accessories	3-12 l/h, 2-5 bar, $\angle$ 75°	Chapter 4
<b>Sorting and handling</b>	High blowing power, noise reduction	Whisperblast® compressed air nozzles	10-35 Nm <sup>3</sup> /h, 2-5 bar	Chapter 6
<b>Cleaning of keg exteriors</b>	High jet force, accurate aim	Flood tips series 688/689	2-5 bar, $\angle$ 60°	Chapter 4
		Easy Clip system series 676		Chapter 4
		HP flat fan nozzles series 602		Chapter 4
<b>Cleaning of keg interiors</b>	High rinsing power	Rotating tank cleaning nozzles, spray balls	15-60 l/min, 1.5-2 bar, $\angle$ 180°/360°	Tank cleaning
<b>Removal of broken glass</b>	High rinsing power	Flat fan nozzles series 632/652	20 l/min, $\angle$ 60°	Chapter 4

The parameters mentioned in the table are only typical examples. They have to be adjusted to each different process.

\* 136 new nozzle generation, replacement of 156 nozzle.



For detailed ordering information on Lechler nozzles for Beverage Industry please refer to the following documentation:

- Catalogue »Precision Spray Nozzles and Accessories«
- Brochure »Tank Cleaning Nozzles«
- Brochure »Food Industry«
- Brochure »Nozzles and Accessories for Compressed Air«
- Brochure »MEMOSPRAY® - the intelligent Nozzle System for Surface Treatment«
- Folder »Lechler Spray Controller LSC«



Contact us now



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**Yes, I want to get detailed information on Lechler nozzles for the Beverage Industry!**

Please send me the special information:

- Catalogue "Precision Spray Nozzles and Accessories"
- Brochure "Tank Cleaning Nozzles"
- Brochure "Spray Nozzles for the Food Industry"
- Brochure "Nozzles and Accessories for Compressed Air"
- Brochure "MEMOSPRAY® - the intelligent Nozzle System for Surface Treatment"

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Company/Department

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