

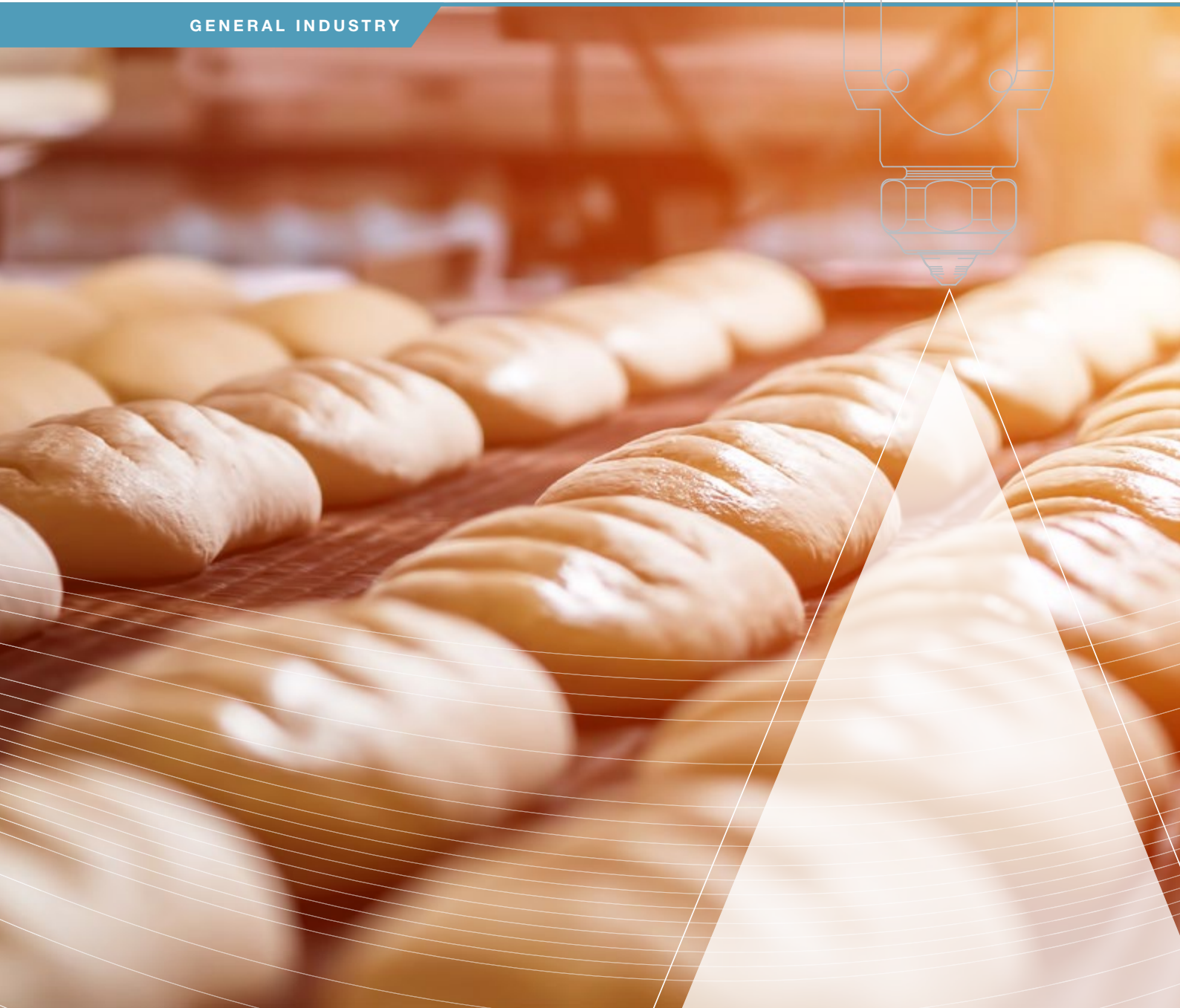
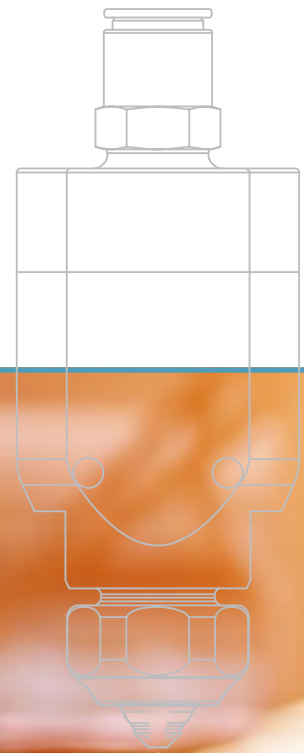
ENGINEERING  
YOUR SPRAY SOLUTION



## ➤➤ VarioSpray

Nozzle valve systems for variable atomization of very small liquid volumes

GENERAL INDUSTRY



# FULL DOSAGE CONTROL FOR MAXIMUM COST CONTROL

Lechler is a world leader in nozzle technology. For over 135 years, we have pioneered numerous groundbreaking developments in the field of nozzle technology. We combine comprehensive nozzle engineering expertise with a deep understanding of application-specific requirements to create products that offer outstanding performance and reliability.

## Innovative and flexible spraying technology opens up new applications

Faster, more precise and now more sustainable. The demand for more efficient production processes is increasing in almost every industry. Even already extremely efficient spraying processes are affected – particularly when spraying very small liquid volumes.

Pneumatic atomizing systems are often used here because very small flow rates can be achieved using compressed air. However, this often makes control and installation extremely complex.

Additionally, the use of air can have an unfavorable effect on operating costs. Aerosols may also be formed and liquid is lost due to the rebound effect.

With the VarioSpray II and VarioSpray HP hydraulic pulse-width-modulated nozzle valve systems, Lechler offers two alternatives that are as versatile as they are reliable. With hydraulic nozzle systems, the narrowest cross section of the spray nozzle determines the liquid flow rate. For reasons of economy and production, however, arbitrary reduction of this narrowest cross section is not possible.



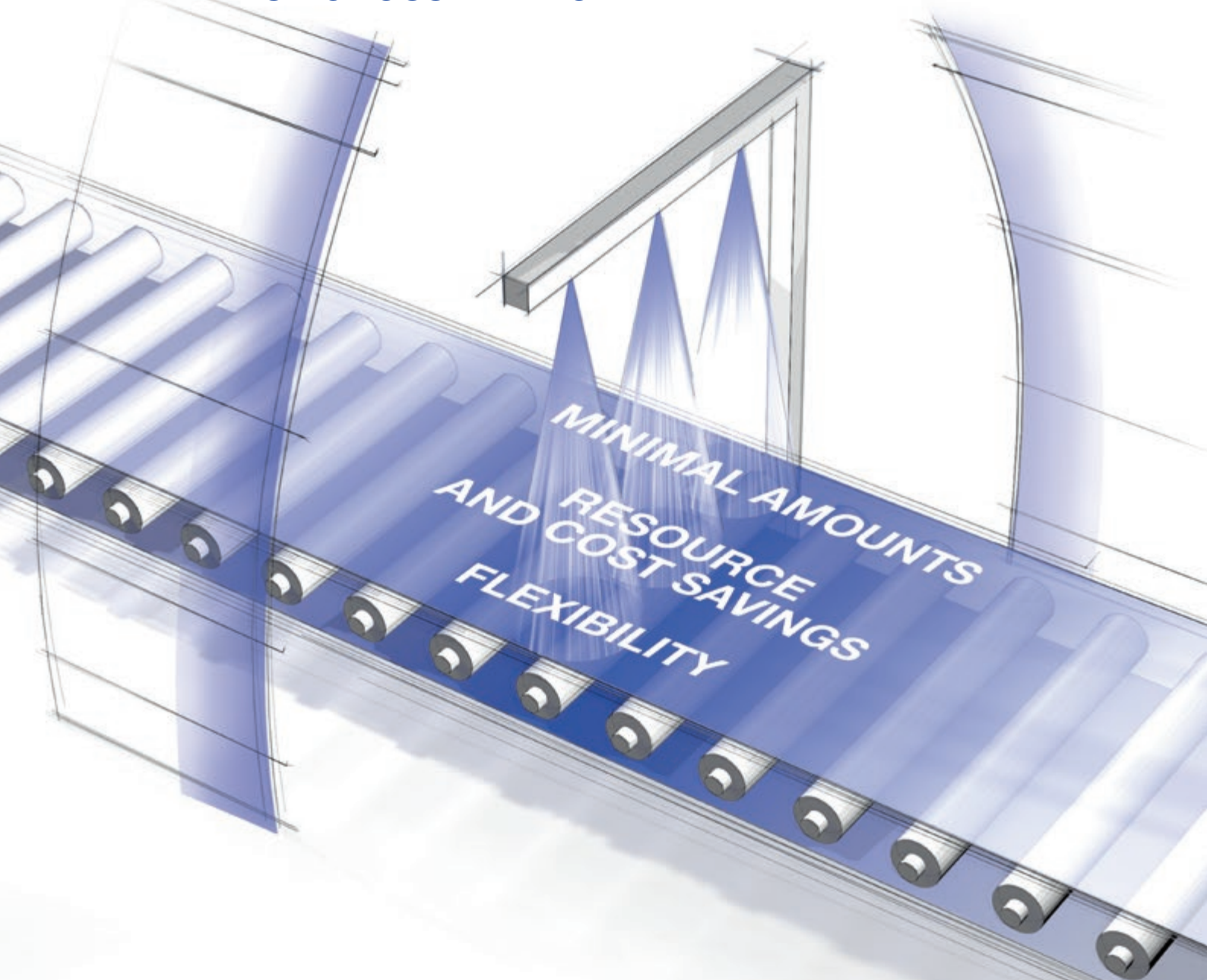
Instead, we use flexible timing of the spray duration to realize minimal flow rates – without the need for an expensive and complex pneumatic atomizing system.

In addition to the VarioSpray II and VarioSpray HP nozzle valve systems, a control unit is also required to permit simple modification of the pulse width and cycle frequency.

## Your benefits

- Simple adjustment of the pulse width and cycle frequency
- Flushing function
- Modular design and modular system
- Start/stop signal (e.g. via light barrier)
- Individual valve control for VarioSpray HP

# BENEFITS ACROSS THE BOARD



## FLEXIBILITY

The Lechler VarioSpray system is completely modular, allowing it to be adapted to individual requirements as flexibly as possible.

The result is a perfectly coordinated product portfolio including

- **Optimum valve control by perfectly matched electronic components**
- **Modular spray headers**
- **Various predefined Lechler control concepts**
- **Individual advice from our sales personnel**

## RESOURCE AND COST SAVINGS

The aerosol-free atomization of small and minimal liquid volumes offers specific benefits for spray nozzle operation. The fact that no atomization air is used means a huge reduction in rebound effects.

The following costs are reduced as a result:

- **Installation cleaning**
- **Operating costs of extraction systems**
- **Liquid losses because the liquid to be atomized is applied to the product in a more targeted manner**

## MINIMAL AMOUNTS

Thanks to the use of pulse-width-modulated valves, even the smallest liquid quantities can be hydraulically atomized with maximum precision.

This control method permits

- **flexible and immediate response to changed ambient parameters (e.g. belt speed)**
- **uniform jet and spray quality**
- **further application benefits due to a significantly increased turn-down ratio**

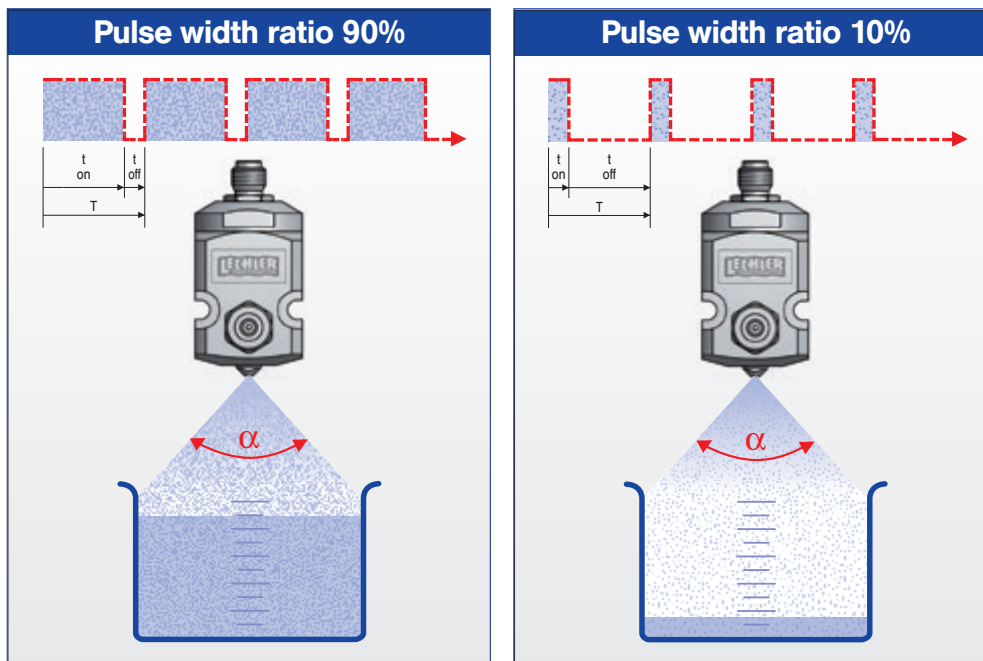
# TECHNICAL BACKGROUND

## What is pulse width modulation?

Pulse width modulation refers to the variation of the ON time  $t_{on}$  / OFF time  $t_{off}$  of a square-wave signal when the frequency  $f$  remains constant. Here, the frequency  $f$  corresponds to the reciprocal value of the period duration  $T$ .

The ratio of the ON time  $t_{on}$  to the period duration  $T$  is referred to as the pulse width ratio (DC = duty cycle). The pulse width ratio determines the flow rate. The valve is open during the ON time  $t_{on}$ . The shorter the DC, the less the flow rate.

Depending on the frequency selected, the pulsation is barely visible to the human eye.



## What fluids can be sprayed?

The two innovative Lechler products VarioSpray II and VarioSpray HP can be used to precisely spray a wide range of different liquids. The two nozzle valve systems are individually designed to optimally perform these tasks.

**VarioSpray II** is ideal for applying small volumes of low-viscosity, easily atomized liquids.

**VarioSpray HP** was developed to permit flexible spraying of a wide variety of liquids. Even high-viscosity media (up to 75 mPas, depending on the liquid density) can be easily atomized.

## Possible liquids for VarioSpray:

VarioSpray II	VarioSpray HP
	Water
	Low-viscosity release agent
	Disinfectant
-	Oils
-	Fats
-	Emulsions
-	Liquid egg
-	Milk
-	Sugar solutions
-	etc.

# 8 GOOD REASONS FOR GREATER COST EFFICIENCY

## Product features

# Your benefit

### Minimum flow rates

- Liquid saving
- No expensive, complex twin-fluid system

- ➔ Reduced costs
- ➔ Greater efficiency

### Cycle frequency up to 200 Hz for VarioSpray HP, up to 100 Hz for VarioSpray II

- Flexible belt speeds

- ➔ Increased productivity
- ➔ Shorter production time

### High turn-down ratio up to 29:1 29:1 with VarioSpray HP, up to 11:1 with VarioSpray II

- Wide range of flow rates covered by one nozzle

- ➔ More flexible production

### Continuously variable flow rate

- Flexible adjustment of the volume applied for different products

- ➔ Shorter product changeover times

### Different flow rates have no influence on spraying parameters

- Constant spray angle
- Uniform droplet size

- ➔ Constant process parameters

### Flow rate is not regulated by pressure

- No high pressure required
- Simple setup

- ➔ Short installation time
- ➔ Low maintenance requirement
- ➔ Low operating costs

### No atomization air

- No aerosol formation
- Reduced loss of liquid

- ➔ Reduced risks to health
- ➔ No environmental pollution
- ➔ Reduced costs

### Food-compliant

- Spraying/humidification of foods

- ➔ Compliance with legal requirements

# POSSIBLE APPLICATIONS FOR VarioSpray HP

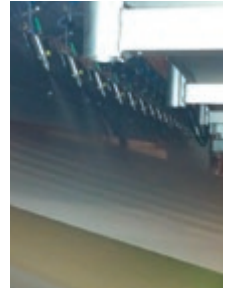
## Application of oil for applying seasonings

Oils are generally applied so that products can adhere (e.g. seasonings to cereals/snacks). With **VarioSpray HP**, this can be performed without aerosols. This means a significant reduction in operating costs and the necessary cleaning processes.



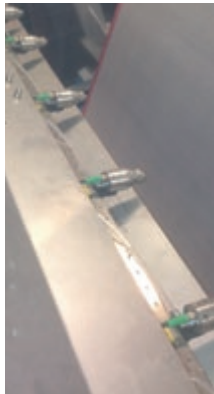
## Web humidification

Individual valve controls permit flexible response to changes in product moisture (for example, on paper webs or non-woven fabrics) and improvements in product quality.



## Release agent application for more viscous media

The application of demolding oils, anti-corrosion agents, or other release agents often requires costly extraction systems. With **VarioSpray HP**, these systems can be kept to a minimum or even eliminated altogether. At the same time, the media is more evenly applied to the product.

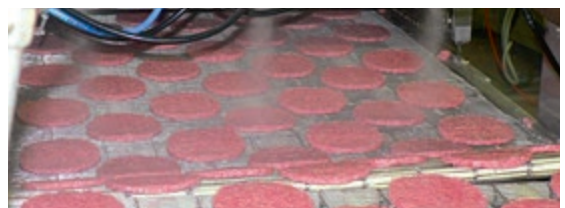


## Coating of foods

With **VarioSpray HP**, commonly used liquids such as sugar solutions containing vitamins or liquid egg can be efficiently sprayed onto the product with practically no loss.



## Optimization of the production process



Moisture loss resulting from freezing can be precisely compensated by applying water. You will notice immediate, measurable success in the optimization of your production processes.

# POSSIBLE APPLICATIONS FOR VarioSpray II

## Anti-scuffing

The application of anti-scuffing lubricants reduces wear rings while at the same time reducing lubricant consumption as compared to conventional application methods.



## Humidification of dough products

Dough products are humidified to maintain the stability of the production processes. Small amounts must be precisely sprayed onto the dough products. VarioSpray II allows material losses to be greatly minimized.



## Disinfection

Targeted, pulse-width-modulated application of antibacterial liquids to a variety of systems/products for purposes of disinfection reduces liquid consumption, while also ensuring maximum safety and compliance with hygiene guidelines.



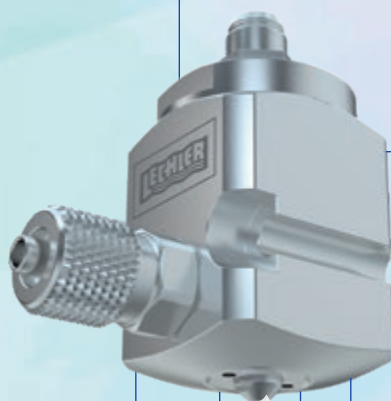
## Release agent application for low-viscosity media

For solidifying and improving the quality of surfaces by means of low-viscosity media, e.g. before the press process.



## Coating with VarioSpray II

Coating and metering processes are commonly used in food processing. The VarioSpray II pulse-width-modulated nozzle valve system is impressively flexible, making it possible to spray the smallest liquid volumes with precision.



# VarioSpray HP



The HP valve range can be used to atomize a wide variety of liquids. All parts that come into contact with liquids are made of stainless steel, thereby complying with EC 1935/2004 and FDA regulations.



Suitable for the following viscosities in mPas\*

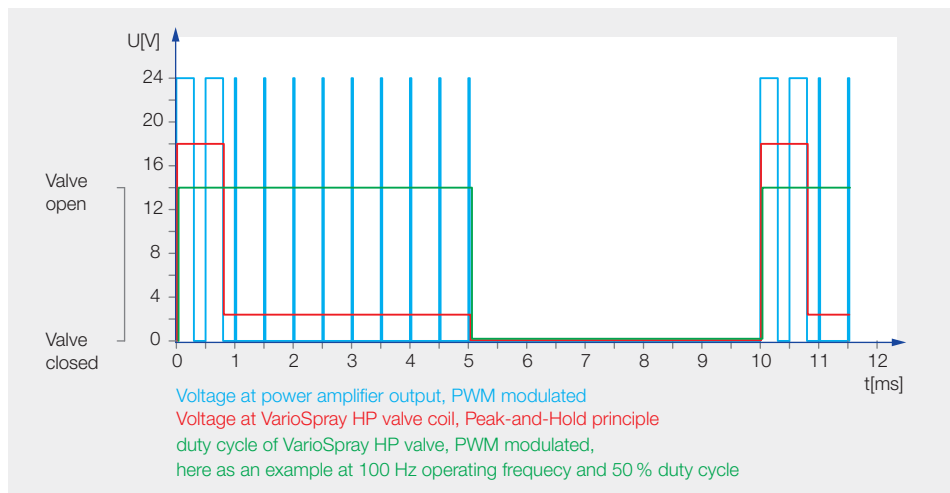
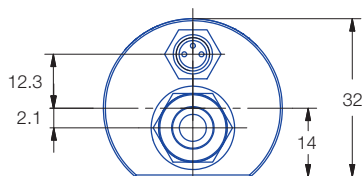
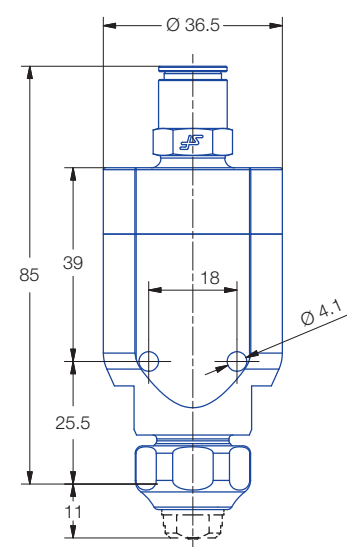
<b>Ordering no.:</b> 752.060.1Y.00	0	10	20	30	40	50	60	70	80	90
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<b>Ordering no.:</b> 752.090.1Y.00	0	10	20	30	40	50	60	70	80	90
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Valve	752.060.1Y.00	752.090.1Y.00
Type	2/2-way N.C.	2/2-way N.C.
Nominal diameter	0.6 mm	0.9 mm
Pressure range	10 bar	7 bar
Voltage	12 V DC	
Nominal power	9 W	
Control	Peak & Hold Control only	
Housing material	316L SS	
Spring material	301 SS	
Protection type	IP 65	
Frequency	0 – 200 Hz	
Hose connection	Push-in dia. 8 mm	
Electrical connection	M8 3-pin circular connector	

\* Depending on the density of the liquid





Control of the VarioSpray HP valve is based on the peak & hold principle. The required voltage signal is also generated according to the PWM\* principle.

This method results in short response times and energy-efficient valve control, which also results in minimal heat generation in the magnetic coil. Typical peak-and-hold parameters, depending on the operating pressure and medium:

$t_{peak}$ : 500-1000  $\mu$ s  
 $V_{peak}$ : 16-28 V  
 $V_{hold}$ : 2.0-5.6 V

Spray angle**	Ordering no.	Material			Suitable for valves		Flow rate range***	
		16	17	56			l/min	l/min
		303 SS	316Ti SS/ 316L SS	POM	752.060.1Y	752.090.1Y	752.060.1Y	752.090.1Y
60°	652.304.WW.05	○	○	–	–	○	–	0.09 – 0.55
	652.334.WW.05	○	○	–	–	○	–	0.11 – 0.71
	652.364.WW.05	○	○	–	–	○	–	0.13 – 0.91
75°	652.145.WW.05	○	–	○	○	○	0.02 – 0.10	0.02 – 0.10
	652.165.WW.05	○	–	–	○	○	0.02 – 0.12	0.02 – 0.12
	652.185.WW.05	○	–	○	○	○	0.02 – 0.15	0.03 – 0.16
	652.215.WW.05	○	–	–	○	○	0.03 – 0.19	0.04 – 0.20
	652.245.WW.05	○	–	–	○	○	0.04 – 0.26	0.05 – 0.28
	652.275.WW.05	○	–	–	○	○	0.05 – 0.34	0.07 – 0.38
90°	652.216.WW.05	○	–	–	○	○	0.03 – 0.19	0.04 – 0.20
	652.246.WW.05	○	–	–	○	○	0.04 – 0.30	0.06 – 0.33
	652.276.WW.05	○	–	–	○	○	0.05 – 0.35	0.07 – 0.40
	652.306.WW.05	○	○	–	–	○	–	0.09 – 0.59
	652.336.WW.05	○	○	–	–	○	–	0.11 – 0.72
	652.366.WW.05	○	○	–	–	○	–	0.13 – 0.92
120°	652.187.WW.05	○	–	–	○	○	0.02 – 0.14	0.03 – 0.15
	652.217.WW.05	○	–	–	○	○	0.03 – 0.20	0.04 – 0.21
	652.247.WW.05	○	–	–	○	○	0.04 – 0.29	0.05 – 0.31
	652.277.WW.05	○	–	–	○	○	0.05 – 0.36	0.07 – 0.41
	652.307.WW.05	○	–	–	–	○	–	0.09 – 0.58
	652.337.WW.05	○	○	–	–	○	–	0.11 – 0.73
	652.367.WW.05	○	○	–	–	○	–	0.13 – 0.95

\* PWM: Pulse width modulation

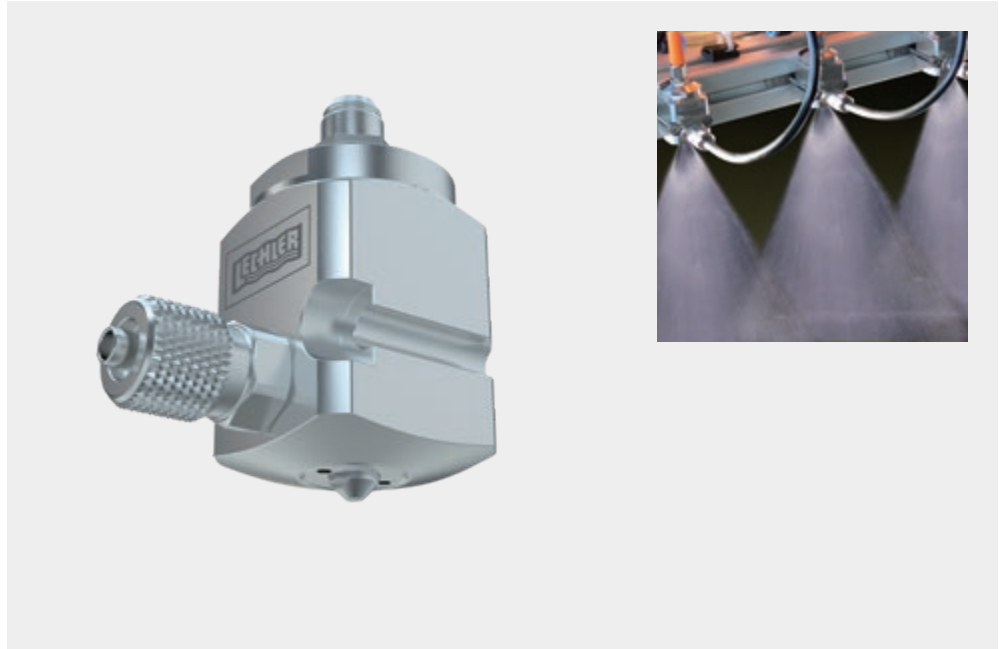
\*\* Spray angle can differ in PWM operation

\*\*\* DC: 10 – 90 %, fluid pressure: 4 – 7 bar, frequency: 50 Hz, DC = Pulse width ratio %

# VarioSpray II

## VarioSpray II


Nozzle valves in the VarioSpray II range can efficiently atomize the most miniscule liquid volumes. Their size makes these valves ideal for use in tight spaces. VarioSpray II is also available in a food version that complies with EC 1935/2004 and FDA regulations.



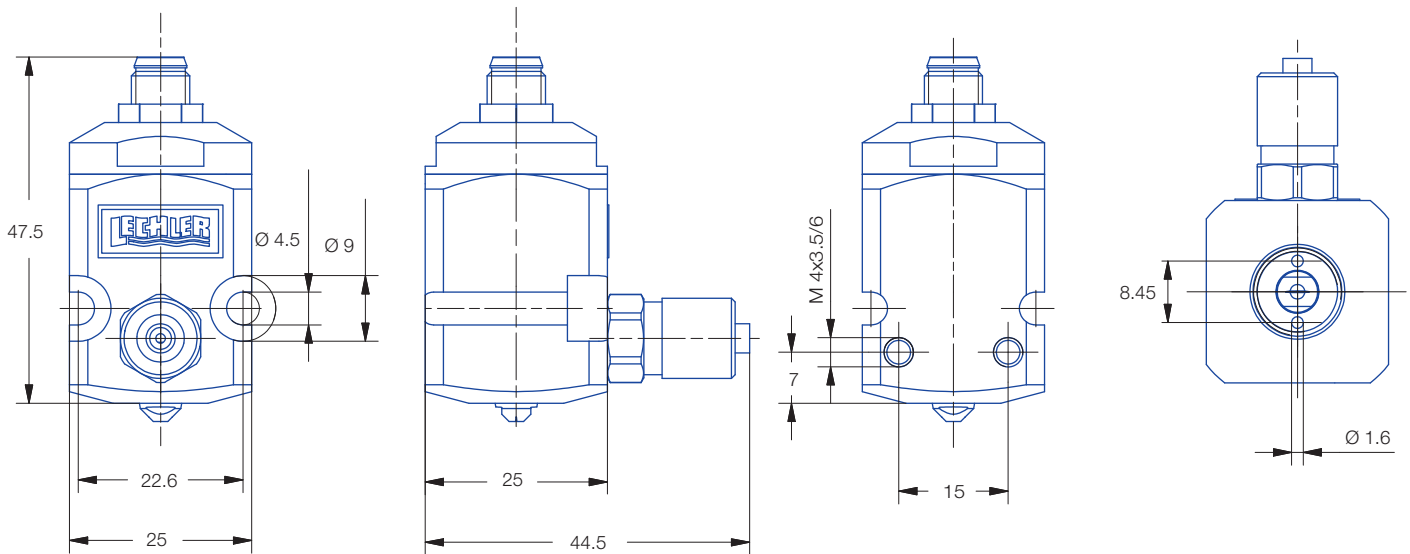
Suitable for the following viscosities in mPas\*



Ordering no.: 742.030.1Y.	0	5	10	15	20	25	30	35	40	45
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Ordering no.: 742.050.1Y.00/10	0	5	10	15	20	25	30	35	40	45
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Valve	742.030.1Y.	742.050.1Y.00	742.050.1Y.10 
Type	2/2-way N.C.		
Nominal diameter	0.3 mm	0.5 mm	0.5 mm
Pressure range	0 – 10 bar	0 – 8 bar	0 – 8 bar
Voltage	24 V DC		
Nominal power	2 W		
Sealing material	FPM		
Housing material	316L SS		
Spring material	301 SS		
Coil resistance	288 ohms		
Protection type	IP 65		
Frequency	0 – 100 Hz		
Hose connection	Ø 6 x 1 mm		

\* Depending on the density of the liquid



Spray angle*	Ordering no.	Suitable for valves		Flow rate range** [ml/min]	
	<b>634.XXX.16.05.00</b>	742.030.1Y.00.00	742.050.1Y.10 	DN 0.3 mm	DN 0.5 mm
				DN 0.3 mm	DN 0.5 mm
75°	<b>634.145.16.05.00</b>	○	○	8 – 73	11 – 85
	<b>634.165.16.05.00</b>	○	○	10 – 85	15 – 111
	<b>634.185.16.05.00</b>	–	○	–	16 – 128
	<b>634.215.16.05.00</b>	–	○	–	17 – 161
	<b>634.245.16.05.00</b>	–	○	–	22 – 206
	<b>634.275.16.05.00</b>	–	○	–	24 – 239
90°	<b>634.216.16.05.00</b>	–	○	–	18 – 165
	<b>634.246.16.05.00</b>	–	○	–	21 – 211
	<b>634.276.16.05.00</b>	–	○	–	25 – 238
120°	<b>634.187.16.05.00</b>	–	○	–	14 – 130
	<b>634.217.16.05.00</b>	–	○	–	19 – 168
	<b>634.247.16.05.00</b>	–	○	–	23 – 215
	<b>634.277.16.05.00</b>	–	○	–	24 – 237

The available nozzles are listed in the above table.  
Please specify the corresponding nozzle number when ordering.

Nozzle material: Stainless steel 303 SS  
incl. O-ring (material: FPM complies with EC 1935, EU 10/2011)

DN = Nominal diameter  
DC = Pulse width ratio

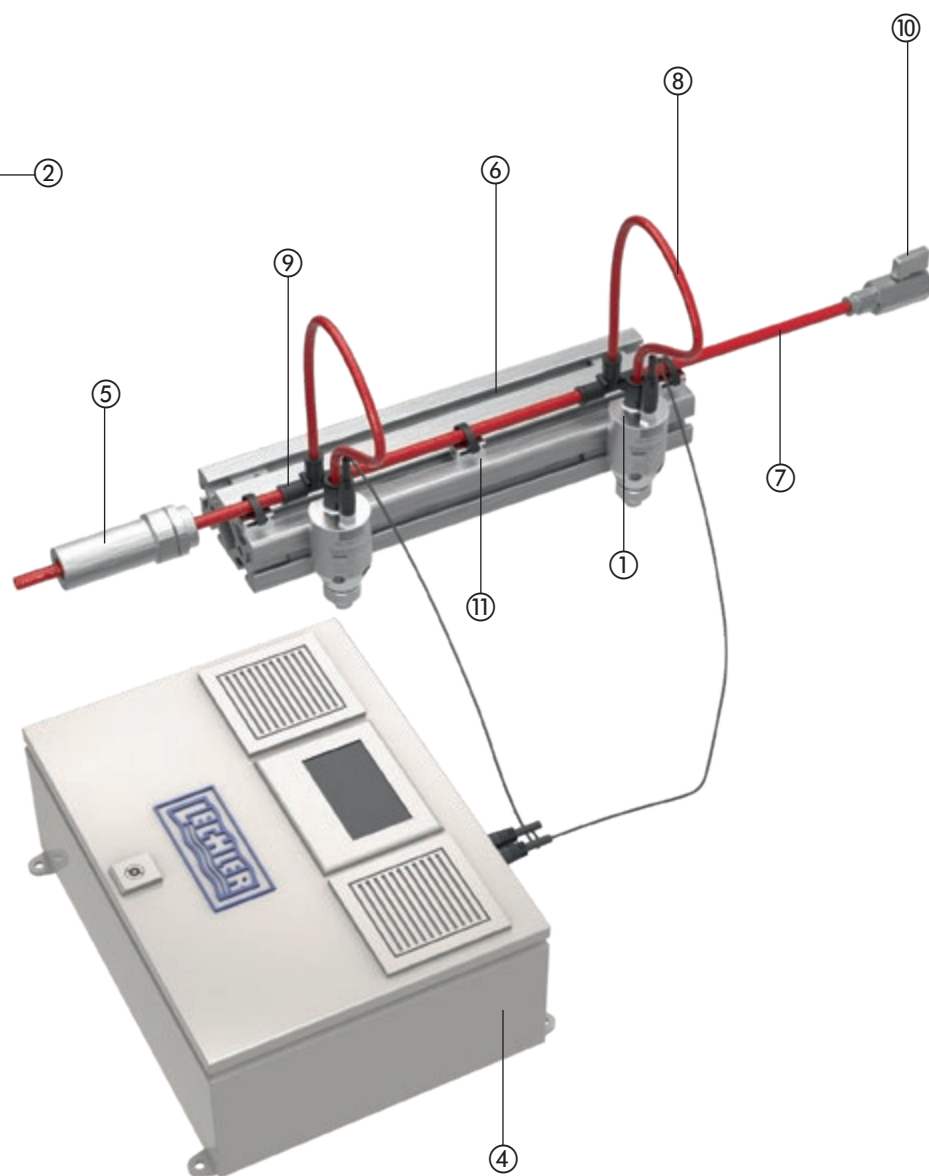
\* Spray angle can differ in PWM operation  
\*\* DC: 10 – 90 %, fluid pressure: 4 – 6 bar

# COMPONENTS AND COMBINATION OPTIONS

## VarioSpray HP



Single valve



Combination example

# COMPONENTS AND COMBINATIONS

Version	No.	Description	Ordering no.	Technical specification	Length
Valves	①	Valve, incl. retaining nut, connecting nipple, packaging, manual, O-ring FDA-compliant	752.060.1Y.00	DN 0.6 mm; 12 V, peak-and-hold control; for further technical data see Page 8/9	
	①	Valve, incl. retaining nut, connecting nipple, packaging, manual, FDA-compliant	752.090.1Y.00	DN 0.9 mm; 12 V, peak-and-hold control; for further technical data see Page 8/9	
Basic analog control		Siemens S7-1200 controller for control cabinet installation, incl. pre-installed software package	075.270.00.00	on USB stick, control: Siemens S7 1200 / control of up to 16 valves, all valves switched simultaneously	
		Power driver	075.281.00.00	max. 4 valves per power driver	
SMART control	④	SMART control	075.270.00.10	Control unit for up to 8 VarioSpray HP valves, simultaneous switching of all valves, see Page 18 for technical details	
FLEX control	④	FLEX control	075.270.00.20	Control unit for up to 16 VarioSpray HP valves, individual valve control possible, see Page 18 for technical details	
Components for VarioSpray HP	②	Nozzle	652.XXX.WW.05	See Page 9 for possible sizes	
	③	Valve cable, M8 - M8	075.280.00.00	Retaining nut, material: 316L SS	5 m
	③	Valve cable, M8 - M8	075.280.00.01	Retaining nut, material: 316L SS	10 m
		Valve filter	075.250.1Y.00	Mesh size: 80 µm, max. pressure 10 bar, material: 316L SS/Viton/adhesive-free, connection: 1/8 BSPP x 1/8 BSPP	
	⑤	Filter for central liquid line	074.217.1Y.00	for up to 8 valves** / Mesh size: 40 µm, max. pressure 10 bar, material: 316L SS/Viton/adhesive-free, connection: 3/8 BSPP	
	⑥	ITEM profile, 80 x 40	074.215.40.00	incl. T-slot nuts, screws, caps, universal holder, Material: Aluminum	1 m
	⑥	ITEM profile, 80 x 40	074.215.40.01	incl. T-slot nuts, screws, caps, universal holder, Material: Aluminum	2 m
	⑦	Central liquid supply line*	075.290.00.00	Hose dia. 22, material: LLDPE blue	10 m
	⑧	Valve hose to the valves	074.213.54.01	Hose dia. 8, material: LLDPE natural	5 m
	⑨	Hose fitting set	075.290.56.50	set components: reducing tee (22 x 22 x 15) 2 x reducer (15 x 12 and 12 x 8); material: POM	
	⑩	Ventilation set	075.290.56.51	set components: reducing tee (22 x 22 x 15); 2 x reducer (15 x 12 and 12 x 8); 1 x shut-off valve; 1 x plug; material: POM	
	⑪	Tube clamp	075.230.00.10	for hose dia. 22	
		Backflush nipple	075.210.1Y.00	G 3/8 on hose dia. 8 mm, material: 316L SS	
	Expansion set for valve mounting	075.230.00.00	T-slot nuts (25 ea), screws (16 ea. M4 x 30), universal holders (10 ea.)		

\* FDA-compliant, EC 1935/10/2011 on request

\*\* Other filters on request

## Ordering information

The above table shows the VarioSpray HP versions recommended by Lechler. Please specify the required individual components when ordering.

The available nozzles are listed in the table on Page 9. Please specify the corresponding nozzle number when ordering.

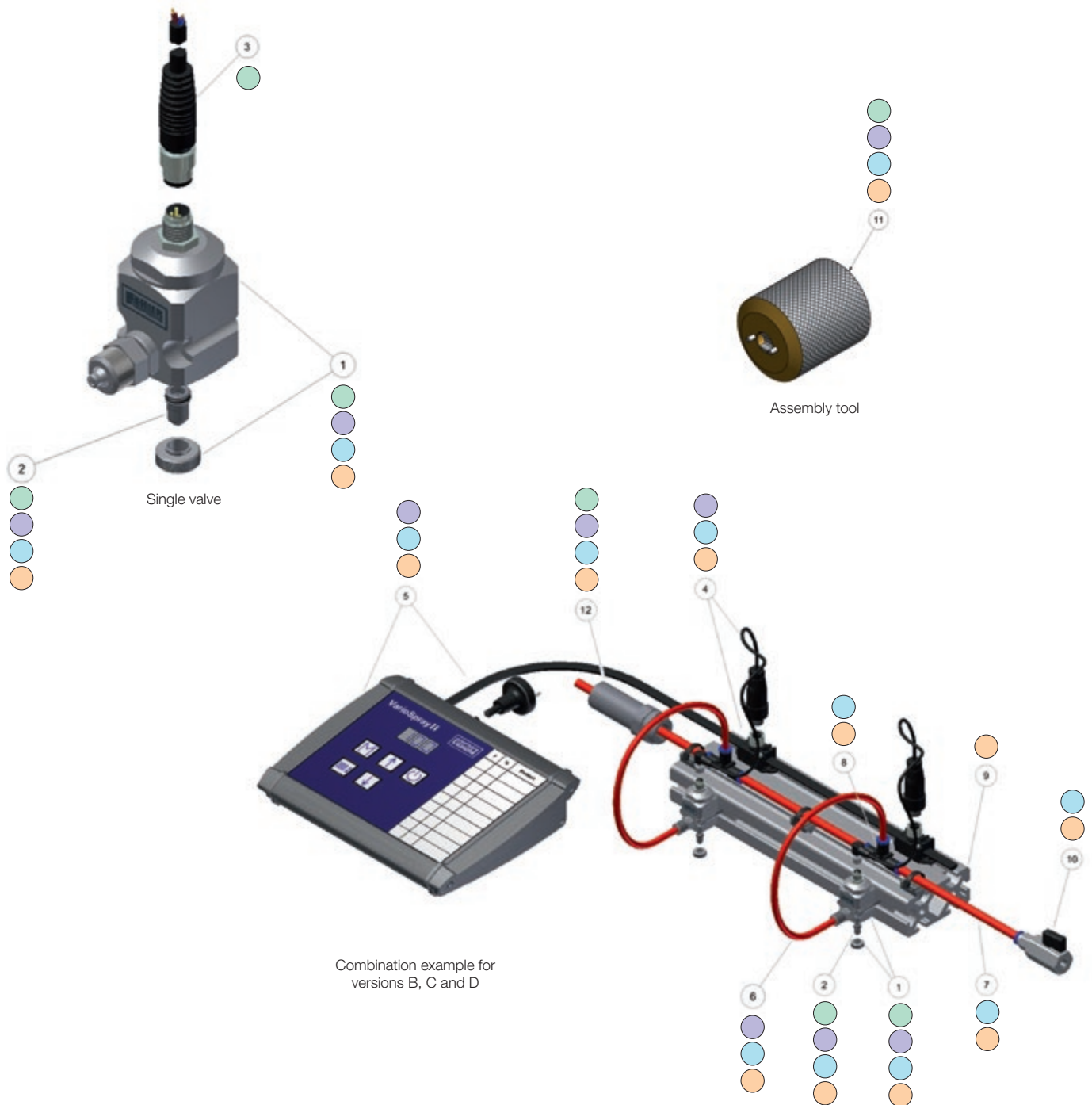
DN = Nominal diameter

### Questionnaire:

[www.lechler.de/variospray/fragebogen\\_variospray](http://www.lechler.de/variospray/fragebogen_variospray)  
[www.lechler.com/variospray/questionnaire\\_variospray](http://www.lechler.com/variospray/questionnaire_variospray)

# COMPONENTS AND COMBINATION OPTIONS

## VarioSpray II



### Ordering information

The adjacent table shows the VarioSpray II versions recommended by Lechler. The possible combinations are highlighted in color and are visually represented in the table »Components and combinations«. Please specify the required individual components when ordering.

The liquid supply lines are available in the materials 5N (polyamide) or 5F (polyurethane).

Please replace »WW« in the order number with the required material.

The available nozzles are shown in the adjacent table. Please specify the corresponding nozzle number when ordering.

DN = Nominal diameter

# COMPONENTS AND COMBINATIONS

Version	No.	Description	Ordering no.	Qty.	Technical specification	Length
<b>A</b>	①	Valve, incl. hollow core screw	742.030.1Y.00.00		DN 0.3 mm, see technical data for further information	
		Valve, incl. hollow core screw	742.050.1Y.00.00		DN 0.5 mm, see technical data for further information	
	②	Nozzle	634.XXX.16.05.00		See nozzle overview	
	③	Valve cable, M8, open	074.211.00.00.00		Cable length: 2 m	
		Valve cable, M8, open	074.211.00.01.00		Cable length: 5 m	
	⑪	Assembly tool	074.290.30.00.00	1	For flat spray nozzle, material: Brass	
	⑫	Filter	074.217.1Y.00.00	1	Mesh size: 40 µm, max. pressure: 10 bar, material: 316L SS, connection: 3/8 BSPP	
<b>B</b>	①	Valve, incl. hollow core screw	742.030.1Y.00.00	max. 8	DN 0.3 mm, see technical data for further information	
		Valve, incl. hollow core screw	742.050.1Y.00.00	max. 8	DN 0.5 mm, see technical data for further information	
	②	Nozzle	634.XXX.16.05.00	max. 8	See nozzle overview	
	④	Valve cable, M12 – M8	074.210.00.00.00	max. 8	With bus connector, supplied loose	1 m
	⑤	Control, table version	074.200.00.00.00	1	Incl. bus cable, bus cable end cap, instructions for use and quick start instructions	10 m
	⑥	Hose, dia. 6 x 1 mm	074.212.WW.00.00	1	Valve supply line, for up to 4 valves, material: 5N (polyamide) or 5F (polyurethane)	1.5 m
		Hose, dia. 6 x 1 mm	074.212.WW.01.00	1	Valve supply line, for up to 8 valves, material: 5N (polyamide) or 5F (polyurethane)	2.5 m
		Wall bracket for control	074.257.00.00.00	1	Mounting set for wall installation of control	
		Rubber feet, self-adhesive	074.258.00.00.00	1	4 ea., black, for control	
	⑪	Assembly tool	074.290.30.00.00	1	For flat spray nozzle, material: Brass	
⑫	Filter	074.217.1Y.00.00	1	Mesh size: 40 µm, max. pressure: 10 bar, material: 316L SS, connection: 3/8 BSPP		
<b>C</b>	①	Valve, incl. hollow core screw	742.030.1Y.00.00	max. 8	DN 0.3 mm, see technical data for further information	
		Valve, incl. hollow core screw	742.050.1Y.00.00	max. 8	DN 0.5 mm, see technical data for further information	
	②	Nozzle	634.XXX.16.05.00	max. 8	See nozzle overview	
	④	Valve cable, M12 – M8	074.210.00.00.00	max. 8	With bus connector, supplied loose	1 m
	⑤	Control, table version	074.200.00.00.00	1	Incl. bus cable, bus cable end cap, instructions for use and quick start instructions	10 m
	⑥	Hose, dia. 6 x 1 mm	074.212.WW.00.00	1	Valve supply line, for up to 4 valves, material: 5N (polyamide) or 5F (polyurethane)	1.5 m
		Hose, dia. 6 x 1 mm	074.212.WW.01.00	1	Valve supply line, for up to 8 valves, material: 5N (polyamide) or 5F (polyurethane)	2.5 m
	⑦	Hose, dia. 8 x 1.25 mm	074.213.WW.00.00	1	Central liquid line, material: 5N (polyamide) or 5F (polyurethane)	3 m
		Hose, dia. 8 x 1.25 mm	074.213.WW.01.00	1	Central liquid line, material: 5N (polyamide) or 5F (polyurethane)	5 m
	⑧	Reducing tee	074.214.00.00.00	max. 8	dia. 8 to dia. 6 mm	
	⑩	Ventilation	074.216.00.00.00	1	Ball valve with threaded stud	
		Wall bracket for control	074.257.00.00.00	1	Mounting set for wall installation of control	
		Rubber feet, self-adhesive	074.258.00.00.00	1	4 ea., black, for control	
⑪	Assembly tool	074.290.30.00.00	1	For flat spray nozzle, material: Brass		
⑫	Filter	074.217.1Y.00.00	1	Mesh size: 40 µm, max. pressure: 10 bar, material: 316L SS, connection: 3/8 BSPP		
<b>D</b>	①	Valve, incl. hollow core screw	742.030.1Y.00.00	max. 8	DN 0.3 mm, see technical data for further information	
		Valve, incl. hollow core screw	742.050.1Y.00.00	max. 8	DN 0.5 mm, see technical data for further information	
	②	Nozzle	634.XXX.16.05.00	max. 8	See nozzle overview	
	④	Valve cable, M12 – M8	074.210.00.00.00	max. 8	With bus connector, supplied loose	1 m
	⑤	Control, table version	074.200.00.00.00	1	Incl. bus cable, bus cable end cap, instructions for use and quick start instructions	10 m
	⑥	Hose, dia. 6 x 1 mm	074.212.WW.00.00	1	Valve supply line, for up to 4 valves, material: 5N (polyamide) or 5F (polyurethane)	1.5 m
		Hose, dia. 6 x 1 mm	074.212.WW.01.00	1	Valve supply line, for up to 8 valves, material: 5N (polyamide) or 5F (polyurethane)	2.5 m
	⑦	Hose, dia. 8 x 1.25 mm	074.213.WW.00.00	1	Central liquid line, material: 5N (polyamide) or 5F (polyurethane)	3 m
		Hose, dia. 8 x 1.25 mm	074.213.WW.01.00	1	Central liquid line, material: 5N (polyamide) or 5F (polyurethane)	5 m
	⑧	Reducing tee	074.214.00.00.00	max. 8	dia. 8 to dia. 6 mm	
	⑨	ITEM profile, 80 x 40 mm	074.215.40.00.00	1	incl. T-slot nuts, screws, caps, universal holder; material: Aluminum	1 m
		ITEM profile, 80 x 40 mm	074.215.40.01.00	1	incl. T-slot nuts, screws, caps, universal holder; material: Aluminum	2 m
	⑩	Ventilation	074.216.00.00.00	1	Ball valve with threaded stud	
		Wall bracket for control	074.257.00.00.00	1	Mounting set for wall installation of control	
		Rubber feet, self-adhesive	074.258.00.00.00	1	4 ea., black, for control	
⑪	Assembly tool	074.290.30.00.00	1	For flat spray nozzle, material: Brass		
⑫	Filter	074.217.1Y.00.00	1	Mesh size: 40 µm, max. pressure: 10 bar, material: 316L SS, connection: 3/8 BSPP		

WW = code for material: 5N (polyamide)  
5F (polyurethane)

## Questionnaire

[www.lechler.de/variospray/fragebogen\\_variospray](http://www.lechler.de/variospray/fragebogen_variospray)  
[www.lechler.com/variospray/questionnaire\\_variospray](http://www.lechler.com/variospray/questionnaire_variospray)

# FOOD-COMPLIANT VarioSpray II COMPONENTS

The products listed below comply with the requirements of (EC) No. 1935/2004 for food contact materials as well as the regulations of the Food and Drug Administration (FDA) for repeated food contact.

The other components which are not in direct contact with the food are listed in the table on Page 4.



Ordering no.	Designation	Further information	Technical information	Material	
074.212.54.00.00	Hose, 6 x 1	Valve supply line	1.5 m	LLDPE	natural
074.212.54.01.00	Hose, 6 x 1	Valve supply line	2.5 m	LLDPE	natural
074.213.54.00.00	Hose, 8 x 1*	Central liquid line	3 m	LLDPE	natural
074.213.54.01.00	Hose, 8 x 1*	Central liquid line	5 m	LLDPE	natural
074.214.00.01.00	Equal tee	8 x 8 – 8 x 8		POM	
074.214.00.02.00	Reducer	8 x 6		POM	
074.216.00.01.00	Ventilation*	Shut-off valve with push-in fitting dia. 8 mm		PP	
074.253.00.01.00	Valve cable, M12 – M8		0.3 m		PVC / EPDM / 316L SS
074.254.00.00.06	Hose clamp	Packaging unit 5 ea.			LLDPE
074.217.1Y.00.00	Line filter*	G 3/8 – 40 µm		1.4404	

\* Components can also be used for VarioSpray HP





# COMPARISON

## VarioSpray HP – VarioSpray II



### VarioSpray HP

High Performance

Flow rate: up to 1 l/min at 3 bar\*

For viscous media up to 75 mPas

Liquid supply at the rear

Flow-optimized liquid supply

Simple nozzle changes

Turn-down ratio up to 29:1

Filter optional

Push-in connection for dia. 8 hose

Voltage: 12 V DC

Electrical connection via M8 push-in fitting

Control via color touch panel

Two control unit versions

– SMART (max. 8 valves)

– FLEX (max. 16 valves)

Individual valve control (FLEX)

Frequencies: 10/20/30/40/50/75/100/200 Hz

### VarioSpray II

Flow rate: up to 140 ml/min at 3 bar\*

For low-viscosity media up to 15 mPas

Liquid supply at the side

Low liquid volume in the valve

Very small design

Turn-down ratio up to 11:1

Integrated last-chance filter

Push-on connection for dia. 6 x 1 hose

Voltage: 24 V DC

M8 push-in fitting

Compact control unit

Simple operation

(max. 8 valves)

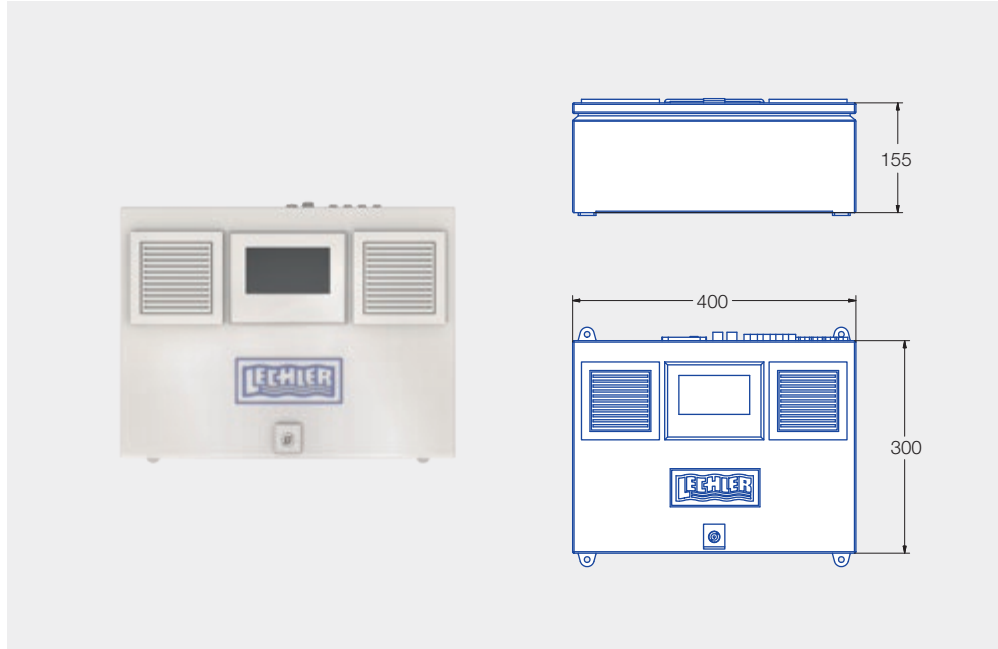
All valves simultaneously

Frequencies: 25/50/75/100 Hz

\* Nominal flow rate without nozzle

# Control unit for VarioSpray HP

The two VarioSpray HP control unit versions with clearly understandable color displays permit optimal valve control in line with your requirements.



## SMART

The SMART valve control unit is an economical version for valves in the HP range. It permits simultaneous control of all valves for easy operation.

### Benefits:

- Easy operation
- Simultaneous control of all connected valves
- Control software ideally matched to the valves
- Clear 4.3" color touch display
- 4 direct control buttons for fast access

## FLEX

The FLEX control unit is characterized by flexibility – the VarioSpray HP valves can be controlled and the flow rate regulated individually. This feature is ideal for applications in which different belt widths occur in the production process.

### Benefits:

- Straightforward operation
- Individual control of all valves via software switches
- Control software ideally matched to the valves
- Clear 4.3" color touch display
- 4 direct control buttons for fast access

	SMART	FLEX
Maximum number of valves	8	16
Individual valve control	No	Yes
Frequency	10 / 20 / 30 / 40 / 50 / 75 / 100 / 200 Hz	
Supply voltage	100 – 240 V AC	
Total power	240 W	
Control voltage	12 – 24 V DC / Peak-and-hold control	
Pulse width	3 – 98 %	
Lag time	0 – 99.9 s	
Lead time	0 – 99.9 s	
External signal input	Yes	
Protection type	IP 54	
Display	4.3" color touch panel	
Electrical connection for valves	M8 3-pin circular connector	

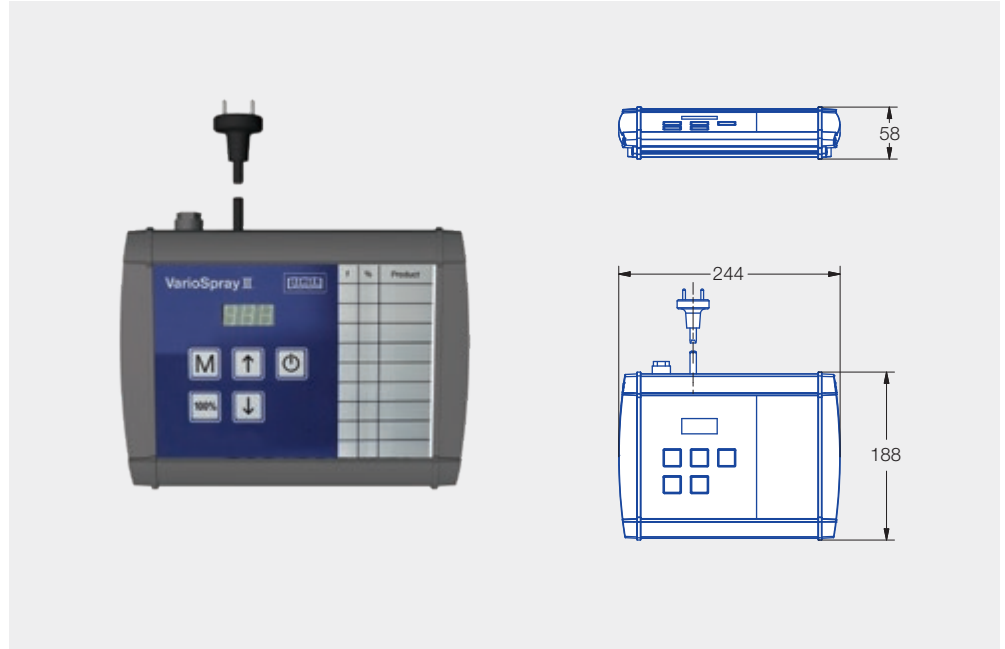
Ordering data  
Control unit SMART  
Control unit FLEX

Ordering no.  
075.270.00.10  
075.270.00.20

# Control unit for VarioSpray II

The control unit permits optimal operation of the nozzle valves from the VarioSpray II series.

The control elements are kept to a minimum and allow easy operation.



## Benefits:

- Easy operation
- Simultaneous control of all connected valves
- Compact dimensions
- Software ideally matched to the valves
- Valve connection via a central bus line

Maximum number of valves	8
Supply voltage	115 – 230 V AC
Control voltage	24 V DC
Total power	20 W
Frequency	25 / 50 / 75 / 100 Hz
Pulse width	0 – 90 / 100 %
Lag time	0 – 10 s
External signal input	Yes
Protection type	IP 54

Ordering data  
Control unit VarioSpray II

Ordering no.  
074.200.00.00.0

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