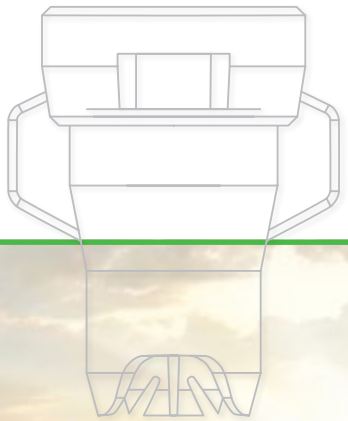
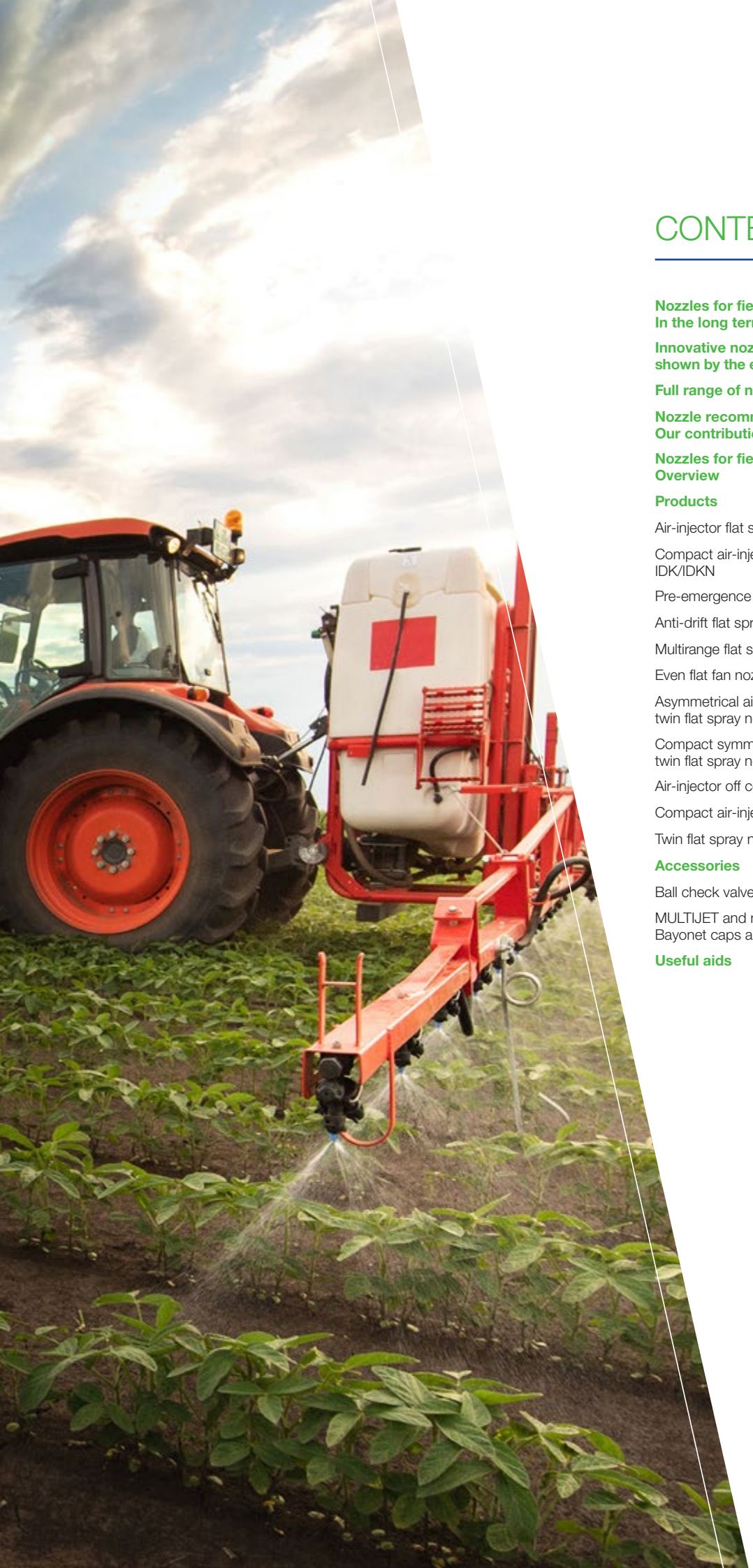
ENGINEERING
YOUR SPRAY SOLUTION

FIELD CROPS
AGRICULTURAL NOZZLES
AND ACCESSORIES



AGRICULTURE

LECHLER NOZZLES FOR FIELD CROPS – **EFFICIENT AREA COVERAGE**



CONTENTS

NOZZLES FOR FIELD CROPS
IN THE LONG TERM, LESS IS ALWAYS MORE

Lechler is a world leader in nozzle technology. For over 140 years, we have pioneered numerous groundbreaking developments in the field of nozzle technology. Thanks to our decades of experience with drift-reducing technology, we have been able to make a significant contribution to more gentle and precise application of plant protection products.

We developed the ID 120-05 as early as the 1990s – the first JKI-approved nozzle with 90 % drift reduction – and therefore laid down a marker for the future direction. Just a few years later, the PRE (VA for Syngenta) already made it possible to achieve a 95 % drift reduction for field spraying. Further user-friendly solutions followed at short intervals, such as the patented IDTA injector that can be removed without tools.

2005
- VarioSelect, strawberries frame
- IDK
- IDN
- IDKN

2010
- FD
- IDKT
- PSV, VarioInject
- Dropleg[UL]

2015
- SC
- VarioSelect II
- 5S
- Hose drop system
- ID3
- PRE

2020
- IDTA
- Cleaner series
- ESV
- FS

- XDT
- VR
- FB
- TR 60

We have consistently followed this path with ongoing new developments. For example, the double flat spray nozzle XDT 130 with extremely low drift over the entire pressure range, or the liquid fertilizer border nozzle, which allows completely uniform cross distribution up to the field edge.

In Europe, Lechler has been the number one for nozzle technology for a long time now. However, we do not just see ourselves as a nozzle manufacturer, but above all as a partner in efforts to achieve both environmentally-friendly and efficient agriculture. This is also particularly true for the large growth markets in China and India, where we are already represented by subsidiary companies and a dense sales network.

INNOVATIVE NOZZLE DESIGN SHOWN BY THE EXAMPLE OF TWIN FLAT SPRAY NOZZLES

Knowing the many different requirements relating to crop production is one thing. Implementing them efficiently is quite another. For example, when applying plant protection products, it is always necessary to take into account legal requirements in addition to crop production aspects.

A primary objective is to reduce drift on to neighboring crops and other non-target areas. In addition, optimum droplet distribution, deposition and target area coverage must be guaranteed. At Lechler, we strive to constantly optimize all these characteristics.

The Lechler twin flat spray nozzles are a good example of this as they have been continuously further developed over many years. All models spray simultaneously to the front and rear. Different spray angles and droplet spectra ensure optimum covering for every application.

Three Lechler twin flat spray nozzles in comparison

	IDKT	IDTA	XDT (NEW)
			
Type	Symmetrical air-injector nozzle	Asymmetrical air-injector nozzle	Symmetrical non-venturi nozzle
Droplet size	Ultra coarse to medium	Ultra coarse to coarse	Ultra coarse to extremely coarse
Recommended application	Herbicides, fungicides, insecticides and growth regulators	Herbicides, fungicides, insecticides and growth regulators	Pre-emergence and early post-emergence herbicides, fungicides in potatoes
Feature	Can be used for sprayer speed up to 12 km/h	Can be used for sprayer speed above 12 km/h	Maximum drift reduction also at high sprayer speeds

IDKT – the thorough solution

The IDKT is a symmetrical air-injector twin flat spray nozzle in compact design and generates an ultra coarse to medium droplet spectrum. It is suitable for plant protection product applications in cereal crops, rape seed, sugar beet, corn, potatoes, soy bean and sunflowers. It is particularly well suited for application of herbicides, insecticides and fungicides with the focus on covering vertical surfaces at sprayer speeds up to12 km/h.

The IDKT sprays at a symmetrical angle of 30°/30° to the front and rear. It achieves very good wetting of small grasses and herbs as well as vertical surfaces in the pressure range from 1.5 to 3 bar.

Advantages

- Optimum deposition on foliage and vertical target surfaces thanks to symmetrical twin flat spray jet 30°/30°
- Reduced spray shadows
- Low drift and loss-reducing in the pressure range up to 3 bar (depending on size)
- Suitable for PWM

Optimum wetting thanks to twin flat spray jet

IDTA – the fast solution

The twin flat spray nozzle IDTA generates an ultra coarse to coarse droplet spectrum. With its asymmetrical design and large low-drift pressure range it permits high workrates and is exceptionally suitable for plant protection product applications in cereal crops, rape seed, sugar beet, corn, potatoes, soy bean and sunflowers. This applies particularly to herbicides, insecticides and fungicides with the focus on covering vertical surfaces at sprayer speeds above 12 km/h.

The IDTA sprays at asymmetrical angles of 120° to the front and 90° to the rear to ensure optimum delivery of plant protection products and deposition. The result is a uniform spray width on the target surface. The flow rate ratios – 60 % to the front and 40 % to the rear – have been adapted to the requirements of higher workrates and sprayer speeds.
Slightly finer droplets ensure optimum covering in forward driving direction, while a coarser droplet spectrum guarantees the required drift stability to the rear.

Advantages

- Reduced spray shadows also at sprayer speeds above 12 km/h
- As a long air-injector nozzle, there is only a small change in the droplet spectrum when the pressure is increased in the pressure range 3 to 8 bar
- Reduced spray angle to the rear compensates for the longer “flight path” of the droplets – no spraying beyond the field border and stable in wind
- Drift stability over a large pressure range

NEW

XDT – the low-drift solution

The XDT nozzle combines twin flat spray technology with an ultra coarse to extremely coarse droplet spectrum and a very low fine droplet share. This nozzle is therefore exceptionally suitable for pre-emergence and early post-emergence applications in cereals, rape seed, potatoes, corn, peas, beans and sunflowers. The extremely low drift values in particular make the XDT an interesting solution for protection of non-target areas. Corresponding parameters are specified by the application requirements for active ingredients such as clomazone, prosulfocarb and pendimethalin. Late post-emergence treatment with grass herbicides (with foliage effect) in spring is a boundary application for the XDT nozzle due to the coarse droplet spectrum.

XDT nozzles are characterized by their compact “nozzle in cap” design where the dosing orifice is installed in the nozzle body. The non-venturi nozzles with integrated pre-atomizer are also suitable for equipment with pulse width modulation.

Advantages

- Complete pressure range for low-drift applications
- 40°/40° to front/rear, extremely suitable of higher sprayer speeds
- High workrate and flexible adaptation of sprayer speed
- 130° flat spray jet extremely suitable for lower boom heights, e.g. for sprayers with boom control
- Optimum delivery with reduced spray shadow
- For on-time application even in unfavorable weather conditions

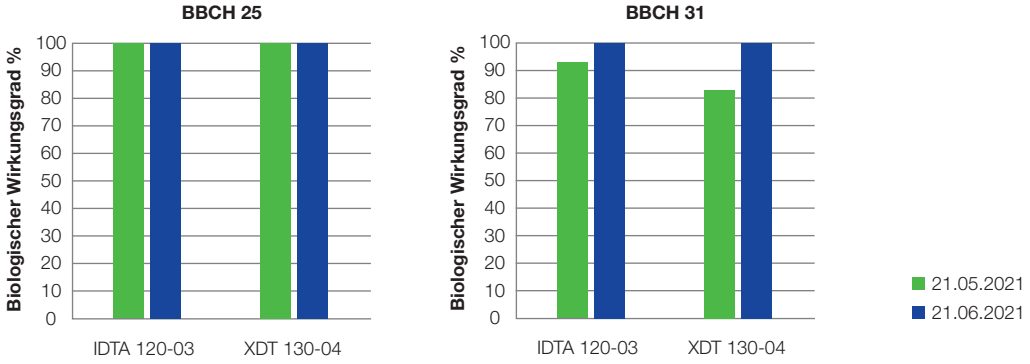
Good to know

The risk of drift depends mainly on the share of fine droplets with a size of less than 100 µm. These very light droplets do not have targeted flight paths, but fall or float very slowly towards the target area and can therefore very easily drift on to non-target areas. In other words, the lower the fine droplet share V100 of a droplet spectrum, the lower the drift of the nozzle. In comparison: the V100 for the XDT up to ten times lower than for conventional air-injector nozzles.

Studies on efficacy

The efficacy of a herbicide measure in early post-emergence (wheat, BBCH 07) depending on application technology (IDTA 120-03 C, XDT 130-04) with a l/ha rate of 300 l/ha was examined in a study. Two twin flat spray nozzles (IDTA 120-03 C, XDT 130-04) were used for herbicide application for BBCH 25 and BBCH 31 in winter wheat. In the early application in the middle of April, it was not possible to observe any differences between the two nozzles in terms of biological efficacy. The results were identical for both the first and second assessments. A delayed initial effect can be expected in the case of the late application in BBCH 31, but this nevertheless shows the full efficacy in the late application.

XDT nozzles applying a pre-emergence herbicide



Biological efficacy (%) of Axial 50 (pinoxaden) against apera spica-venti (windgrass). Two nozzle types (IDTA 120-03 C, XDT 130-04) were used for herbicide application for BBCH 25 and BBCH 31 in winter wheat. The green bars show the biological efficacy at the first count (21 May 2021). The blue bars show the biological efficacy at the second count (21 June 2021). According to information from: Syngenta, EAME-CPD, E. Siegert, Field Scientist, Döbeln, Saxony.

Wetting in the upper plant area

Wetting in the middle plant area

Wetting in the lower plant area

Optimum coverage

In the area of fungicide application also, the XDT achieves very good results with its twin flat spray technology and in spite of the ultra coarse droplet spectrum. It achieves optimum coverage of the entire plant for potatoes. The hairs on the potato leaves prevent the droplets from rolling off.

NOZZLES FOR FIELD CROPS PRODUCTION

TECHNICAL REQUIREMENTS

Optimum application of plant protection products is guaranteed only if narrow flow rate tolerances and uniform distribution are ensured. These parameters are laid down in the JKI and ENTAM guidelines and in the corresponding EN/ISO standards on European and international level.

In the case of JKI-approved Lechler nozzles, the volume flow of new nozzles may deviate from the table value by a maximum of +/–5 %.

In combination, new JKI-approved Lechler nozzles must guarantee the most uniform cross distribution possible. The coefficient of variation over the entire width of the spray boom must not exceed 7 % in the specified pressure range and with the corresponding spray heights.

BIOLOGICAL REQUIREMENTS

In order to achieve the optimum effect, application of plant protection products must be extremely precise. Lechler precision nozzles achieve exact dosage and uniform distribution. Independently of this, the recommendations of the plant protection product manufacturers with respect to l/ha quantities must always be observed. Determination of the application area before use is of decisive importance for optimum deposition of the plant protection product.

Delivery takes place via flat fan and twin flat fan nozzles. Flat fan nozzles generally achieve good crop penetration (e.g. mildew control in cereal crops). In contrast, twin flat fan nozzles are recommended for optimum deposition on vertical target surfaces (e.g. grass control, ear treatment) and to reduce spray shadow (e.g. direct seed, cloddy soil).

ENVIRONMENTALLY-RELEVANT REQUIREMENTS

The wind and thermal currents can cause some of the droplets containing the active ingredients to miss the target area. This drift can pollute or damage adjacent crops, contaminate nearby waters and pose a risk to both humans and animals. In addition, drift frequently leads to incorrect dosages for the crop being treated.

The causes of drift depend on equipment-specific and meteorological factors such as:

- Droplet size
- Sprayer velocity
- Spray height
- Wind speed
- Air temperature
- Air humidity

LOSS-REDUCING EQUIPMENT

Application regulations for plant protection products, e.g. distance restrictions to water and field boundary structures, have been defined in order to protect non-target organisms. Depending on the toxicity of the plant protection product, the distances from water and field boundaries can be reduced with loss-reducing equipment, e.g. with air-injector nozzles.

Lechler nozzles are officially approved in many European countries as drift-reducing devices in the drift reduction classes 99/95/90/75/66/50 and 25 %. The criteria on which the distance regulations are based in the individual countries comprise, among other things, the nozzle technology, water type, bank vegetation, width of the field boundary, mixture concentration, process technology (e.g. pressure) as well as external influences such as wind direction, wind speed and temperature.

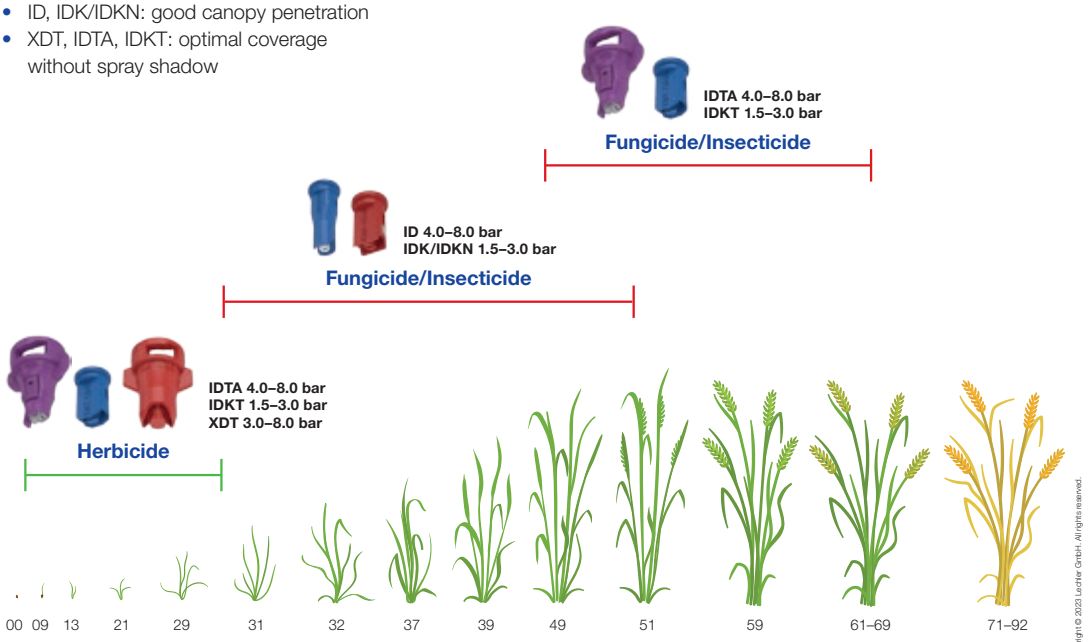
Drift-reducing Lechler nozzles allow areas to be used more efficiently while at the same time protecting field boundaries and water.

NOZZLE RECOMMENDATIONS FOR PLANT PROTECTION/HERBICIDE APPLICATIONS

Cereals

Pesticide application
2-nozzle-strategy
- ID, IDK/IDKN: good canopy penetration
- XDT, IDTA, IDKT: optimal coverage without spray shadow

Further recommendations

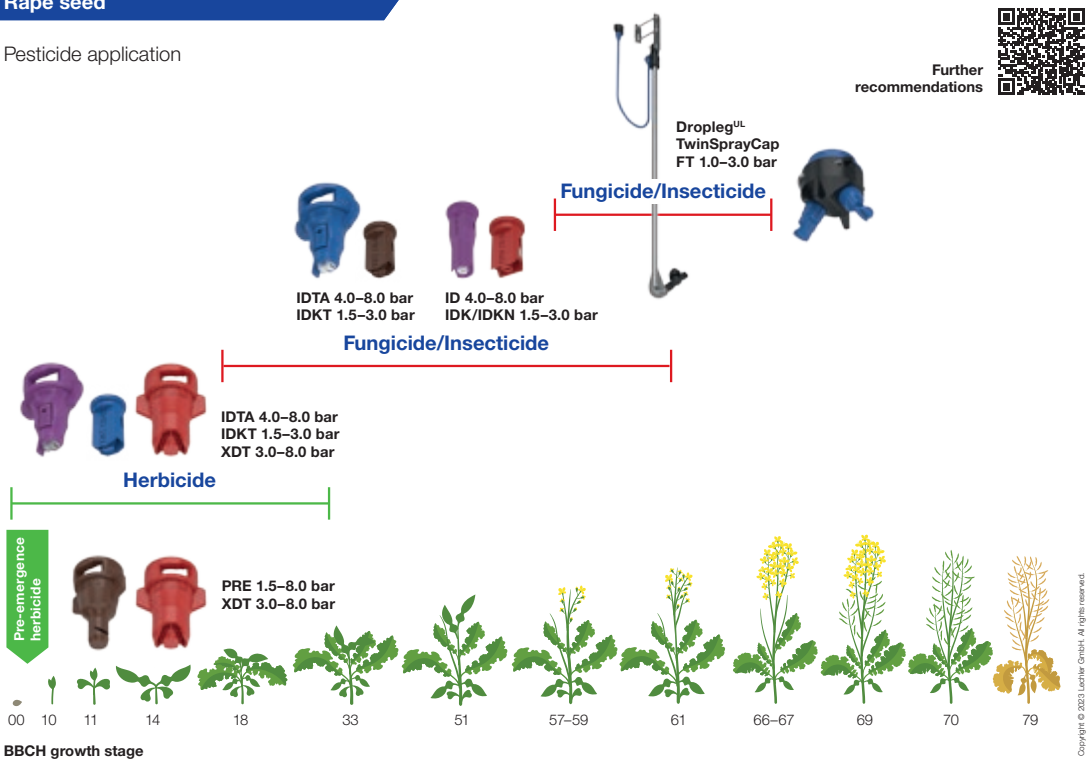


BBCH growth stage

Rape seed

Pesticide application

Further recommendations

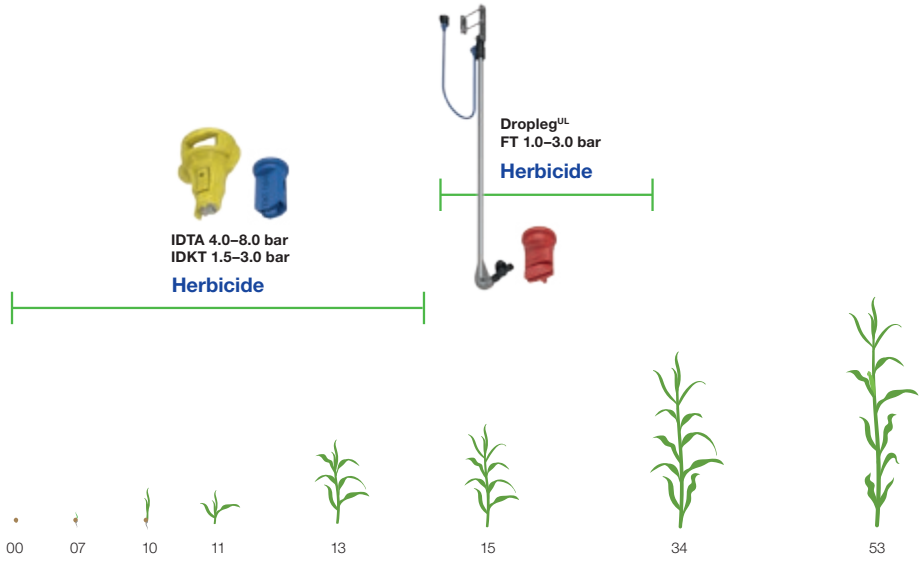


BBCH growth stage

Corn

Herbicide application

Further recommendations

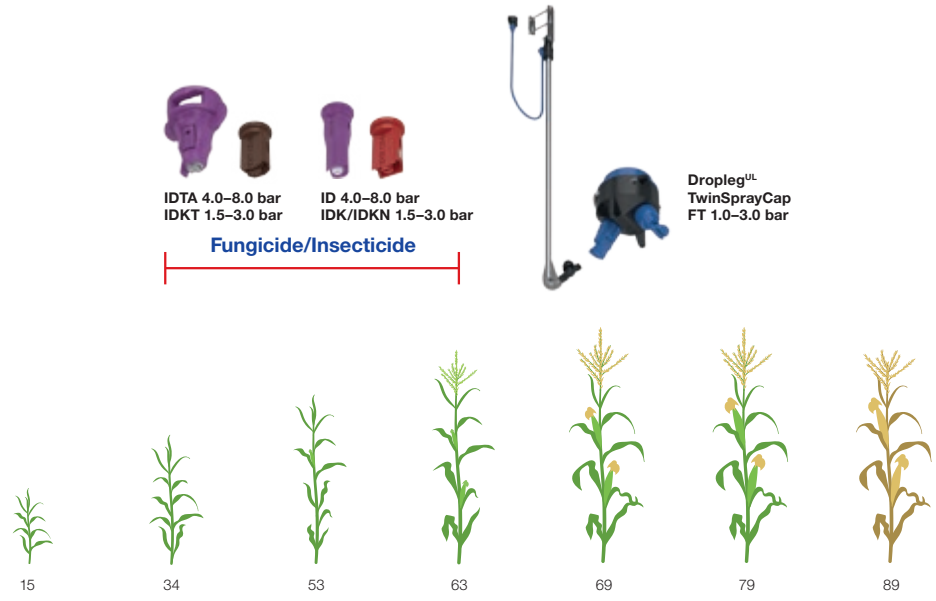


BBCH growth stage

Corn

Fungicide and insecticide application

Further recommendations



BBCH growth stage

Potatoes

Herbicide application

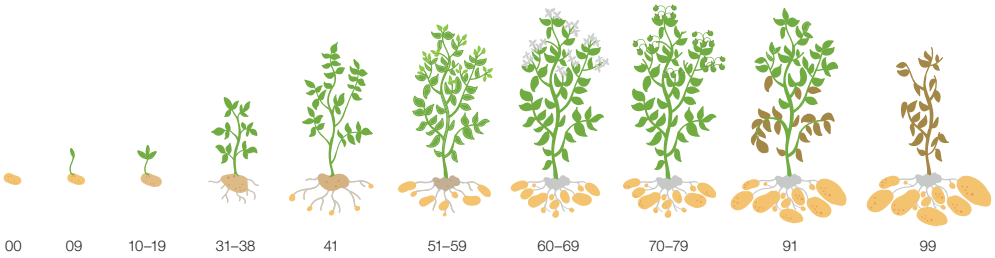
Further recommendations

IDTA 4.0–8.0 bar
IDKT 1.5–3.0 bar
XDT 3.0–8.0 bar

Herbicide

IDTA 4.0–8.0 bar
IDKT 1.5–3.0 bar

Desiccation



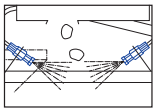
00 09 10–19 31–38 41 51–59 60–69 70–79 91 99

BBCH growth stage

Potatoes

Fungicide and insecticide application

Further recommendations



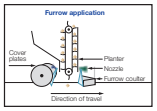
Liquid dressing at planting

TR 1.5–3.0 bar

IDTA 4.0–8.0 bar
IDKT 1.5–3.0 bar
XDT 3.0–8.0 bar

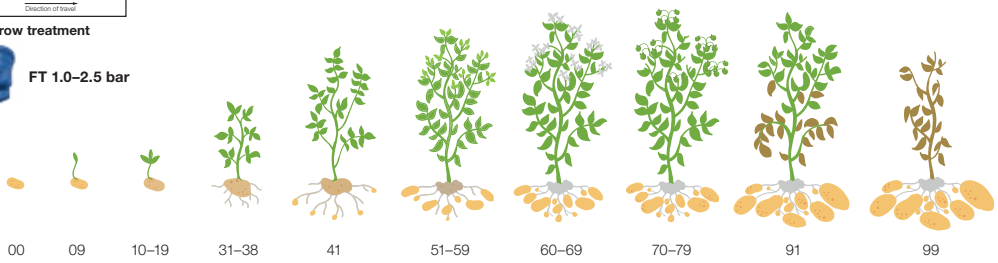
ID 4.0–8.0 bar
IDK/IDKN 1.5–3.0 bar

Fungicide/Insecticide



Furrow treatment

FT 1.0–2.5 bar



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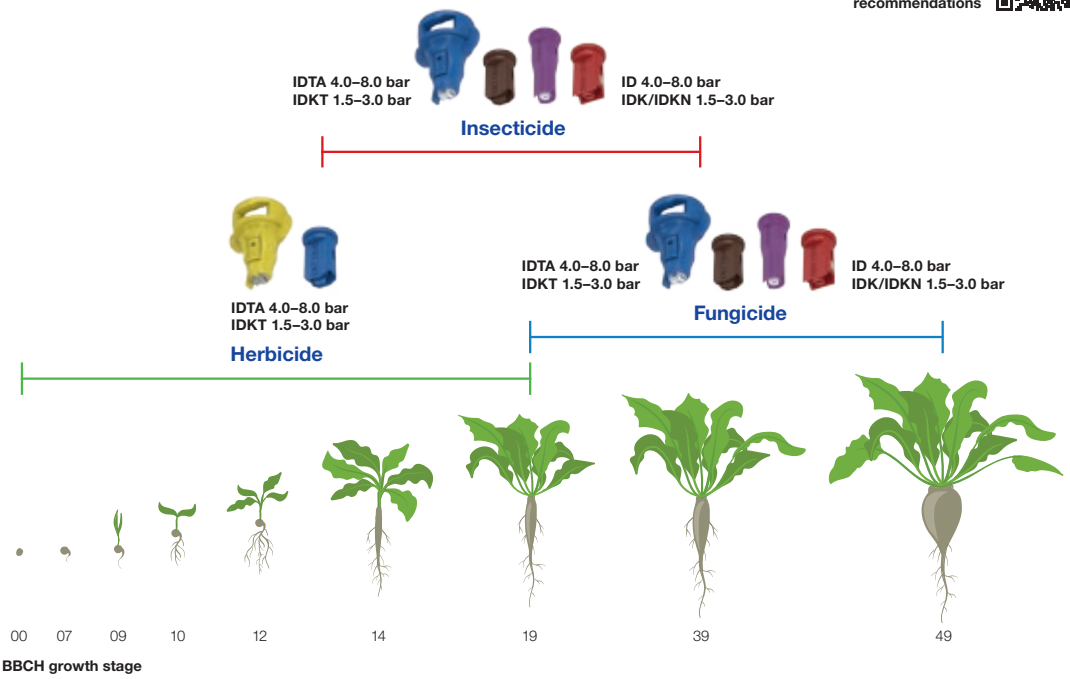
BBCH growth stage

Sugar beets

Pesticide application

Further recommendations



BBCH growth stage

Soy bean

Pesticide application

Further recommendations

BBCH growth stage

NOZZLES FOR FIELD CROPS
OVERVIEW

Series	ID	IDK/IDKN	IDTA	IDKT	PRE	AD	QS	LU	ST/SC	XDT	DF	FT
												
Spray angle	120/90	IDK 120/90 IDKN 120	120	120	130	120/90	80	120/90	ST 110/80 SC 110	130	120	140/90
Information on Page	18	19	24	25	20	21		22		28		
Agricultural catalogue Page	46	48	62	64	50	52	56	54	58	60	66	70
Drift reduction	++	+	++	+	+++	o	o/–	o/–	–	+++	––	+(–)
Spray geometry												

Arable crops

		2/3*–**4–8**	1**/**1.5–3**–6	1–**4–8**	1***/**1.5–3**–6	**1.5–8**	**1.5–3**–6	**1.5–5**	**1.5–2.5**–5	**2–3**–5	1.5–**3–8**	**2–3**–5	**1–3**–6(**1–2**–3)
Herbicides	Soil incorporated	●●	●●	●●	●●	●●	●●	●●	●●	●	●●		●●
	Pre-emergence	●●	●●	●●	●●	●●	●●	●●	●●	●	●●		●●
	Post-emergence (systemic)	●●	●●	●●	●●		●●	●●	●●	●	●●	○	●
	Post-emergence (contact)	●	●	●●	●●		●	●●	●●	●	●	●●	●
Fungicides	Contact	●	●	●●	●●		●	●●	●●	●		●●	●
	Systemic	●●	●●	●●	●●		●●	●●	●●	●		●	●
Insecticides	Contact	●	●	●●	●●		●	●●	●●	●		●●	●
	Systemic	●●	●●	●●	●●		●●	●●	●●	●		●	●
Liquid fertilizer		●●(2–4)	●●(1**/1.5–2.5)	○(1–4)	○(1***/1.5–2.5)	●●(1.5–4)	●(1.5–2.5)	○(1.5–2)	○(1.5–2)	○(2)			●(1–2)
Growth regulators		●●	●●	○	○		●●	●	●	●		○	●
Irrigation		●●	●●	●●	●●	●●	●●	●	●	●	●●		

Arable crops and specialty/row crops

Recommended pressure range [bar]													
Herbicides	Soil incorporated												
	Pre-emergence												
	Post-emergence (systemic)												
	Post-emergence (contact)												
Fungicides	Contact												
	Systemic												
Insecticides	Contact												
	Systemic												
Liquid fertilizer													
Growth regulators													
Irrigation													

Observe specifications of product manufacturers.

Nozzle sizes: * ID-01/-015 ** IDK 04/-05/-06/-08/-10 IDKN 03/-04 *** IDKT 03/-04/-05/-06/-08/-10 **** FS 10/-15 ***** IDKS 03/-04/-05/-06

	NEW		NEW		NEW									
															
TR	**ITR**	**VR**	**FD**	**FB**	**FL**	**FS**	**IS**	**IDKS**	**BN**	**OC (S)**	**E**	**ID**	**IDK**	**AD**
80/60	80	130	130	100	160	100	80	80	100	90	80	90	90	90
							26	27			23	18	19	21
78	80	82	84	86	90	88	94	96	98	100	104	72	74	76
−−	++	+++	+++	+++	+++	+++	++	+	−	−	−	++	+	o
														
3–8	3–**5–10**	**2–8**	**1.5–4**	**1.5–4**	**1–5**	**1–3****/4**	2–**4–8**	1*****/**1,5–3**–6		**1.5–2.5**–5		**2–8**	**1.5–8**	**1.5–3**–6
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	●●(3–5)	●●	●●	●●	●●	●●	●●(2–4)	●●(1*****/1.5–2.5)		○(1.5–2)		●●(2–4)	●●(1.5–2.5)	●●(1.5–2.5)
○	○						●●	●●		●		●●	●●	●●
	●	●●	●●	●●	●	●	●●	●●		●		●●	●●	●●

3–8							2–**4–8**	1*****/**1.5–3**–6	1–2–**4–6**	**1.5–2.5**–5	**1–3**–4			
○							●●	●●	●●	●●	●●			
○							●●	●●	●●	●●	●●			
○							●●	●●	●●	●●	●●			
●●							●	●	●●	●●	●●			
●●							●	●	●●	●●	●●			
●							●●	●●	●●	●●	●●			
●●							●	●	●●	●●	●●			
●							●●	●●	●●	●●	●●			
							●●(2–4)	●●(1*****/1.5–2.5)	○(1–2)	○(1.5–2)	○(1–2)			
○							●●	●●	●●	●●	●			
							●●	●●	●●	●	●			

– – = not drift-reducing – = slightly drift-reducing o = drift-reducing + = very drift-reducing + + = highly drift-reducing + + + = extremely drift-reducing

●● = very well-suited ● = well-suited ○ = less well-suited

Good to know

You can find further information in our main catalogue “Agricultural Spray Nozzles and Accessories” and online at **www.lechler-agri.de**.

Air-injector flat spray nozzles
ID-120/ID-90

Crop production | Ground care

Dimensions in mm.

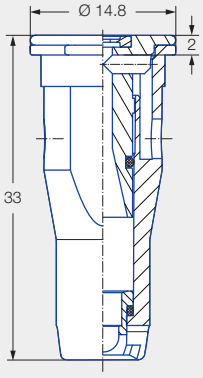
- Air-aspirating flat spray nozzle
- Extremely low-drift

Advantages

- 90 % drift reduction for: ID-120-025 to -06
- Drift stability over a large pressure range thanks to long injector design
- Timely application even under adverse weather conditions
- Increased workrate due to flexible use over a wide pressure range – adaptation by changing the sprayer speed and l/ha rate without nozzle changes
- Very good deposition structure and crop penetration
- Suitable for PWM

ID

ID-C



JKI approval as loss-reducing: 90/75/50 %

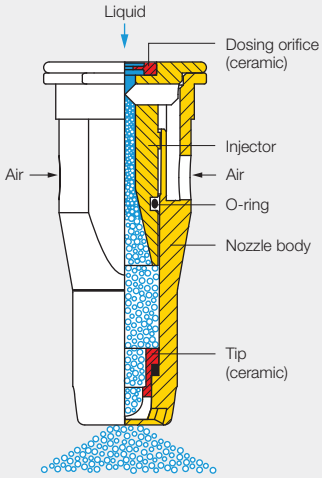
G 1965, G 1966, G 1968, G 1969, G 1970, G 1971, G 1972, G 1973, G 1974, G 2088, G 2287

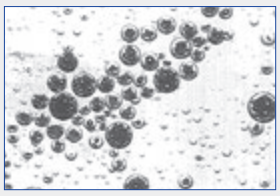
JKI approval for mixed equipment and border nozzle IS.

Current list at: www.lechler.com/de-en/service/loss-reducing

Series ID

Injector can be removed without tools





Bubble formation

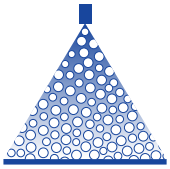
Application:

- **Plant protection products and growth regulators**
- **Liquid fertilizer delivery** (AHL, UAN)
- **Edge application** Can be combined with border nozzle IS 80
- **Golf course**

Technical data:

- **Nozzle sizes** 01–10
- **Spray angles** 90°, 120°
- **Materials** POM, ceramic
- **Pressure ranges**
  - ID-01 to -015: 3–**4**–**8** bar
  - ID-02 to -10: 2–**4**–**8** bar
  - UAN: 2–4 bar
- **Recommended strainers**
  - 80 M 01
  - 60 M 015-04
  - 25 M 05–10
- **Droplet sizes** Ultra coarse – medium
- **Width across flats** 10 mm

Compact air-injector flat spray nozzles
IDK 120/IDK 90 / IDKN 120



Crop production | Ground care

Dimensions in mm.

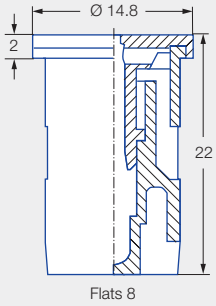
- Air-aspirating flat spray nozzle
- Very low drift

Advantages

- 95 % drift reduction for: IDK 90-015 C and -02 C with 25 cm nozzle spacing
- 90 % drift reduction for:
  – IDK 120-05 to -06
  – IDKN 120-03 to -04
- Compact design
- Large droplet size range from ultra coarse to medium
- Very low drift and loss-reducing in the pressure range up to 3.0 bar (depending on size)
- Inexpensive alternative to conventional standard nozzles
- Very good deposition structure and crop penetration
- Suitable for PWM

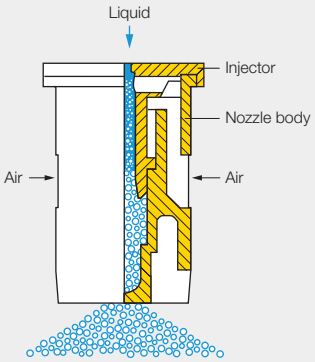
IDK | **IDK-C** | **IDKN**

IDKN characteristic: Nozzle body with white stripe



Series IDK/IDKN

Injector can be removed without tools



JKI approval as loss-reducing: 90/75/50 %

G 1661, G 1662, G 1663, G 1683, G 1718, G 1799, G 1800, G 1801, G 1802, G 1936, G 2300, G 2301, G 2311

JKI approval for mixed equipment and border nozzle IDKS.

Current list at: www.lechler.com/de-en/service/loss-reducing

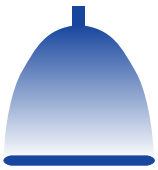
Application:

- **Plant protection products and growth regulators**
- **Liquid fertilizer delivery**
- **Spray frame**
- **Edge application Can be combined with border nozzle IDKS 80**
- **Golf course**
- **Backpack sprayer**
- **Greenhouse**

Technical data:

- **Nozzle sizes** 01–10
- **Spray angles** 90°, 120°
- **Materials** POM, ceramic
- **Pressure ranges**
  - IDK 01 to -10: 1–**1.5–3**–6 bar
  - IDKN 03 to -04: 1–**1.5–3**–6 bar
  - UAN: 1.0–2.5 bar
- **Recommended strainers**
  - 80 M 01
  - 60 M 015–04
  - 25 M 05–10
- **Droplet sizes** Ultra coarse – medium
- **Width across flats** 8 mm

Pre-emergence flat spray nozzle
PRE



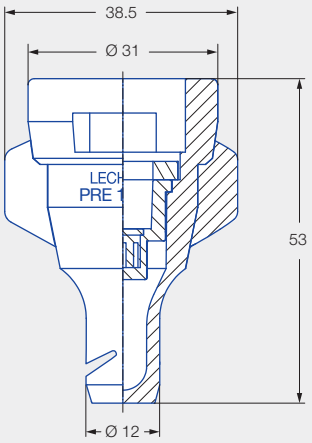
Crop production | **Ground care**

Dimensions in mm.

- Extremely low-drift flat spray nozzle
- For timely application of pre-emergence herbicides

Advantages

- 95 % drift reduction from 1.5 to 5 bar
- Flexible implementation of distance to water requirements
- Wide pressure range from 1.5–8 bar
- High workrate through simple adaptation of l/ha rate and sprayer speed
- Timely application even under adverse weather conditions
- Nozzle in cap with MULTIJET bayonet system (incl. gasket)
- Suitable for PWM



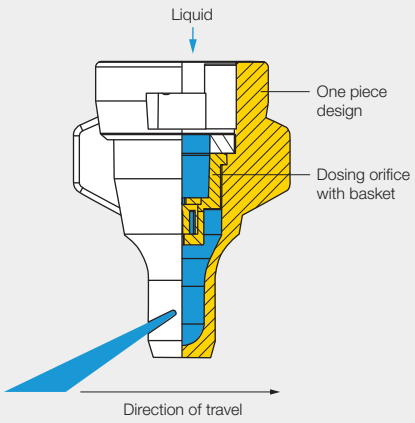
Series PRE

JKI approval as loss-reducing: 95/90 %

G 1981

Current list at: www.lechler.com/de-en/service/loss-reducing

Pre-chamber can be removed without tools



Application:

Herbicide pre-emergence

Liquid fertilizer delivery

Golf course

Technical data:

Nozzle size
05

Spray angle
130°

Material
POM

Pressure ranges
- **1.5–8** bar
- UAN: **1.5–4** bar

Recommended strainer
25 M

Droplet size
Ultra coarse

Anti-drift flat spray nozzles
AD 120/AD 90

Crop production | **Ground care**

Dimensions in mm.

- Low-drift flat spray nozzle

Advantages

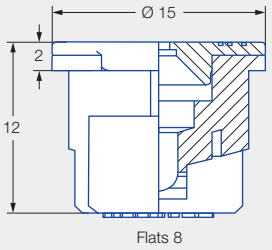
- Application with medium to coarse droplets even with low l/ha rates
- Optimized atomization and reduced fine droplet share thanks to integrated pre-chamber
- Pre-atomizer can be removed without tools

NEW

- Pre-atomizer has flush contact with twist lock
- Pre-atomizer can be removed for cleaning
- Compact design
- Suitable for PWM

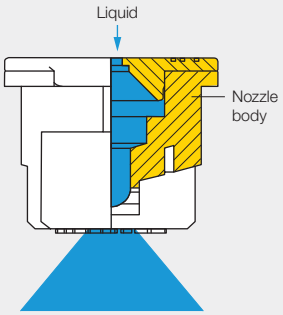
AD

AD-C



Series AD

Removable pre-atomizer



Application:

Plant protection products and growth regulators

Backpack sprayer

Greenhouse

Technical data:

Nozzle sizes
015–04

Spray angles
90°, 120°

Materials
POM, ceramic

Pressure ranges
1.5–3–6 bar

Recommended strainers
- 80 M 015
- 60 M 02–04

Droplet sizes
Coarse – fine

Width across flats
8 mm

Multirange flat spray nozzles
LU 120/LU 90

Crop production | **Ground care**

Dimensions in mm.

- Universal flat spray nozzle with fine droplet spectrum

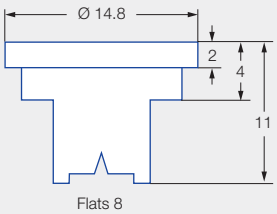
Advantages
- Extended pressure range
- Low drift in the pressure range up to 2.5 bar
- Fine-droplet application
- High manufacturing quality
- Suitable for PWM

LU

LU-C

LU-S

Series LU



Application:

Plant protection products and growth regulators

Edge application
Can be combined with border nozzle OC

Backpack sprayer

Greenhouse

Technical data:

Nozzle sizes
01–08

Spray angles
90°, 120°

Materials
POM, ceramic, stainless steel

Pressure ranges
1.5–2.5–5 bar

Recommended strainers
- 80 M 01–015
- 60 M 02–04
- 25 M 05–08

Droplet sizes
Coarse – very fine

Width across flats
8 mm

Even flat fan nozzles
E

Crop production | **Ground care**

Dimensions in mm.

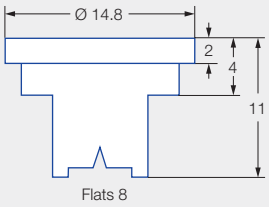
- Flat spray nozzle with rectangular liquid distribution
- For band and row spraying

Advantages

- 90 % drift reduction for 8002 to 8004 E
- Fully formed spray angle from 1 bar
- Uniform active ingredient distribution over the whole band width
- Extremely small spraying distances possible
- Suitable for PWM

E

E-M



JKI approval as loss-reducing: 90 %

G 1435, G 1436, G 1437, G 1438

Current list at: www.lechler.com/de-en/service/loss-reducing

Series E

Spray height H [cm]	Band width B [cm]	Product application quantity[1] [%], at row spacing A		
		50 cm	75 cm	100 cm
7	10	20	13	10
10	15	30	20	15
13	20	40	27	20
16	25	50	33	25

[1] Percentages, in comparison with full-area treatment.

Reduction in application rate

Depending on the band and row width, the amount of spraying liquid for band spraying amounts to 10–50 % of the amount for full-area treatment. Calculation formula for band and row spraying, see Lechler app.

Application:

Backpack sprayer

Band spraying

Technical data:

Nozzle sizes
01–08

Spray angle
80°

Materials
Brass, POM

Pressure ranges
1–3–4 bar

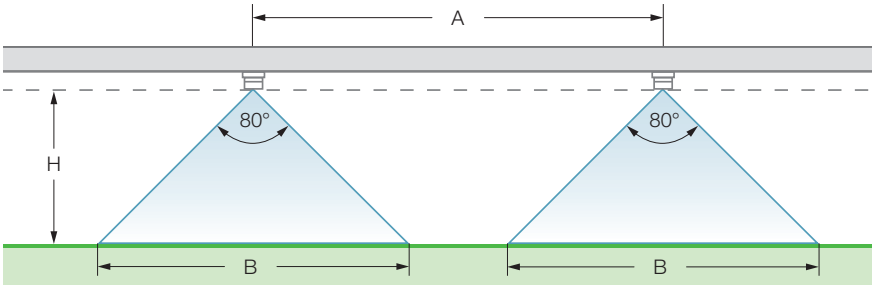
Recommended strainers
- 80 M 01–015
- 60 M 02–04
- 25 M 05–08

Droplet sizes
Very coarse – very fine

Width across flats
8 mm

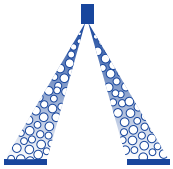
Nozzle adjustment

Extremely small spray heights (H) possible with even flat fan nozzles E. Band drift can be largely avoided. The band width (B) can be adjusted by changing the spray height (H) and/or rotating the spray axis.



Asymmetrical air-injector twin flat spray nozzles IDTA

IDTA
Twin Asymmetric Full Coverage



Crop production | Ground care

PATENTED

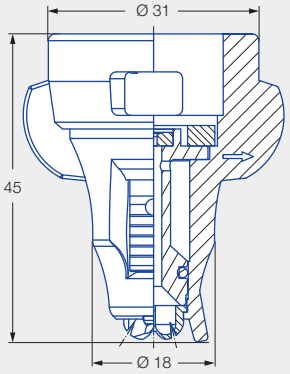
Dimensions in mm.

- Air-aspirating asymmetrical twin flat spray nozzle
- Extremely low-drift

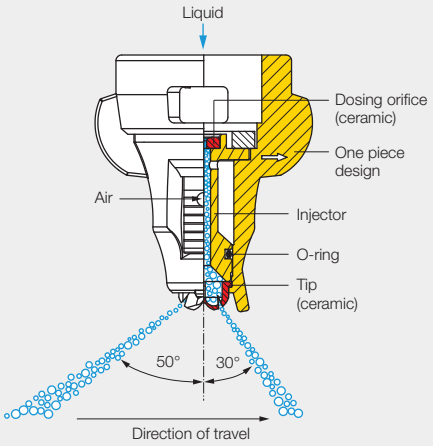
Advantages

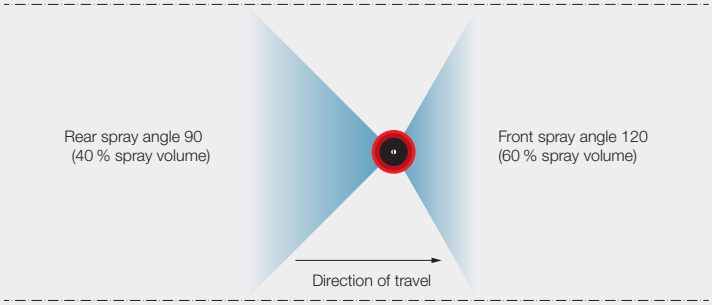
- 95 % drift reduction for: IDTA 120-05 C
- 90 % drift reduction for: IDTA 120-025 C to -04 C
- Ideal for higher sprayer speeds due to 30°/50° spray configuration
- Uniform deposition through 60/40 flow rate distribution
- Identical spray width on the target area due to 90°/120° spray angle
- Optimum wetting through finer droplet spectrum to the front in direction of travel
- Drift-reducing coarser droplet spectrum to the rear
- Optimum user protection thanks to removal/installation of the injector with protective gloves without tools
- Nozzle in cap with MULTIJET bayonet system (incl. gasket)
- Suitable for PWM

Series IDTA



Injector can be removed without tools





JKI approval as loss-reducing: 95/90/75 %

G 2015, G 2016, G 2017, G 2018, G 2019, G 2020, G 2021, G 2022, G 2043

JKI approval for mixed equipment and border nozzle IS.

Current list at:
www.lechler.com/de-en/service/loss-reducing

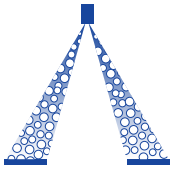
Application:

- **Plant protection products**
- **Edge application**
  Can be combined with border nozzle IS 80
- **Golf course**

Technical data:

- **Nozzle sizes**
  02–08
- **Spray angle**
  120° front/
  90° rear
- **Material**
  Ceramic
- **Pressure ranges**
  1–**4**–**8** bar
- **Recommended strainers**
  - 80 M 02
  - 60 M 025–08
- **Droplet sizes**
  Ultra coarse – coarse

Compact symmetrical air-injector twin flat spray nozzles IDKT



Crop production | **Ground care**

Dimensions in mm.

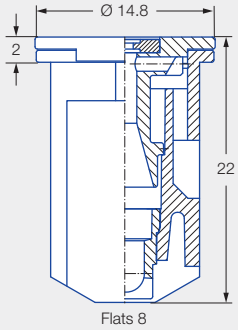
- Very low-drift, air-aspirating twin flat spray nozzle

Advantages

- Optimum deposition thanks to symmetrical twin flat spray jet 30°/30°
- Reduced spray shadow
- 90 % drift reduction for: IDKT 120-02 to -06
- Compact design
- Low drift and loss-reducing in the pressure range up to 3 bar (depending on size)
- Suitable for PWM

IDKT

IDKT-C



JKI approval as loss-reducing: 90/75/50 %

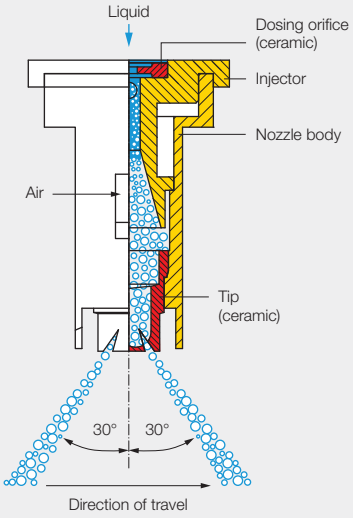
G 1836, G 1837, G 1865, G 1882, G 1883, G 1884, G 1911, G 1912, G 1932, G 1933, G 1934, G 1935, G 1937

JKI approval for mixed equipment and border nozzle IDKS.

Current list at: www.lechler.com/de-en/service/loss-reducing

Series IDKT

Injector can be removed without tools



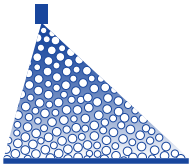
Application:

- **Plant protection products**
- **Spray frame**
- **Edge application** Can be combined with border nozzle IDKS 80
- **Golf course**
- **Greenhouse**

Technical data:

- **Nozzle sizes** 015–10
- **Spray angle** 120°
- **Materials** POM, ceramic
- **Pressure ranges**
  - IDKT 015 to -025 **1.5–3**–6 bar
  - IDKT 03 to -06 1–**1.5–3**–6 bar
- **Recommended strainers**
  - 80 M 015–02
  - 60 M 025–08
  - 25 M 10
- **Droplet sizes** Ultra coarse – medium
- **Width across flats** 8 mm

Air-injector off center spray nozzles
IS 80



Crop production | Ground care

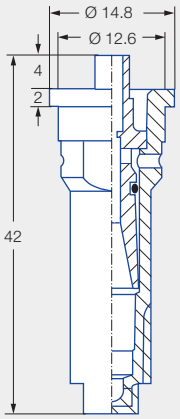
Dimensions in mm.

- Air-aspirating off center nozzle for border application and banding
- Extremely low-drift

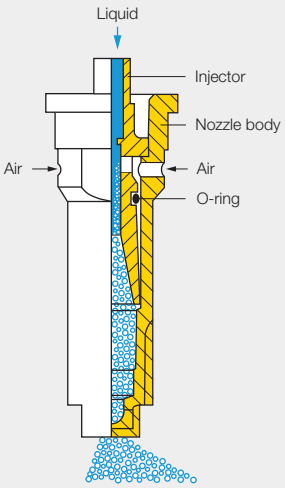
Advantages

- 90 % drift reduction for band spraying with IS 80-03
- Same JKI drift reduction class in combination with ID/IDTA nozzles in the field spray boom
- Volume flow adapted for optimum cross distribution in combination with ID/IDTA nozzles of the same size
- Asymmetrical spray pattern (20°/60° to axis)
- Precise edge application along water courses and field boundaries
- Optimum protection of neighboring crops (field border application) or row/special cultures (herbicide underleaf spraying/banding)
- Suitable for PWM

Series IS 80



Injector can be removed without tools



JKI approval as loss-reducing: 90/75/50 %

G 1753, G 1754, G 1755, G 1999, G 2000, G 2087

JKI approval with ID/IDTA nozzles of the same size.

Current list at: www.lechler.com/de-en/service/loss-reducing

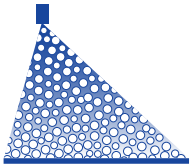
Application:

- **Border nozzle**
- **Band spraying in orchards and vineyards**
- **Vertical boom**
- **Spray frame**

Technical data:

- **Nozzle sizes**
  02–06
- **Spray angle**
  80°
- **Material**
  POM
- **Pressure ranges**
  - Field sprayer/ underleaf sprayer: 2–**4–8** bar
  - Vertical boom: 2–**8–15** bar
- **Recommended strainers**
  - 60 M 02–04
  - 25 M 05–06
- **Droplet sizes**
  Ultra coarse – medium
- **Width across flats**
  10 mm

Compact air-injector off center spray nozzles IDKS 80



Crop production | **Ground care**

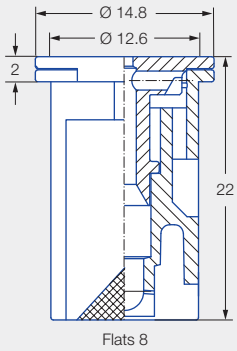
Dimensions in mm.

- Compact, air-aspirating off center nozzle for border application and banding
- Very low drift

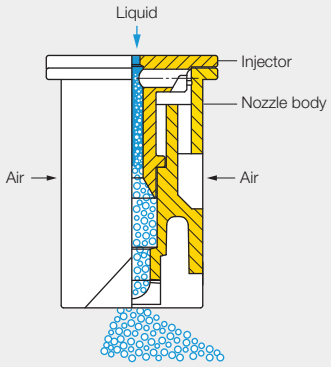
Advantages

- 90 % drift reduction for band spraying with IDKS 80-025 to -06
- Same JKI drift reduction class in combination with IDK/IDKN/IDKT nozzles in the field spray boom
- Volume flow adapted for optimum cross distribution in combination with IDK/IDKN/IDKT nozzles of the same size
- Precise edge application along water courses and field boundaries
- Optimum protection of neighboring crops (field edge application) or row/special cultures (herbicide underleaf spraying/banding)
- Suitable for PWM

Series IDKS 80



Injector can be removed without tools



JKI approval as loss-reducing: 90/75/50 %

G 1786, G 1787, G 1788, G 1789, G 1998, G 2139, G 2140, G 2141, G 2142, G 2143

JKI approval with IDK/ IDKN/IDKT nozzles of the same size.

Current list at: www.lechler.com/de-en/service/loss-reducing

Application:

- **Border nozzle**
- **Plant protection in viticulture, orchard and specialty crops**
- **Vertical boom**
- **Spray frame**
- **Backpack sprayer**
- **Greenhouse**

Technical data:

- **Nozzle sizes**
  015–06
- **Spray angle**
  80°
- **Material**
  POM
- **Pressure ranges**
  - Field sprayer/ underleaf sprayer: 1–**1.5–3**–6 bar
  - Vertical boom: 1–**8–15** bar
- **Recommended strainers**
  - 60 M 015–04
  - 25 M 05–06
- **Droplet sizes**
  Ultra coarse – medium
- **Width across flats**
  8 mm

Twin flat spray nozzles
XDT 130

NEW

Crop production | **Ground care**

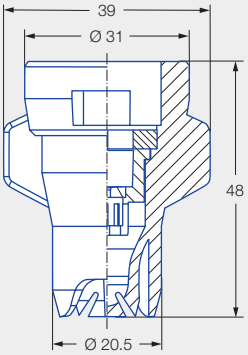
- Extreme drift reduction over the entire pressure range
- Symmetrical twin flat spray jet 40°/40° to the front/rear

Advantages

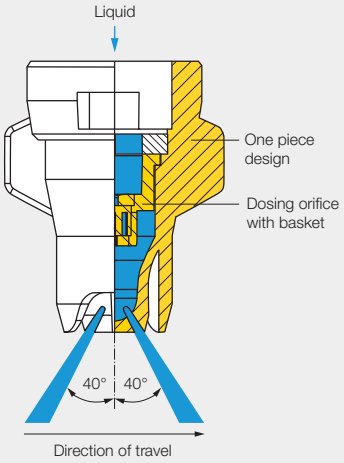
- High workrate due to wide control range
- Optimum deposition with reduced spray shadow
- Nozzle in cap with MULTIJET bayonet system (incl. gasket)
- For timely application even under adverse weather conditions
- Suitable for PWM

Series XDT 130

Dimensions in mm.



Dosing orifice with basket, can be removed without tools



Application:

Plant protection products

Golf course

Technical data:

Nozzle sizes
02–08

Spray angle
130°

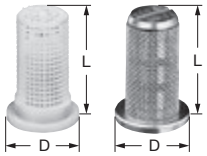
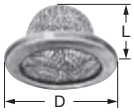
Material
POM

Pressure ranges
1.5–8 bar

Recommended strainers
60 M 02–08

Droplet sizes
Ultra coarse – extremely coarse

Accessories
Ball check valves and nozzle strainers

Designation		Opening pressure [bar]	Mesh size	D [mm]	L [mm]	Material	Strainer area (without gaskets)	Order no.
Ball check valves[1]		0.5	**25 M**	14.8	21.5	POM	628 mm²	**065.266.56.00.00**
		0.5	**60 M**	14.8	21.5	POM	628 mm²	**065.265.56.00.00**
		0.5	**25 M**	14.8	21.0	Brass	430 mm²	**065.261.30.00.00**
		0.5	**60 M**	14.8	21.0	Brass	430 mm²	**065.260.30.00.00**
		2.5	**25 M**	14.8	21.5	POM	628 mm²	**065.266.56.02.00**
		2.5	**60 M**	14.8	21.5	POM	628 mm²	**065.265.56.02.00**
Ball check valve (without strainer)		0.5		14.8	18.5	POM	–	**065.266.56.01.00**
Nozzle strainers[1]		–	**25 M**	14.8	21.5	POM	628 mm²	**065.256.56.00.00**
		–	**60 M**	14.8	21.5	POM	628 mm²	**065.257.56.00.00**
		–	**80 M**	14.8	21.5	POM	430 mm²	**A424.310.50.00.00**
Slotted strainer		–	**25 M**	14.8	21.0	POM	430 mm²	**095.009.56.13.43**
Cup strainers		–	**25 M**	14.8	8.5	Cu/Monel	184 mm²	**065.252.26.00.00**
		–	**25 M**	14.8	8.5	PA/Monel	184 mm²	**200.029.26.00.03**
		–	**60 M**	14.8	8.5	PA/Stainless	184 mm²	**200.029.1C.01.03**
Nozzle strainers with integrated seal, for TWISTLOC		–	**25 M**	18.0	19.2	POM, Santoprene	628 mm²	**065.269.7J.00.00**
		–	**60 M**	18.0	19.2	POM, Santoprene	628 mm²	**065.268.7J.00.00**
Nozzle strainer with integrated seal, for MULTIJET		–	**60 M**	18.8	19.2	POM, Santoprene	628 mm²	**065.268.7J.10.00**

[1] Important: Color coding for strainers and check valves according to ISO 19732:2007.

Accessories

Optimised bayonet cap for maximum performance Improved ergonomics, enhanced functionality and sustainable materials – our new bayonet cap sets new standards!

Description[1]	Color	Order number
Combi Cap AF 8/AF 10	Red	092.179.56.00.00
Combi Cap AF 8/AF 10	Yellow	092.179.56.10.00
Combi Cap AF 8/AF 10	Green	092.179.56.20.00
Combi Cap AF 8/AF 10	Blue	092.179.56.30.00
Combi Cap AF 8/AF 10	Black	092.179.56.40.00
Combi Cap AF 8/AF 10	Orange	092.179.56.60.00
Combi Cap AF 8/AF 10	White	092.179.56.50.00
Combi Cap AF 8/AF 10	Brown	092.179.56.70.00
Combi Cap AF 8/AF 10	Violet	092.179.56.80.00
Combi Cap AF 8/AF 10	Grey	092.179.56.90.00

[1] EasyFitCap incl. gasket, **Order number: 095.015.6C.13.08**

NEW

EasyFitCap

New installation tool – can also be used as a multitool for MULTIJET bayonet caps (**Order number 092.179.56.40.91**)

Non-Lechler origin	Designation		Color code	Order no.
Bayonet cap Type H 	System: – **Hardi** incl. gasket (8/10 mm AF: **095.015.73.06.36**)	**Combi cap** for nozzles with 8 and 10 mm AF ID, IDK, IDKN, IDKT, AD, QS, LU, ST, DF, IS, IDKS, OC, E, FL, FS	black	090.078.56.00.40
	Molded gasket (in combination with nozzle strainer **065.256.56.00.00** or **065.257.56.00.00**, see Page 30)			095.015.7J.04.34
Bayonet cap Type R 	System: – **Rau** incl. gasket (**095.015.73.04.61**) from year of manufacture 2000 See bayonet cap MULTIJET above	for nozzles with size 8 mm AF IDK, IDKN, IDKT, AD, QS, LU, ST, IDKS, OC, E	red	095.016.56.05.90
		for nozzles with size 10 mm AF ID, DF, IS, FL, FS	lavender	095.016.56.05.97

Intermediate and extension adapter

Intermediate adapter[1]

Lechler TWISTLOC system
092.163.56.00.22
Extension: 22 mm

Rau system
092.163.56.00.21
Extension: 20 mm

Hardi system
092.163.56.00.20
Extension: 17 mm

Extension adapter and bayonet nipple[1]

MULTIJET system
092.163.56.00.23
Extension: 32 mm

MULTIJET bayonet nipple
092.163.56.00.26

[1] Including gasket.

Useful aids

Electric border nozzle kit

- Retrofittable, compact 3-way valve with integrated nozzle holders
- Can be electrically controlled from the driver's seat
- Ideally suited for FB nozzles in combination with FD nozzles, IS nozzles in combination with ID nozzles, IDK nozzles in combination with IDKS nozzles, IDTA nozzles in combination with IS nozzles and IDKT nozzles in combination with IDKS nozzles

Advantages

- Switchover without dismounting
- Fast switching in less than 1 second
- Minimum energy requirement, no power consumption during spraying
- All parts made of liquid fertilizer-resistant plastic or stainless steel

Order no.: **065.290.00.00.00**

Good to know

You can find detailed information in our "Assembly Instructions Electric Border Valve Kit" and at **www.lechler.com/de-en/support**.

Anemometer Pocketwind IV

- Backlit display
- Waterproof and shockproof housing
- Lanyard
- Integrated hard cover for protection against damage and dirt
- Tripod thread

Advantages

- Self-calibrating humidity sensor
- Hard cover protects measuring sensors against damage
- Measures all relevant application parameters

Measuring functions

- – Relative humidity
  – Dew point
  – ΔT
  – Wet bulb thermometer
- Wind speed
  – Maximum
  – Average
  – Switchable units m/s, km/h, fpm, mph, kn and bft
- Temperature/wind chill units °C and °F, switchable
- Wind direction
  – Digital compass
  – Integrated wind vane

Order no.
ZWIN.DME.SS.ER.01

Droplet size calculator/ dosage calculator

Order no.: **095.009.50.12.11**

Water-sensitive paper

Size: 76 x 26 mm
Order no.: **ZWSP.76X.26.00.00**

Nozzle cleaning brush

Order no.: **095.009.50.10.89**

Nozzle aligner

Order no.: **065.231.02.00.00**

Nozzle assembly wrench

Order no.: **092.164.40.00.99**

Sample bag

Field crops
Order no.: **092.251.00.00.00 / 872585**

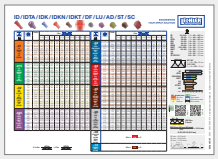
Viticulture, orchard and specialty crops
Order no.: **092.251.00.10.00 / 872586**

Adjustment template for Dropleg[UL]

Order no.: **092.163.42.10.30**

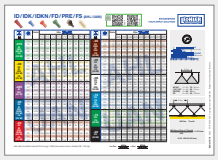
Spray table for arable crops

DIN A4



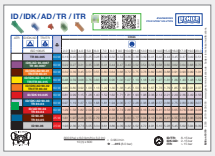
Spray table for arable crops UAN

DIN A4



Spray table for viticulture, orchard and specialty crops

DIN A5



Nozzle calculator app

The Lechler agricultural nozzle app makes it easy to select the right nozzle for your application.

On the basis of the selected sprayer speed and application rate, the nozzle shows you the suitable nozzles and corresponding droplet size categories. This allows you to quickly find the suitable Lechler nozzle and thus optimize your application.

All values are based on measurements with water.

Apple Android

Spray table
Important information at a glance

Pressure

Nozzle	[bar]
ID 01–015:	3.0–**4.0–8.0**
ID 02–10:	2.0–**4.0–8.0**
IDTA 02–08:	1.0–**4.0–8.0**
IDK:	1.0-**1.5-3.0**–6.0
IDKN:	**1.0–3.0**–6.0
IDKT 015–025:	**1.5–3.0**–6.0
IDKT 03–010:	**1.0–3.0**–6.0
LU:	**1.5–2.5**–5.0
ST/SC:	**2–3**–5
DF:	**2–3**–5
AD:	**1.5–3.0**–6.0

Nozzle filter (M = mesh/inch)

General:

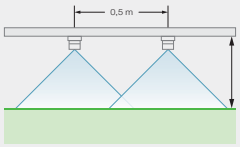
60 M

Exceptions:

80 M ST 90-01–015; IDKT 015–02; LU 01–015; AD 015; DF 03

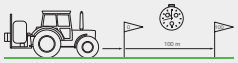
25 M ID 05–10; IDK 05–10; LU 05–08; ST/SC 05–08

Height



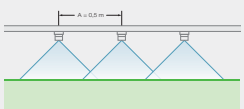
80°/90°
h = 60 – **75** – 90 cm
110°/120°
h = 40 – **50** – 70 cm

Speed



60 s = 6.0 km/h
45 s = 8.0 km/h
36 s = 10.0 km/h

Calculation example



230 l/ha
8 km/h

$$\frac{230 \text{ l/ha} \times 0.5 \text{ m} \times 8.0 \text{ km/h}}{600} = 1.53 \text{ l/min}$$

	ISO 25358								[l/min]	[l/ha] 0,5m									
	ID	IDTA	IDKN	IDK	IDKT	LU	AD			5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	16.0 km/h	20.0 km/h	25.0 km/h	30.0 km/h
-01				EC				**1.0**	0.23	55	46	39	35	28	23	17			
				VC		F		**1.5**	0.28	67	56	48	42	34	28	21	17	13	11
				VC		F		**2.0**	0.32	77	64	55	48	38	32	24	19	15	13
				VC		F		**2.5**	0.36	86	72	62	54	43	36	27	22	17	14
	EC			VC		F		**3.0**	0.39	94	78	67	59	47	39	29	23	19	16
	EC			VC		F		**3.5**	0.42	101	84	72	63	50	42	32	25	20	17
	VC			C		F		**4.0**	0.45	108	90	77	68	54	45	34	27	22	18
	VC			C		F		**4.5**	0.48	115	96	82	72	58	48	36	29	23	19
	VC			C		VF		**5.0**	0.51	122	102	87	77	61	51	38	31	24	20
	VC			M				**6.0**	0.55	132	110	94	83	66	55	41	33	26	22
	C							**7.0**	0.60	144	120	103	90	72	60	45	36	29	24
	C							**8.0**	0.64	154	128	110	96	77	64	48	38	31	26
-015				EC				**1.0**	0.34	82	68	58	51	41	34	26			
				VC	UC	F	M	**1.5**	0.42	101	84	72	63	50	42	32	25	20	17
				VC	EC	F	M	**2.0**	0.48	115	96	82	72	58	48	36	29	23	19
				VC	EC	F	M	**2.5**	0.54	130	108	93	81	65	54	41	32	26	22
	VC			C	VC	F	M	**3.0**	0.59	142	118	101	89	71	59	44	35	28	24
	VC			C	VC	F	F	**3.5**	0.63	151	126	108	95	76	63	47	38	30	25
	VC			C	VC	F	F	**4.0**	0.68	163	136	117	102	82	68	51	41	33	27
	VC			C	VC	F	F	**4.5**	0.72	173	144	123	108	86	72	54	43	35	29
	VC			C	VC	VF	F	**5.0**	0.76	182	152	130	114	91	76	57	46	36	30
	C			M	VC		F	**6.0**	0.83	199	166	142	125	100	83	62	50	40	33
	C							**7.0**	0.90	216	180	154	135	108	90	68	54	43	36
	C							**8.0**	0.96	230	192	165	144	115	96	72	58	46	38
-02		UC		EC				**1.0**	0.46	110	92	79	69	55	46	35	28	22	18
		UC		VC	EC	M	M	**1.5**	0.56	134	112	96	84	67	56	42	34	27	22
	EC	UC		VC	EC	F	M	**2.0**	0.65	156	130	111	98	78	65	49	39	31	26
	EC	UC		VC	EC	F	M	**2.5**	0.73	175	146	125	110	88	73	55	44	35	29
	VC	VC		VC	VC	F	M	**3.0**	0.80	192	160	137	120	96	80	60	48	38	32
	VC	VC		VC	VC	F	F	**3.5**	0.86	206	172	147	129	103	86	65	52	41	34
	VC	VC		C	VC	F	F	**4.0**	0.92	221	184	158	138	110	92	69	55	44	37
	VC	VC		C	VC	F	F	**4.5**	0.98	235	196	168	147	118	98	74	59	47	39
	VC	VC		C	C	F	F	**5.0**	1.03	247	206	177	155	124	103	77	62	49	41
	C	VC		M	C		F	**6.0**	1.13	271	226	194	170	136	113	85	68	54	45
	C	VC						**7.0**	1.22	293	244	209	183	146	122	92	73	59	49
	M	VC						**8.0**	1.30	312	260	223	195	156	130	98	78	62	52
-025		UC		EC				**1.0**	0.57	137	114	98	86	68	57	43	34	27	23
		UC		VC	EC	M		**1.5**	0.70	168	140	120	105	84	70	53	42	34	28
	UC	UC		VC	VC	F		**2.0**	0.81	194	162	139	122	97	81	61	49	39	32
	UC	UC		VC	VC	F		**2.5**	0.91	218	182	156	137	109	91	68	55	44	36
	EC	EC		C	VC	F		**3.0**	0.99	238	198	170	149	119	99	74	59	48	40
	EC	EC		C	VC	F		**3.5**	1.07	257	214	183	161	128	107	80	64	51	43
	VC	VC		C	VC	F		**4.0**	1.15	276	230	197	173	138	115	86	69	55	46
	VC	VC		C	VC	F		**4.5**	1.22	293	244	209	183	146	122	92	73	59	49
	VC	VC		C	C	F		**5.0**	1.28	307	256	219	192	154	128	96	77	61	51
	VC	VC		M	M			**6.0**	1.40	336	280	240	210	168	140	105	84	67	56
	VC	VC						**7.0**	1.52	365	304	261	228	182	152	114	91	73	61
	VC	VC						**8.0**	1.62	389	324	278	243	194	162	122	97	78	65
-03		UC	UC	EC	UC			**1.0**	0.69	166	138	118	104	83	69	52	41	33	28
		UC	EC	VC	EC	M	M	**1.5**	0.84	202	168	144	126	101	84	63	50	40	34
	UC	EC	EC	VC	EC	F	M	**2.0**	0.97	233	194	166	146	116	97	73	58	47	39
	UC	EC	VC	VC	EC	F	M	**2.5**	1.08	259	216	185	162	130	108	81	65	52	43
	EC	VC	VC	VC	VC	F	M	**3.0**	1.19	286	238	204	179	143	119	89	71	57	48
	EC	VC	VC	VC	VC	F	M	**3.5**	1.28	307	256	219	192	154	128	96	77	61	51
	VC	VC	VC	C	VC	F	F	**4.0**	1.37	329	274	235	206	164	137	103	82	66	55
	VC	VC	VC	C	VC	F	F	**4.5**	1.46	350	292	250	219	175	146	110	88	70	58
	VC	VC	C	C	VC	F	F	**5.0**	1.53	367	306	262	230	184	153	115	92	73	61
	VC	VC	C	M	C		F	**6.0**	1.68	403	336	288	252	202	168	126	101	81	67
	VC	VC						**7.0**	1.81	434	362	310	272	217	181	136	109	87	72
	VC	VC						**8.0**	1.94	466	388	333	291	233	194	146	116	93	78

	ISO 25358							bar	[l/min]	[l/ha] 0,5m									
	ID	IDTA	IDKN	IDK	IDKT	LU	AD			5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	16.0 km/h	20.0 km/h	25.0 km/h	30.0 km/h
-04		UC	UC	UC	EC			1.0	0.91	218	182	156	137	109	91	68	55	44	36
		UC	EC	EC	EC	M	C	1.5	1.12	269	224	192	168	134	112	84	67	54	45
	EC	EC	EC	EC	VC	M	C	2.0	1.29	310	258	221	194	155	129	97	77	62	52
	EC	EC	VC	VC	VC	F	M	2.5	1.44	346	288	247	216	173	144	108	86	69	58
	EC	VC	VC	VC	VC	F	M	3.0	1.58	379	316	271	237	190	158	119	95	76	63
	EC	VC	VC	VC	VC	F	M	3.5	1.71	410	342	293	257	205	171	128	103	82	68
	VC	VC	VC	C	VC	F	M	4.0	1.82	437	364	312	273	218	182	137	109	87	73
	VC	VC	VC	C	C	F	M	5.0	2.04	490	408	350	306	245	204	153	122	98	82
	VC	VC	C	C	C		M	6.0	2.23	535	446	382	335	268	223	167	134	107	89
	VC	VC						7.0	2.41	578	482	413	362	289	241	181	145	116	96
	VC	C						8.0	2.58	619	516	442	387	310	258	194	155	124	103
-05		UC		EC	UC			1.0	1.14	274	228	195	171	137	114	86	68	55	46
		UC		EC	EC	M		1.5	1.39	334	278	238	209	167	139	104	83	67	56
	UC	EC		VC	VC	M		2.0	1.61	386	322	276	242	193	161	121	97	77	64
	UC	EC		VC	VC	F		2.5	1.80	432	360	309	270	216	180	135	108	86	72
	EC	VC		VC	VC	F		3.0	1.97	473	394	338	296	236	197	148	118	95	79
	EC	VC		VC	VC	F		3.5	2.13	511	426	365	320	256	213	160	128	102	85
	VC	VC		VC	VC	F		4.0	2.28	547	456	391	342	274	228	171	137	109	91
	VC	VC		C	C	F		5.0	2.55	612	510	437	383	306	255	191	153	122	102
	VC	VC		C	C			6.0	2.79	670	558	478	419	335	279	209	167	134	112
	VC	C						7.0	3.01	722	602	516	452	361	301	226	181	144	120
	VC	C						8.0	3.22	773	644	552	483	386	322	242	193	155	129
-06		UC		EC	UC			1.0	1.36	326	272	233	204	163	136	102	82	65	54
		UC		VC	EC	M		1.5	1.67	401	334	286	251	200	167	125	100	80	67
	EC	EC		VC	VC	M		2.0	1.93	463	386	331	290	232	193	145	116	93	77
	EC	EC		VC	VC	F		2.5	2.16	518	432	370	324	259	216	162	130	104	86
	EC	VC		VC	VC	F		3.0	2.36	566	472	405	354	283	236	177	142	113	94
	EC	VC		VC	VC	F		3.5	2.55	612	510	437	383	306	255	191	153	122	102
	VC	VC		C	VC	F		4.0	2.73	655	546	468	410	328	273	205	164	131	109
	VC	VC		C	C	F		5.0	3.05	732	610	523	458	366	305	229	183	146	122
	VC	VC		C	C			6.0	3.34	802	668	573	501	401	334	251	200	160	134
	VC	C						7.0	3.61	866	722	619	542	433	361	271	217	173	144
	VC	C						8.0	3.86	926	772	662	579	463	386	290	232	185	154
-08		UC		EC	EC			1.0	1.82	437	364	312	273	218	182	137	110	88	72
		UC		EC	EC	C		1.5	2.23	535	446	382	335	268	223	167	134	108	90
	EC	EC		VC	SG	M		2.0	2.58	619	516	442	387	310	258	194	154	124	104
	EC	VC		VC	SG	M		3.0	3.16	758	632	542	474	379	316	237	190	152	126
	VC	VC		VC	C	M		4.0	3.65	876	730	626	548	438	365	274	218	174	146
	VC	VC		C	C			6.0	4.47	1073	894	766	671	536	447	335	268	214	178
	VC	C						7.0	4.83	1159	966	828	725	580	483	362	290	232	192
	VC	C						8.0	5.16	1238	1032	885	774	619	516	387	310	248	206
-10				UC	UC			1.0	2.27	545	454	389	341	272	227	170	136	110	92
				EC	EC			1.5	2.79	670	558	478	419	335	279	209	166	134	112
	UC			EC	VC			2.0	3.22	773	644	552	483	386	322	242	194	154	128
	EC			VC	VC			3.0	3.94	946	788	675	591	473	394	296	236	190	158
	EC			VC	C			4.0	4.55	1092	910	780	683	546	455	341	274	218	182
	VC			C	C			6.0	5.57	1337	1114	955	836	668	557	418	334	268	224
	VC							7.0	6.02	1445	1204	1032	903	722	602	452	362	288	240
	VC							8.0	6.43	1543	1286	1102	965	772	643	482	386	310	258

ISO 25358 classification according to droplet sizes:

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse
UC	Ultra coarse

Subject to modifications.

- Operating pressure at the nozzle (measured with diaphragm valve)
- The stated liter-per-hectare rates apply to water
- Verify the table values by gauging the flow rates prior to every spraying season
- Pay attention to uniform nozzle adjustment

Nozzle calculator app

The apps for Lechler agricultural nozzles make selection and use of the optimum nozzle even easier. Find out more here: **www.lechler.com/de-en/service/apps**

ENGINEERING
YOUR SPRAY SOLUTION

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