Lechler is a world leader in nozzle technology. For over 140 years, we have pioneered numerous groundbreaking developments in the field of nozzle technology. Comprehensive nozzle engineering know-how is combined with a deep understanding of application-specific requirements to create products that offer outstanding precision, reliability and durability.

Modern plant protection involves more than just the use of environmentally friendly chemicals. It is above all a question of precision. In order to achieve uniform coverage, the droplets must reach the target as exactly as possible. Losses due to drift, run-off or evaporation should be avoided – in favour of the environmental protection.

The application technology and here particularly the plant protection nozzles must therefore meet very high requirements. Today, nozzles must offer a degree of precision that would have been considered impossible just a few years ago.

As a globally leading manufacturer of precision nozzles, Lechler is ideally prepared to meet this challenge. For decades now, our products have set the technological standards in the fields of crop protection and liquid fertilizer application. Through regular and extensive investment in research and development, we ensure that this will also remain the case in the future. The functions and characteristics of our precision nozzles are defined exactly and objectively right from the start. This process is based on sophisticated measuring techniques and our proven documentation system.

State-of-the-art design and simulation techniques guarantee practically-oriented products with a high practical value.

With Lechler nozzles, one spray jet is the same as the next. This demands a high level of precision and care in production. Our processes are therefore subject to permanent quality control measures, from the incoming goods department, through development and production right up to dispatch. Our quality management system is based primarily on the requirements of our customers and is certified in accordance with ISO 9001:2015. Lechler nozzles comply with the requirements of the Julius Kühn Institute, the German Plant Protection Act as well as European EN and international ISO standards.

Thanks to close cooperation and active exchange of information with official test institutes, the chemicals and liquid fertilizer industry, the equipment manufacturers and last but not least agricultural consultants, we also ensure that we are fully up-to-date on current practical requirements. After all, one thing is certain: solutions for practical applications can only be developed from practical knowledge.

This catalog contains our comprehensive Lechler agricultural spray nozzle and accessory range so see for yourself our product range.
Therefore success is not a final state for us, but simply a further step on the way to even greater perfection.
THE RIGHT NOZZLE FOR YOUR PLANT PROTECTION

As part of efficient crop production, it is nowadays necessary to observe a large number of different requirements and reconcile these with each other.

National and international regulations have to be taken into account as well as biological and ecological aspects. And as the bottom line, economical delivery of all plant protection products must also be guaranteed. At Lechler, we focus all our attention on combining these requirements in the optimum nozzle for your particular application.

Technical requirements

Compliance with the requirements of JKI, ENTAM as well as the international EN/ISO standards with respect to flow rate tolerance and distribution uniformity is an essential part of ensuring optimum use of plant protection products.

In the case of JKI-approved Lechler nozzles, the flow rate of new nozzles may deviate from the table value by a maximum of +/- 5%. This applies for spraying both field crops as well as bush and tree crops.

In combination, new JKI-approved nozzles must guarantee the most uniform cross distribution possible.

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 as precise as possible.

Lechler precision nozzles achieve exact dosage and uniform distribution. Independently of this, the recommendations of the plant protection product manufacturers with respect to application rates must always be observed.

Flat spray and twin flat spray nozzles are available. Flat spray nozzles generally achieve good crop penetration (e.g. mildew control in cereal crops). In contrast, twin flat spray 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).

Determination of the target area before use is of decisive importance for optimum deposition of the plant protection product.

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Determination of the target area before use is of decisive importance for optimum deposition of the plant protection product.
Environmentally-relevant requirements

Drift

Spray drift refers to droplets containing crop protection chemicals which are not deposited on the target area due to wind or thermal current. These droplets 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.

Drift-reducing technology

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 Germany, Austria, England, Finland, France, the Netherlands, Belgium and Sweden 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.
INNOVATIVE NOZZLE DESIGN – LECHLER IDTA

It is one thing to be aware of the requirements to achieve good crop production. It is another to create a product that will fulfill these. A good example is the new IDTA with its operator oriented design.

The IDTA is a high drift reducing asymmetrical twin flat spray air-injector nozzle for optimal coverage at higher forward speeds. The newest development in the wide range of agricultural spray nozzles is suitable for a wide range of applications.

Optimized twin flat spray concept

For best deposit on vertical targets the IDTA has asymmetric spray angles of 120° to the front and 90° to the back. With the angling of 30° to the front and 50° to the back the actual spray width at the target is the same. Also the spray volume is divided 60% to the front and 40% to the back to get best result at higher forward speed.

Facts

To prove the high efficiency of the IDTA several field tests have been conducted. Deposit at vertical targets (e.g. black grass) has been checked with water sensitive paper. This test has been done with a field sprayer Amazone UF 1201 with 15 m boom. Results show significant difference on front and back at different forward speed between the different nozzles.

<table>
<thead>
<tr>
<th>Type</th>
<th>Lechler ID 120-03 (ID3)</th>
<th>Lechler IDTA 120-03</th>
<th>Competitor Asym. DF 110-03</th>
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<tr>
<td>Pressure</td>
<td>5 bar</td>
<td>5 bar</td>
<td>5 bar</td>
</tr>
<tr>
<td>Speed</td>
<td>12 km/h</td>
<td>12 km/h</td>
<td>12 km/h</td>
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<td>Deposit towards front</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage in %</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>+ Droplet number/cm²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.4 % + 5 d/cm²</td>
<td>15.5 % + 10 d/cm²</td>
<td>5.9 % + 5.6 d/cm²</td>
<td></td>
</tr>
<tr>
<td>Deposit towards back</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage in %</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>+ Droplet number/cm²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.5 % + 24.9 d/cm²</td>
<td>30.2 % + 60.7 d/cm²</td>
<td>27.2 % + 63.5 d/cm²</td>
<td></td>
</tr>
</tbody>
</table>

More applications

As a consequence of the different spray angles and volume rates, the droplet spectrum is changed. Finer spray to the front is for excellent coverage and coarser to the back is for better drift stability. This enables the IDTA nozzle to spray under conditions when other nozzles have to stop.

Results

Compared to standard air-injector nozzles e.g. ID 120-03 the IDTA gives clear advantages in the field:

- Double overall coverage
- Significant higher total deposit on the front and back of vertical targets
- More uniform coverage on front and back
Nozzle type influences deposit on target area

To obtain high biological efficacy best coverage at the target is prerequisite. Depending on crop and growth stage this may change. So for optimum application there is a need for at least two or more different nozzle settings. Important is to know the target area.

Better coverage on vertical targets can be achieved by using twin flat fan nozzles. Penetration into the canopy a standard single fan nozzle has advantages.

Target oriented application – better coverage on vertical targets by asymmetrical spray pattern at higher forward speeds

Winter wheat BBCH 55

Ear: 8 km/h – 230 l/ha

<table>
<thead>
<tr>
<th>Nozzle Type</th>
<th>Coverage %</th>
<th>V/H</th>
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</thead>
<tbody>
<tr>
<td>ID 120-03 5.0 bar</td>
<td>14</td>
<td>2.5</td>
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<tr>
<td>IDTA 120-03 5.0 bar</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>IDKT 120-04 2.8 bar</td>
<td>6</td>
<td>1.1</td>
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</table>

Ear: 12 km/h – 155 l/ha

<table>
<thead>
<tr>
<th>Nozzle Type</th>
<th>Coverage %</th>
<th>V/H</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID 120-03 5.0 bar</td>
<td>14</td>
<td>2.5</td>
</tr>
<tr>
<td>IDTA 120-03 5.0 bar</td>
<td>10</td>
<td>0.5</td>
</tr>
<tr>
<td>IDKT 120-04 2.8 bar</td>
<td>6</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: Research Institute of Horticulture Department of Agroengineering Skierniewice, Poland

Picture 2: Coverage on ear in winter wheat BBCH 55 with different nozzle types at different forward speed and application rates.

At 8 km/h the IDKT has a balanced coverage of the ear front and back thanks to the symmetrical pattern.

At 12 km/h and higher speed the asymmetrical pattern of the IDTA give the more uniform coverage.
NOZZLE RECOMMENDATION FOR PESTICIDE APPLICATION

Cereals
Pesticide applications

Two nozzle strategy
- ID, IDK/IDKN: good canopy penetration
- IDTA, IDKT: optimal coverage without spray shadow

Rape seed
Pesticide applications

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Corn

Herbicide applications

- IDTA 4.0 – 8.0 bar
- IDK 1.5 – 3.0 bar
- FT 1.0 – 3.0 bar

Fungicide and insecticide applications

- IDTA 4.0 – 8.0 bar
- IDK 1.5 – 3.0 bar
- FT 1.0 – 3.0 bar

BBCH growth stage:
- 00
- 05
- 07
- 09
- 10
- 11
- 13
- 15
- 17/32
- 34
- 53

More recommendation:
NOZZLE RECOMMENDATION FOR PESTICIDE APPLICATION

**Potatoes**

**Herbicide applications**

- TwinSprayCap
  - IDTA 4.0 – 8.0 bar
  - IDKT 1.5 – 3.0 bar

**Desiccation**

**Potatoes**

**Fungicide and insecticide applications**

- Liquid dressing at planting
  - TR 1.5 – 3.0 bar

- Furrow treatment
  - FT 1.0 – 2.5 bar

- Fungicide/Insecticide
  - IDTA 4.0 – 8.0 bar
  - IDKT 1.5 – 3.0 bar
  - ID/IDN 4.0 – 8.0 bar
  - IDK/IDKN 1.5 – 3.0 bar

*BBCH growth stage*
Sugar beet
Pesticide applications

Herbicide

Insecticide

ID 4.0 – 8.0 bar
IDK/IDKN 1.5 – 3.0 bar

Fungicide

IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar

Herbicide

IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar

Soybean
Pesticide applications

Herbicide

Fungicide/Insecticide

ID 4.0 – 8.0 bar
IDK/IDKN 1.5 – 3.0 bar

IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar

IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar

Fungicide/Insecticide

Dropleg®
FT 1.0 – 3.0 bar

Harvest aid

BBCH growth stage
LECHLER NOZZLES FOR THE CROP PRODUCTION

### Broadcast spraying

<table>
<thead>
<tr>
<th>Herbicides</th>
<th>ID3</th>
<th>IDK/IDKN</th>
<th>IDTA</th>
<th>IDKT</th>
<th>PRE</th>
<th>AD</th>
<th>QS 80</th>
<th>LU</th>
<th>ST/SC</th>
<th>DF</th>
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<tr>
<td>Fungicides</td>
<td>Contact</td>
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<td>(1–4)</td>
<td>(1***/1.5–2.5)</td>
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<td>(1.5–2)</td>
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### Banding/row spraying – arable crops and speciality crops

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<tr>
<th>Herbicides</th>
<th>ID3</th>
<th>IDK/IDKN</th>
<th>IDTA</th>
<th>IDKT</th>
<th>PRE</th>
<th>AD</th>
<th>QS 80</th>
<th>LU</th>
<th>ST/SC</th>
<th>DF</th>
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<td>Liquid fertilizer</td>
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<td>Growth regulators</td>
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Heed label of chemical company.
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<th>FT 90 (FT 140)</th>
<th>TR 80</th>
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</table>

**Nozzle sizes:**

- ID3-01/-015
- IDK-04/-05/-06/-10
- IDKT-03/-04/-05/-06
- FS-10/-15
- IDKS-03/-04/-05/-06
- IDKN-03/-04

--- = not drift reducing
- = less drift reducing
○ = drift reducing
+ = very drift reducing
+++ = extremely drift reducing
++++ = most drift reducing

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

---
Air-Injector flat spray nozzles ID3

Extremely low-drift, air-injector flat spray nozzle for professional use.

Advantages
- Up to 90% drift reduction depending on nozzle size, pressure and country
- Long injector design ensures high drift stability over a wide pressure range
- Timely application even under adverse weather conditions
- Increased workrate due to flexible use over a wide pressure range
  - Adaptation by changing the driving speed and l/ha rate without nozzle changes
- Very good deposition structure and crop penetration

Nozzle size
- 01 – 10

Spray angle
- 120°

Material
- POM, ceramic

Pressure range
- ID-01 to -015: 3 – 4 – 8 bar
- ID-02 to -08: 2 – 4 – 8 bar
- UAN: 2 – 4 bar

Recommended filters
- 80 M 01
- 60 M 02 – 04
- 25 M 05 – 10

Droplet size
- Ultra coarse – medium

Width across flats
- 10 mm

Application areas
- Plant protection products and growth regulators
- Liquid fertilizer
- Border application can be combined with border nozzle IS 80
- Golf course

Example of ordering
Type + spray angle + int’l nozzle size + material = ordering no.
ID3 120° 025 (POM) = ID-120-025
ID3 120° 025 C (ceramic) = ID-120-025 C

Aeration effect

Dimensions in mm.

Drift reduction: 90/75/50 %
Current list under www.lechler-agri.com/ drift-reduction

JKI-approval for mixed nozzle equipping
Air-injector flat spray compact nozzles IDK/IDKN

Very low-drift, compact air-injector flat spray nozzle with wide droplet spectrum (from ultra coarse to fine).

Advantages
- Up to 90% drift reduction depending on nozzle size, pressure and country
- 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

Advantages
- Up to 90% drift reduction depending on nozzle size, pressure and country
- 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

Nozzle size
- 01 – 10

Spray angle
- 90°, 120°

Material
- POM, ceramic

Pressure range
- IDK-01 to -03: 1.5 – 3 – 6 bar
- IDK-04 to -10: 1 – 1.5 – 3 – 6 bar
- UAN
- IDK -01 to -03: 1.5 – 2.5 bar
- IDK -04 to -10: 1 – 2.5 bar
- IDKN: 1 – 2.5 bar

Recommended filters
- 80 M 01
- 60 M 015 – 04
- 25 M 05 – 10

Droplet size
- Ultra coarse – medium

Width across flats
- 8 mm

Application areas
- Plant protection products and growth regulators
- Liquid fertilizer
- Spray frame
- Border application can be combined with border nozzle IDKS 80
- Golf course
- Knapsack sprayer
- Greenhouse

Example of ordering
<table>
<thead>
<tr>
<th>Type</th>
<th>spray angle</th>
<th>int'l nozzle size</th>
<th>material</th>
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<td>120°</td>
<td>01</td>
<td>C (ceramic)</td>
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<td>MultiCap IDK</td>
<td>120°</td>
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<td>(POM)</td>
<td>MultiCap IDK 120-01</td>
</tr>
</tbody>
</table>

Dimensions in mm.
Pre-emergence flat spray nozzle PRE

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

Advantages
- Up to 95% drift reduction depending on pressure and country
- Flexible adaption to buffer zones
- Wide pressure range from 1.5 – 8 bar
- High workrate through simple adaptation of l/ha rate and driving speed
- Timely application even under adverse weather conditions
- Nozzle in cap with MULTIJET bayonet system (incl. gasket)

Nozzle size
05

Spray angle
130°

Material
POM

Pressure range
1.5 – 8 bar
- UAN: 1.5 – 4 bar

Recommended filters
25 M

Droplet size
Ultra coarse

Application areas
- Herbicides pre-emerge
- Liquid fertilizer
- Golf course

Example of ordering
Type + spray angle + int'l nozzle size + material = ordering no.
PRE 130° 05 (POM) = PRE 130-05
Anti-drift flat spray nozzles AD

Low-drift flat spray nozzle.

Advantages
- Application with medium to coarse droplet even with low l/ha rates
- Integrated pre-chamber ensures optimized atomization and reduced fine droplet share
- Preatomizer can be removed for cleaning

Application areas
- Plant protection products and growth regulators

Example of ordering
Type + spray angle + int'l nozzle size + material = ordering no.
AD 120° 02 (POM) = AD 120-02
AD 120° 02 C (ceramic) = AD 120-02 C

Nozzle size
015 – 04

Spray angle
90°, 120°

Material
POM, ceramic

Pressure range
1.5 – 3 – 6 bar

Recommended filters
80 M 01 – 015
60 M 02 – 04

Droplet size
Coarse – fine

Width across flats
8 mm

Dimensions in mm.
Multirange flat spray nozzles LU

Universal flat spray nozzle with finer droplet spectrum.

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

Nozzle size
01 – 08

Spray angle
90°, 120°

Material
POM, stainless steel, ceramic

Pressure range
1.5 – 2.5 – 5 bar

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

Droplet size
Coarse – very fine

Width across flats
8 mm

Application areas
- Plant protection products and growth regulators
- Border application can be combined with border nozzle OC
- Knapsack sprayer
- Greenhouse

Example of ordering
Type + spray angle + int'l nozzle size + material = ordering no.
LU 120° 02 (POM) = LU 120-02
LU 120° 015 C (ceramic) = LU 120-015 C
LU 120° 03 S (stainless steel) = LU 120-03 S

Dimensions in mm.
Even flat spray nozzles E

Flat spray nozzle with rectangular liquid distribution for band and row spraying.

Advantages
- Only even flat spray nozzle with 90% drift reduction approved by JKI (depending on nozzle size, pressure and country)
- Fully formed spray angle from 1 bar
- Uniform active ingredient distribution over the entire bandwidth
- Extremely small spraying distances possible

Nozzle size
01 – 08

Spray angle
80°

Material
Brass, POM

Pressure range
1 – 3 – 4 bar

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

Droplet size
Very coarse – very fine

Width across flats
8 mm

Application areas
Band spraying
Knapsack sprayer

Nozzle alignment
Lechler’s even flat spray nozzles E enable extremely short spray heights (H), thus extensively avoiding band drift. The width of the spray band (B) can be varied by altering the spray height (H) and/or rotating the spray axis to change the spray offset.

Application-rate reduction
Depending on the band width and row width, the amount of spraying liquid for band spraying amounts to 10–50% of the amount of liquid for full surface treatment.

<table>
<thead>
<tr>
<th>Spray height (H) cm</th>
<th>Band width (B) cm</th>
<th>Application rate* (in %), for a row spacing A</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>16</td>
<td>25</td>
<td>50</td>
</tr>
</tbody>
</table>

* Percentages in comparison with full-area treatment.

Example of ordering
Type + spray angle + int’l nozzle size + material = ordering no.
E 80° 02 Brass = 8002 E brass
E 80° 02 (POM) = 8002 E
Asymmetrical twin flat spray air-injector nozzles IDTA

Extremely low-drift, air-aspirating air injector twin flat spray nozzle for optimized deposition and reduced spray shadow at higher driving speeds.

Advantages
- High drift reduction over entire pressure range
- Nozzle in cap with MULTIJET bayonet system (incl. gasket)
- Twin flat spray jet 30°/50° with asymmetrical spray angles and flow rates – 90°/120° gives on the target area the same spray width
- Finer droplet spectrum to the front in driving direction for optimum wetting
- Coarser, more drift-resistant droplet spectrum to the rear
- Optimum user protection thanks to removal/installation of the injector with protective gloves without tools (Patent)
- JKI approval for mixed equipment with ID3 nozzles with the same nozzle size in the boom center section

Nozzle size
- 02 – 08

Spray angle
- Front 120°/back 90°

Material
- Ceramic

Pressure range
- 1 – 4 – 8 bar

Recommended filters
- 80 M 02
- 60 M 025 – 08

Droplet size
- Ultra coarse – coarse

Application areas
- Plant protection products and growth regulators
- Border application can be combined with border nozzle IS 80
- Golf course

Example of ordering
Type + spray angle + int'l nozzle size + material = ordering no.
IDTA 120° 025 C (ceramic) = IDTA 120-025 C
Symmetrical TWIN flat spray air-injector compact nozzles IDKT

Very low-drift, air-injector twin flat spray nozzle for optimized deposition and reduced spray shadow.

Advantages
- Up to 90% drift reduction depending on nozzle size, pressure and country
- Compact design
- Optimum deposition on foliage and vertical target surfaces thanks to symmetrical twin flat spray jet 30°/30°
- Reduced spray shadow
- Drift reducing up to 3 bar (depending on nozzle size)
- JKI approval for mixed equipment with IDK/IDKN nozzles with the same nozzle sized in the boom center section

Advantages

| Nozzle size | 015 – 06 |
| Spray angle | 120° |
| Material | POM, ceramic |
| Pressure range |
| – IDKT 015 to 025: 1.5 – 3 – 6 bar |
| – IDKT 03 to 06: 1 – 1.5 – 3 – 6 bar |
| Recommended filters |
| 80 M 015 – 02 |
| 60 M 025 – 06 |
| Droplet size | Ultra coarse – medium |
| Width across flats | 8 mm |

Application areas
- Plant protection products
- Spray frame
- Border application can be combined with border nozzle IDKS 80
- Golf course
- Greenhouse

Example of ordering

<table>
<thead>
<tr>
<th>Type</th>
<th>spray angle</th>
<th>int'l nozzle size</th>
<th>material</th>
<th>ordering no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDKT</td>
<td>120°</td>
<td>04</td>
<td>(POM)</td>
<td>IDKT 120-04</td>
</tr>
<tr>
<td>IDKT</td>
<td>120°</td>
<td>04</td>
<td>C (ceramic)</td>
<td>IDKT 120-04 C</td>
</tr>
<tr>
<td>MultiCap IDKT</td>
<td>120°</td>
<td>04</td>
<td>(POM)</td>
<td>MultiCap IDKT 120-04</td>
</tr>
</tbody>
</table>

Dimensions in mm.

JKI-approval for mixed nozzle equipping
Air-injector off center nozzles IS 80

Extremely low-drift, air-injector off center nozzle for border application and banding.

Advantages
- Same JKI drift reduction class in combination with ID3 nozzles in the field spray boom
- Volume flow adapted for optimum cross distribution in combination with ID3-/IDTA-nozzles of the same size
- Asymmetrical spray pattern (20°/60° to vertical axis)
- Precise edge application along water courses and field boundaries
- Optimum protection of neighboring crops (field edge application or row/special cultures (herbicide banding/underleaf spraying)

Nozzle size
- 02 – 06

Spray angle
- 80°

Material
- POM

Pressure range
- Sprayer/broadcast spraying: 2 – 4 – 8 bar
- Vertical sprayer boom: 2 – 8 – 15 bar

Recommended filters
- 60 M 02 – 04
- 25 M 05 – 06

Droplet size
- Ultra coarse – medium

Width across flats
- 10 mm

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

Dimensions in mm.

Example of ordering
Type + spray angle + int'l nozzle size + material = ordering no.
IS 80° 02 (POM) = IS 80-02
Air-injector off center compact nozzles IDKS 80

Very low-drift, compact air-injector off center nozzle for border application and banding.

Advantages
- 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
- Asymmetrical spray pattern (20°/60° to axis)
- Precise edge application along water courses and field boundaries
- Optimum protection of neighboring crops (field edge application) or row/special cultures (herbicide banding/underleaf spraying)

Drift reduction: 90/75/50 %

Current list under www.lechler-agri.com/drift-reduction

Nozzle size
- 015 – 06

Spray angle
- 80°

Material
- POM

Pressure range
- Sprayer/broadcast spraying: 1 – 1.5 – 3 – 6 bar
- Vertical sprayer boom: 1 – 8 – 15 bar

Recommended filters
- 60 M 015 – 04
- 25 M 05 – 06

Droplet size
- Ultra coarse – medium

Width across flats
- 8 mm

Application areas
- Border nozzle
- Band spraying in orchards and vineyards
- Vertical boom
- Spray frame
- Knapsack sprayer
- Greenhouse

Example of ordering
Type + spray angle + int’l nozzle size + material = ordering no.
IDKS 80° 02 (POM) = IDKS 80-02
<table>
<thead>
<tr>
<th>Mesh size</th>
<th>Material</th>
<th>Filter area (without gasket)</th>
<th>Ordering no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>L [mm]</td>
<td>D [mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.266.56.00</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.265.56.00</td>
</tr>
<tr>
<td>21</td>
<td>14.8</td>
<td>430 mm²</td>
<td>065.261.30.00</td>
</tr>
<tr>
<td>21</td>
<td>14.8</td>
<td>430 mm²</td>
<td>065.260.30.00</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.266.56.02</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.265.56.02</td>
</tr>
<tr>
<td>18.5</td>
<td>14.8</td>
<td></td>
<td>065.266.56.01</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.256.56.00</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>628 mm²</td>
<td>065.257.56.00</td>
</tr>
<tr>
<td>21.5</td>
<td>14.8</td>
<td>430 mm²</td>
<td>A.424.310.5</td>
</tr>
<tr>
<td>21.0</td>
<td>14.8</td>
<td>430 mm²</td>
<td>095.009.56.13.43</td>
</tr>
<tr>
<td>8.5</td>
<td>14.8</td>
<td>184 mm²</td>
<td>065.252.26.00</td>
</tr>
<tr>
<td>8.5</td>
<td>14.8</td>
<td>184 mm²</td>
<td>200.029.26.00.03</td>
</tr>
<tr>
<td>8.5</td>
<td>14.8</td>
<td>184 mm³</td>
<td>200.029.1C.01.03</td>
</tr>
<tr>
<td>19.2</td>
<td>18.0</td>
<td>628 mm²</td>
<td>065.269.7J</td>
</tr>
<tr>
<td>19.2</td>
<td>18.0</td>
<td>628 mm²</td>
<td>065.268.7J</td>
</tr>
<tr>
<td>19.2</td>
<td>18.0</td>
<td>628 mm²</td>
<td>065.268.7J.10</td>
</tr>
</tbody>
</table>

* Please note: If applicable we deliver the strainers and ball check valves in the color coding according to ISO 19732:2007.
### MULTIJET

<table>
<thead>
<tr>
<th>Description</th>
<th>Color code</th>
<th>Ordering no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayonet cap incl. gasket Y.G00.002.02.0 for combination with System MULTIJET, for example:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combi cap for nozzles with 8 and 10 mm AF ID3, IDK, IDKN, IDKT, AD, QS, LU, ST, DF, IS, IDKS, OC, E, FL, FS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fibre-glass reinforced for nozzles with AF 8</td>
<td>red</td>
<td>Y.825.3C0.00.00.00.0</td>
</tr>
<tr>
<td>for hollow cone nozzles TR, ITR, FT, BN hose shanks</td>
<td>black</td>
<td>A.402.900.01.A</td>
</tr>
<tr>
<td>for flood nozzles FT</td>
<td>black</td>
<td>A.402.909.09.0</td>
</tr>
</tbody>
</table>

### Non-Lechler origin

<table>
<thead>
<tr>
<th>Description</th>
<th>Color code</th>
<th>Ordering no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayonet cap Type H System: – Hardi incl. gasket (8 and 10 mm AF: 095.015.73.06.36)</td>
<td>black</td>
<td>090.078.56.00.40.1</td>
</tr>
<tr>
<td>Gasket with special shape (in combination with nozzle strainer 065.256.56 or 065.257.56)</td>
<td></td>
<td>095.015.7J.04.34</td>
</tr>
<tr>
<td>Bayonet cap Type R System: – Rau incl. gasket (095.015.73.04.61) since 2000 see Bayonet cap MULTIJET above</td>
<td>red</td>
<td>095.016.56.05.90</td>
</tr>
<tr>
<td>for nozzles with 8 mm AF IDK, IDKN, IDKT, AD, QS, LU, ST, DF, IS, IDKS, OC, E</td>
<td>lavender</td>
<td>095.016.56.05.97</td>
</tr>
<tr>
<td>for nozzles with 10 mm AF ID3, DF, IS, FL, FS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Intermediate and extension adaptor

**Intermediate adaptor**
- System Lechler TWISTLOC (092.163.56.00.22.1)
- Extension: 22 mm

**Intermediate adaptor**
- System Rau (092.163.56.00.21.0)
- Extension: 43 mm

**Intermediate adaptor**
- System Hardi (092.163.56.00.20.1)
- Extension: 17 mm

**Extension adaptor**
- System MULTIJET (092.163.56.00.23.1)
- Extension: 32 mm
Farmer's helpers
Anemometer

Pocketwind IV

Features
- 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 the measuring sensors against damage
- Measures all decision-relevant application parameters

Measuring functions
- Air humidity
  - Relative humidity
  - Dew point
  - $\Delta T$
  - Wet bulb thermometer
- Wind speed
  - Maximum
  - Average
  - Units m/s, km/h, fpm, mph, kn and bft, switchable
- Temperature/wind chill units °C and °F, switchable
- Wind direction
  - Digital compass
  - Integrated wind vane

Ordering no.: Z.WIN.DME.SS.ER.010
**Farmer’s helpers**

**Accessories**

- **Droplet-size/dosage calculator**
  Order no. 095.009.50.12.11.4

- **Online nozzle calculator**
  Apple [QR code]
  Android [QR code]

- **Cleaning brush**
  Order no. 095.009.50.10.89.0

- **Water sensitive paper**
  Size: 76 x 28 mm
  Order no. 092.164.40.00.99.0

- **Nozzle assembly wrench**
  Order no. 092.164.40.00.99.0

- **Nozzle aligner**
  Order no. 065.231.02

**Spray tables (sticker)**

- **UAN (A4)**

- **Arable crops (A4)**
## Spray Table

<table>
<thead>
<tr>
<th>ID/IDK/LU/ST</th>
<th>5.0 km/h</th>
<th>6.0 km/h</th>
<th>7.0 km/h</th>
<th>8.0 km/h</th>
<th>10.0 km/h</th>
<th>12.0 km/h</th>
<th>16.0 km/h</th>
<th>20.0 km/h</th>
<th>25.0 km/h</th>
<th>30.0 km/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>-01 IDK (60 M)</td>
<td>1.5</td>
<td>0.28</td>
<td>0.32</td>
<td>0.36</td>
<td>0.39</td>
<td>0.42</td>
<td>0.45</td>
<td>0.48</td>
<td>0.51</td>
<td>0.52</td>
</tr>
<tr>
<td>IDK LU ST (60 M)</td>
<td>1.5</td>
<td>0.42</td>
<td>0.48</td>
<td>0.52</td>
<td>0.58</td>
<td>0.68</td>
<td>0.72</td>
<td>0.76</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>-02 IDK LU/AD ST (60 M)</td>
<td>1.0</td>
<td>0.40</td>
<td>0.48</td>
<td>0.54</td>
<td>0.59</td>
<td>0.69</td>
<td>0.73</td>
<td>0.77</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>IDK DF (60 M)</td>
<td>1.5</td>
<td>0.57</td>
<td>0.70</td>
<td>0.81</td>
<td>0.91</td>
<td>0.99</td>
<td>1.07</td>
<td>1.15</td>
<td>1.22</td>
<td>1.28</td>
</tr>
<tr>
<td>IDK DF ST/SC (60 M)</td>
<td>1.0</td>
<td>0.57</td>
<td>0.70</td>
<td>0.81</td>
<td>0.91</td>
<td>0.99</td>
<td>1.07</td>
<td>1.15</td>
<td>1.22</td>
<td>1.28</td>
</tr>
</tbody>
</table>

2 x l/ha = l/ha
0.25 m

---

### Formulas

- IDK/IDKN
- IDTA/IDTK
- DF

---

### Units

- l/ha
- km/h
- m

---

### Notes

- The table provides spray rates for different speeds and distances.
- The values are given in liters per hectare (l/ha) and kilometers per hour (km/h).
- The table includes a section for IDK/IDKN, IDTA/IDTK, and DF units.
- The spray rates are adjusted for different distances and wind conditions.
### DROPLET SIZE TABLE

| ID 120-01 | UC | XC | VC | VC | VC | VC | VC | C | C | C |
| ID 120-015 | VC | VC | VC | VC | VC | VC | VC | C | C | C |
| ID 120-02 | UC | XC | VC | VC | VC | VC | VC | C | C | M | M |
| ID 120-025 | UC | VC | VC | VC | VC | VC | VC | VC | VC | VC |
| ID 120-03 | UC | VC | VC | VC | VC | VC | VC | VC | VC | VC |
| ID 120-04 | UC | UC | VC | VC | VC | VC | VC | VC | VC | VC |
| ID 120-05 | UC | UC | VC | VC | VC | VC | VC | VC | VC | C | C |
| ID 120-06 | UC | UC | VC | VC | VC | VC | VC | VC | VC | C | C |
| ID 120-08 | UC | UC | VC | VC | VC | VC | VC | VC | VC | C | C |

| IDTA 120-02 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDTA 120-025 | UC | UC | UC | XC | VC | VC | VC | VC | VC | VC |
| IDTA 120-03 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDTA 120-04 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDTA 120-05 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDTA 120-06 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |

| IDK 120-01 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-015 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-02 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-025 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-03 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-04 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-05 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-06 | VC | VC | VC | VC | C | C | M | M | M | M |
| IDK 120-08 | VC | VC | VC | VC | C | C | M | M | M | M |

| IDKN 120-03 | UC | UC | UC | VC | VC | VC | VC | VC | C | C |
| IDKN 120-04 | UC | UC | UC | VC | VC | VC | VC | VC | C | C |

| IDKT 120-02 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDKT 120-025 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDKT 120-03 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDKT 120-04 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDKT 120-05 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |
| IDKT 120-06 | UC | UC | UC | VC | VC | VC | VC | VC | VC | VC |

| AD 120-015 | M | F | F | F | F | F | F | F | F | F |
| AD 120-02 | C | M | M | M | M | F | F | F | F | F |
| AD 120-03 | C | M | M | M | M | M | M | M | M | F |
| AD 120-04 | C | M | M | M | M | M | M | M | M | F |

| LU 120-01 S | F | F | F | F | F | F | F | VF | VF | VF |
| LU 120-015 | F | F | F | F | F | F | F | F | F | F |
| LU 120-02 | M | F | F | F | F | F | F | F | F | F |
| LU 120-025 | M | F | F | F | F | F | F | F | F | F |
| LU 120-03 | M | F | F | F | F | F | F | F | F | F |
| LU 120-04 | M | F | F | F | F | F | F | F | F | F |
| LU 120-05 | M | F | F | F | F | F | F | F | F | F |
| LU 120-06 | M | F | F | F | F | F | F | F | F | F |
| LU 120-08 | M | F | F | F | F | F | F | F | F | F |

| LU 120-01 | M | F | F | F | F | F | F | F | F | F |

| LU 120-015 | M | F | F | F | F | F | F | F | F | F |

| LU 120-02 | M | F | F | F | F | F | F | F | F | F |

| LU 120-025 | M | F | F | F | F | F | F | F | F | F |

| LU 120-03 | M | F | F | F | F | F | F | F | F | F |

| LU 120-04 | M | F | F | F | F | F | F | F | F | F |

| LU 120-05 | M | F | F | F | F | F | F | F | F | F |

| LU 120-06 | M | F | F | F | F | F | F | F | F | F |

| LU 120-08 | M | F | F | F | F | F | F | F | F | F |

**ISO 25358: Droplet size classification**

- **VF**: Very fine
- **F**: Fine
- **M**: Medium
- **C**: Coarse
- **VC**: Very coarse
- **XC**: Extremely coarse
- **UC**: Ultra coarse

Classifications are subject to change.
YOU CAN FIND MORE INFORMATION IN OUR CATALOGUE »AGRICULTURAL SPRAY NOZZLES AND ACCESSORIES« ...

Information is available for various applications in our catalogue.

All documents can be downloaded from our website at www.lechler.com. We would also be happy to send you the catalogue.

... AND IN OUR BROCHURES

Brochure “Spray Nozzles and Accessories for viticulture, orchard and speciality crops”

Brochure “Application of Liquid Fertilizer Recommendations Nozzles and Accessories”

Brochure “Cleaning Nozzles, Accessories and Application Information”

FULL INFORMATION IS JUST A CLICK AWAY: THE LECHLER WEBSITE

Our website contains further information on our products as well as useful resources. In addition to technical data, there is also a droplet-size/dosage calculator and nozzles recommendations for many crops to help you in your search for the adequate nozzle.

www.lechler-agri.com

Our general terms and conditions can be found at www.lechler-agri.com. We will also send them to you on request. The general safety instructions are also available at www.lechler-agri.com.