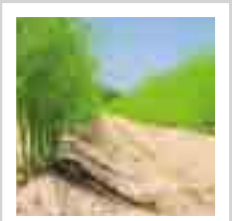
ENGINEERING
YOUR SPRAY SOLUTION

LECHLER

Agricultural Spray Nozzles and Accessories
Catalogue L 2018

AGRITECHNICA 2017 INNOVATION AWARD

ESV – Electrical Stop Valve











Agricultural Engineering

LECHLER AGRICULTURAL SPRAY NOZZLES – GOOD FOR YOUR CROP, GOOD FOR THE ENVIRONMENT

Lechler is a world leader in nozzle technology. For over 135 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.

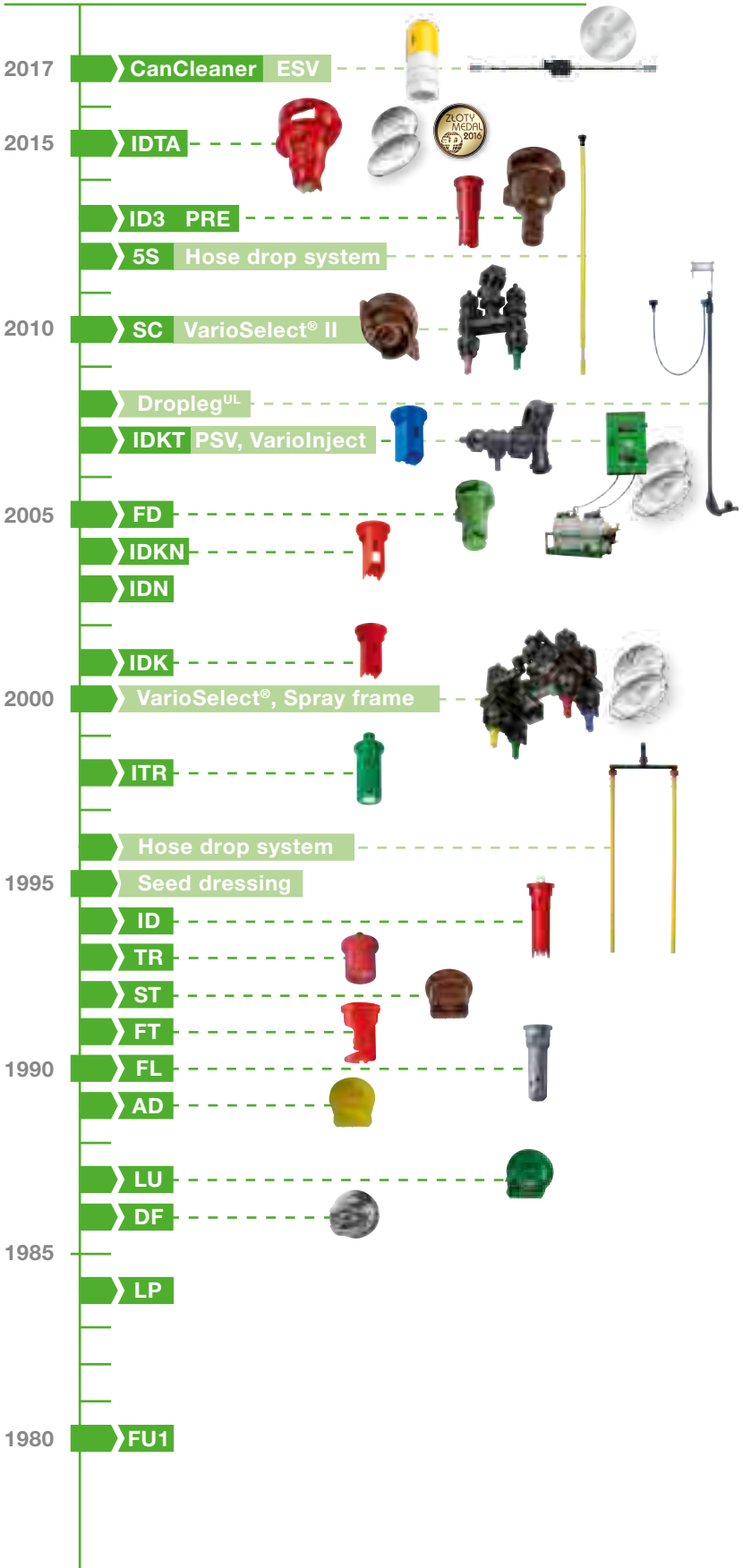
With Lechler nozzles, one spray jet is the same as the next. This demands a high level of precision and care in production. Our processes are therefore subject to permanent quality control measures, from the incoming goods department, through development and production right up to dispatch. Our quality management system is based primarily on the requirements of our customers and is certified in accordance with ISO 9001:2008. 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.

PROGRESS MEANS FURTHER DEVELOPMENT

Therefore success is not a final state for us, but simply a further step on the way to even greater perfection.



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THE RIGHT NOZZLE FOR EVERY APPLICATION



Crop production



Ground care



Container and tank cleaning



Product information



Accessories

Field crops
- Plant protection
- Liquid fertilizer

Wine and orchard
- Plant protection

Horticulture
- Plant protection
- Liquid fertilizer
- Irrigation

Golf courses/ sports grounds
- Plant protection
- Liquid fertilizer
- Irrigation

Traffic areas/ airports
- De-icing
- Dust suppression

Riding arena floors
- Sprinkling

Cleaning

Mixing

Rinsing

The right nozzle for every application – quick and easy.

The optimal accessory for greater efficiency in agriculture.

SPRAY NOZZLE TECHNOLOGY

① **Identification of Lechler nozzles and filters**

② **Flow rate**

③ **Density**

④ **Conversion factors for different densities**

⑤ **Coverage**

⑥ **Nozzle arrangement in the system**

Flat-jet nozzles

Hollow cone nozzles

⑦ **Calculation formula for field spraying**

⑧ **Calculation formula for applications for wine and orchard**

Use of nozzles with identical nozzle sizes

Use of nozzles with different nozzle sizes

⑨ **Recommendations**

Correct „filtering“

Avoiding nozzle blockages

Measuring the driving speed

Nozzles troubleshooting

A sprayer will deliver the desired product quantity per hectare only if it is correctly adjusted

⑩ **Nozzle wear**

⑪ **Thread table and pipe diameters**

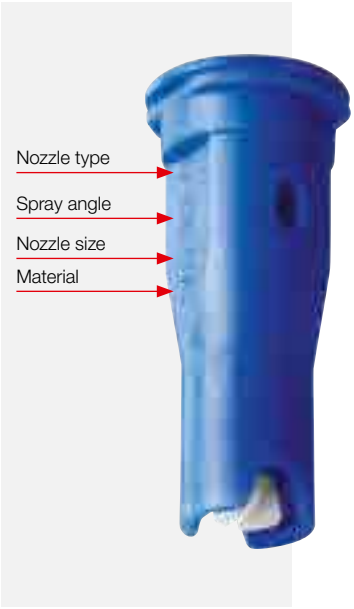
⑫ **Quality means being measured by results**

① Identification of Lechler nozzles and filters

The performance data of Lechler nozzles is specified in accordance with international standards and contains the following information:

- Nozzle type
- Spray angle
- Nozzle size

Lechler nozzles are color-coded in accordance with ISO 10625. Each nozzle corresponds to a defined volume flow. This information is also contained in the nozzle size, e.g. -03 stands for a volume flow of 0.3 US gallons at 40 PSI. The nozzle material is coded with the letters S (stainless steel) or C (Ceramic).



Color code for filters and strainers according to ISO standard 19732 since 2011

		ISO 19732	
Old color code Lechler	Old color code ARAG	New color code	Mesh
yellow		red	25
	white	red	32
	blue	blue	50
red		blue	60
	grey	yellow	80

Conversion table of old and new ISO color code

② Flow rate

The flow rate of a nozzle changes as a function of the spray pressure. Expressed in simplified terms, the flow rate (l/min) is doubled if the spray pressure (bar) is quadrupled.

The following formula applies:

$$\dot{V}_2 = \sqrt{\frac{p_2}{p_1}} \times \dot{V}_1 \text{ (l/min)}$$

③ Density

All table values for flow rate are based on water (density 1.0 kg/l).

In the case of liquids with a different density, the correction factors stated in the table must be taken into account.

④ Conversion factors for different densities

Density of sprayed liquid	0.84	0.96	1.00 Water	1.11 Urea	1.24 ASL	1.28 UAN (28) UAN +S	1.32 UAN (30)	1.38 NP-solu-tion	1.44	1.50
Conversion factor	1.09	1.02	1.00	0.95	0.90	0.88	0.87	0.85	0.83	0.81

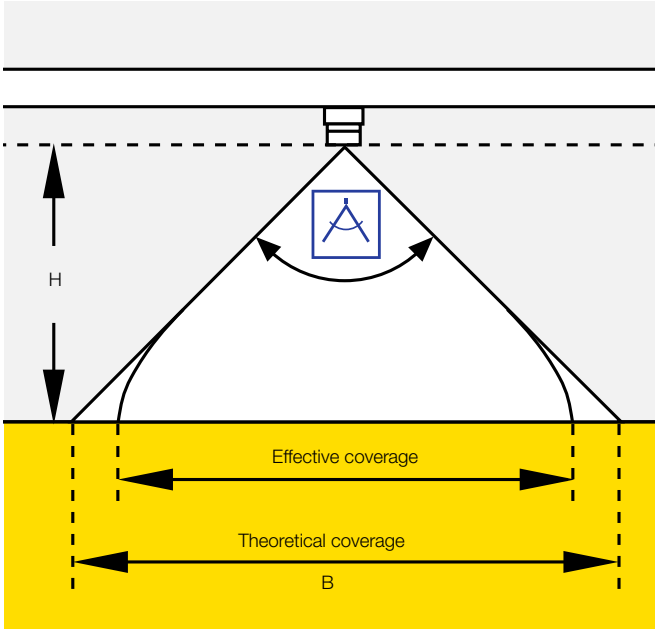
Converts as follows:

flow rate of water (see table)	x	**Conversion factor**	=	**Actual flow rate of medium**

⑤ Coverage

The theoretical coverage of a nozzle is essentially determined by the spray angle and spray height above the target.

Depending on nozzle type and nozzle size, the spray pressure can also influence the spray angle and distribution accuracy. Prerequisites for uniform liquid distribution in the spraying system are in compliance with the recommended spray pressure at the nozzle as well with the minimum spray height for a given nozzle spacing.



Due to the physically caused collapse of the jet, the effective coverage is less than the theoretical coverage stated below particularly with low pressures and large spray heights.

Spray angle	Theoretical coverage B for different spray heights H [cm]											
	10	15	20	25	30	40	50	60	70	80	100	120
20°	3.5	5.3	7.1	8.8	10.6	14.1	17.6	21.2	24.7	28.2	35.3	42.0
30°	5.4	8.0	10.7	13.4	16.1	21.4	26.8	32.2	37.5	42.9	53.6	64.0
45°	8.3	12.4	16.6	20.7	24.9	33.1	41.4	49.7	58.0	66.3	82.8	99.0
60°	11.6	17.3	23.1	28.9	34.6	46.2	57.7	69.3	80.8	92.4	115.0	(138.0*)
90°	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0	140.0	160.0	200.0	(240.0*)
120°	34.6	52.0	69.3	86.6	104.0	139.0	173.0	208.0	242.0	277.0	(346.0*)	(416.0*)
140°	55.0	82.4	110.0	137.0	165.0	220.0	275.0	(330.0*)	(385.0*)	(440*)	(550.0*)	(660.0*)

* Parentherized data: mayor difference between effective and theoretical coverage.

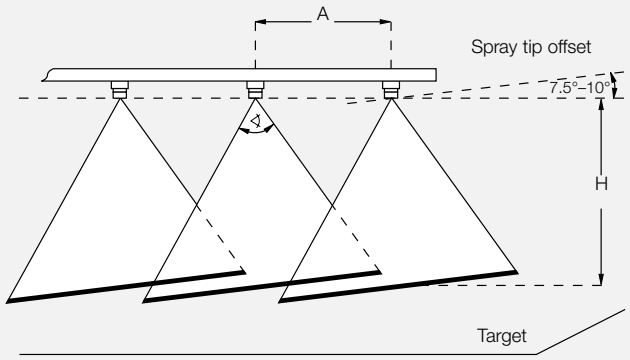
SPRAY NOZZLE TECHNOLOGY

⑥ Nozzle arrangement in the system

Flat-jet nozzles

In order to avoid mutual spray jet interference, the jet plane of flat spray nozzles is rotated by around 7.5° – 10° with respect to the pipe axis. This takes place automatically with Lechler diaphragm valves and Lechler assembly clips with TWISTLOC/Multijet bayonet cap.
The Lechler nozzle adjusting gauge (Order No. 065.231.02) is available for systems with screw/union nut fastening.

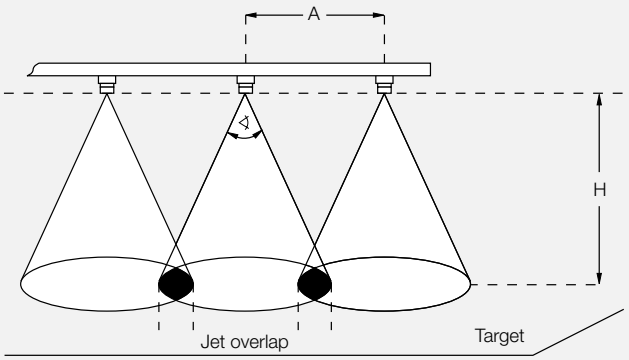
Arrangement of flat-jet nozzles



Hollow cone nozzles

Hollow cone nozzles must be arranged so that the jet cones just overlap immediately before the target surface.

Arrangement of hollow cone nozzles



Spray height H: min.-**optimal**-max. [cm] for different nozzle spacings A [m]

	Flat spray nozzles											Hollow cone	Stream jet
Type of jet Spray angle	**IDTA/ID3/IDKT AD/DF 120°**	**PRE 130°**	**IDK/IDKN 120°**	**ID/IDK/AD/ LU 90°**	**LU 120°**	**ST 110°**	**QS 80°**	**ST 80°**	**FD 130°**	**FT 90°**	**FT 140°**	**TR/ITR 80°**	**FL 160°**
A = 1.0 m	-	-	-	-	-	-	-	-	-	-	*75	-	-
A = 0.5 m	40-**50**-60	40-**50**-60	40-**50**-60**/90	60-**75**-90	40-**50**-70	40-**50**-60	60-**75**-90	60-**75**-90	50-70	60-75-90*	*40	-	100
A = 0.25 m	20-30	-	20-45	30-45	20-35	20-30	30-45	30-45	-	30-45*	-	50-**65**-80	-

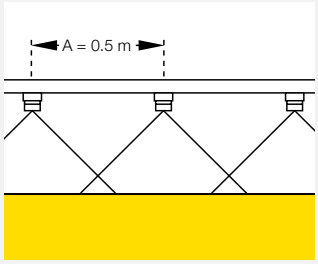
* In the case of flood nozzles, the spray height is also a function of orientation. Uniform cross distribution requires at least a single overlapping.
**IDK 120-06

⑦ Calculation formula for field spraying

Application parameters

The table values in the technical part of the catalog apply for field spraying booms with a lateral nozzle spacing of A = 0.5 m. The adjacent formula apply for other lateral nozzle spacings.

As a general rule:
of the four parameters driving speed (km/h), application rate (l/ha), flow rate (l/min) and nozzle spacing (m), three are normally known. The frequently unknown variables (l/ha; l/min) are also calculated using the adjacent formulae.



Liter per hectare rate, M (l/ha)

$$M = \frac{600 \times \dot{V}}{A \times v_F}$$

Flow rate/nozzle $\dot{V}$ (l/min)

$$\dot{V} = \frac{1}{600} \times M \times A \times v_F$$

Lateral nozzle spacing A (m)

Sprayer speed v_F (km/h)

Sample for calculation of flow rate per nozzle:

A = 1 m, v_F = 6 km/h,

M = 400 l/ha

$$\dot{V} = \frac{400 \times 1 \times 6}{600} = 4 \text{ l/min}$$

Band width B [m]
Lateral nozzle spacing or row spacing A [m]

$$\frac{B}{A} \times 100 = \text{treated (sprayed) area as a percentage of total gross covered area}$$

Example:

$$\frac{0.2}{0.5} \times 100 = 40\ \%$$

Calculation of the actual application rate for banding or row spraying is based on the ratio of the treated area to the area to be driven over. The application rate in l/ha corresponds to the percentage (e.g. 40 %) of the application rate for broadcast spraying.

⑧ Calculation formula for applications for wine and orchards

Use of nozzles with identical nozzle sizes

The total nozzle output of the crop protection equipment is calculated in accordance with the following formula:

$$\dot{V} = \frac{M \times V_F \times B}{600}$$

$\dot{V}$ = Total nozzle output, l/min

M = Liter-per-hectare rate, l/ha

v_F = Sprayer speed, km/h

B = Working width, m

The flow rate of the individual nozzles is calculated by dividing the total nozzle output by the number of working nozzles.

The nozzle size and pressure are determined from the flow rate on the basis of the tables (see pages 59-67).

The working width corresponds to the distance between the driving lanes, i.e. the row spacing if every driving lane is used. If only every second driving lane is used, the working width corresponds to double the row spacing.

Use of nozzles with different nozzle sizes

If nozzles with different sizes are used simultaneously in one sprayer, the nozzle size is first determined that would be obtained in the case of equipment with nozzles offering identical performance.

The number of nozzles of the next-smaller nozzle size is taken into account corresponding to the total number of nozzles.

In order to achieve the given liquid application rate (required value), the pressure must be increased in accordance with the adjacent formula.

$$\text{Pressure-setpoint} = \text{Pressure-actual value} \times \left[\frac{\text{Total nozzle output setpoint}}{\text{Total nozzle output actual value}}\right]^2$$

Example
At a sprayer speed of 6.5 km/h, 600 l/ha should be applied. The working width is 2.0 m. The total nozzle output is then:

$$\frac{600 \times 6.5 \times 2.0}{600} = 13.0 \text{ l/min}$$

If 10 nozzles of the same size are used, the flow rate of each nozzle is
13.0 : 10 = 1.3 l/min.
➔ nozzle/pressure as per Table see above:

ID 90-02/yellow at 8 bar

Instead of nozzle ID 90-02, the lower and two upper nozzles with the next smaller size

6 x ID 90-015/green should be fitted on both sides of the sprayer. The total nozzle output (actual value) is as follows at 8 bar (actual value) **(6 x 0.96 + 4 x 1.30) l/min = 10.96 l/min.**
The pressure setpoint to be set for 600 l/ha (setpoint) is then:

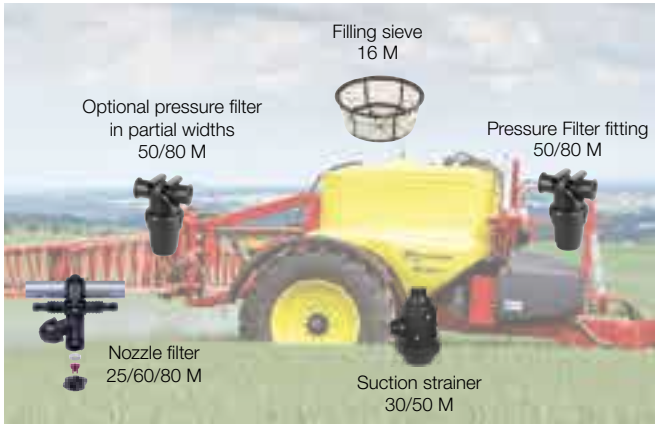
$$8 \times \left[\frac{13.0}{11.0}\right]^2 = 11.2 \text{ bar}$$

SPRAY NOZZLE TECHNOLOGY

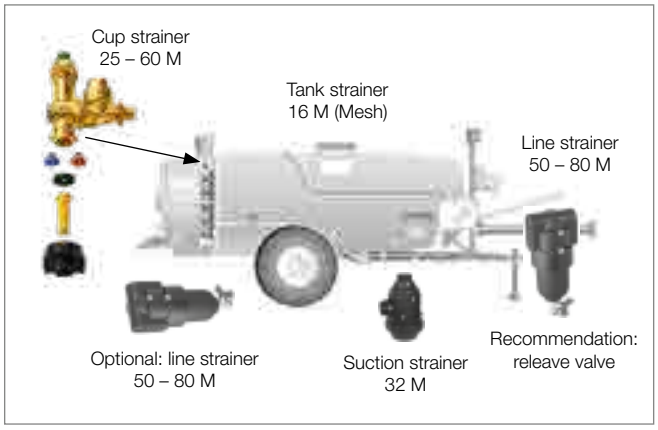
⑨ Recommendations

Correct „filtering“

Malfunctions during operation caused by coarse particles can be prevented by use of the correct filter system. In order to protect the nozzle filter, we recommend selecting a mesh filter in the pressure filter which is one category finer. The recommendations for the mesh size (M) of the nozzle filter/cup strainer are provided in the spray tables according to nozzle size.



Scheme of selecting the mesh size using the example of a field sprayer



Scheme for selecting the mesh of the filter using the example of a sprayer for wine and orchard

Avoiding nozzle blockages

Properly functioning equipment is a prerequisite for successful crop protection. Clogged nozzles are annoying because cleaning takes up valuable time. And this also does not take into account the possible consequences of incorrect spray application.

Such problems can be easily avoided by suitable measures as well as knowledge of the products and water quality:

- Observe the specified order when producing the spray mixture
- Always add only one product at a time
- Allow sufficient time to dissolve
- The mixer must guarantee good and homogeneous mixing of the plant protection product
- Match the filter in the equipment to the nozzle size
- Clean after use, e.g. with continuous internal cleaning
- Pay attention to water quality in relation to solubility of plant protection products

Measuring the driving speed

60 sec. = 6.0 km/h
45 sec. = 8.0 km/h
36 sec. = 10.0 km/h



Example

$$\frac{\text{100 m x 3.6}}{\text{45 sec.}} = \text{8.0 km/h}$$

Nozzles troubleshooting

Nozzle clogging	cleaning
Damaged nozzle	changing
Nozzle worn out	changing
Wrong nozzle (Type/size)	changing
Filterclogging	cleaning
Diaphragm valve defective	changing

A sprayer will deliver the desired product quantity per hectare only if it is correctly adjusted.

The easiest method for checking this yourself is measurement of the individual nozzle output.
A nozzle is considered to be worn if the individual nozzle output is 10 % above the table value of nozzles of same size. The pressure range and pressure drop must be taken into account.



Even with flow-controlled devices, a water capacity test is necessary.
Source: Bildungswerkstatt Mold, Pichler Herbert

⑩ Nozzle wear

- Nozzles become worn even if used properly and thus have a limited service life.
- Wear is determined by factors such as spray pressure, abrasiveness of the spray fluid and the nozzle material.
- Damage to the nozzle tip due to incorrect cleaning or handling must be avoided under all circumstances.
- A simple way of determining the wear of nozzle tips is to gauge the flow rate using a measuring jug, stop watch and pressure gauge on the nozzle line. The flow rates of used nozzles are compared with the flow rates of new nozzles of the same size.
- The nozzles must be replaced if the flow rates of nozzle that are in use exceed the value of spray table by more than 10 %.

All table values in this catalog specify the flow rates of new nozzles. In addition, equipment testing on a nozzle test bench also provides information about the nozzle condition in relation to cross distribution, whereby the quality of cross distribution and the change in volume flow may be interdependent with respect to the calculated coefficient of variation.

The wear resistance of the nozzle material increases in the following order:

- Brass
- Stainless steel
- Plastic
- Ceramic

SPRAY NOZZLE TECHNOLOGY

⑪ Thread table and pipe diameters

Compatibility of pipe threads			Female thread			
			DIN EN 10226		ISO 228	NPT
			Rc	Rp	G	
Male thread	DIN EN 10226	R	x	x	x*	-
	ISO 228	G	-	-	x	-
	NPT		-	-	-	x

* Leckage possible!
x = compatible
- = not compatible

Taper thread: R, Rc, NPT
Parallel thread: RP, G

Code for pipe diameters:

20 mm	21 mm
1/2“	21 mm
25 mm	25 mm
3/4“	27 mm
1“	34 mm

⑫ Quality means being measured by results



Approved Lechler nozzles for field spraying as well as for bush, tree and specialty crop applications always reliably meet the requirements of the Julius Kühn Institute JKI and other international standards. All prerequisites in the sense of the German Plant Protection Act and European legislation as well as ISO 16119 (Environmental requirements for sprayers) and ISO 16122 (Inspection of sprayers in use) are therefore met.

ENGINEERING
YOUR SPRAY SOLUTION

Crop production



LECHLER NOZZLES FOR THE CROP PRODUCTION

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.

AMTLICH GEPRÜFT JKI Julius Kühn-Institut Bundesforschungsinstitut für Kulturpflanzen UND ANERKANNT

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.

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

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).



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.

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

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

Drift-reducing technology

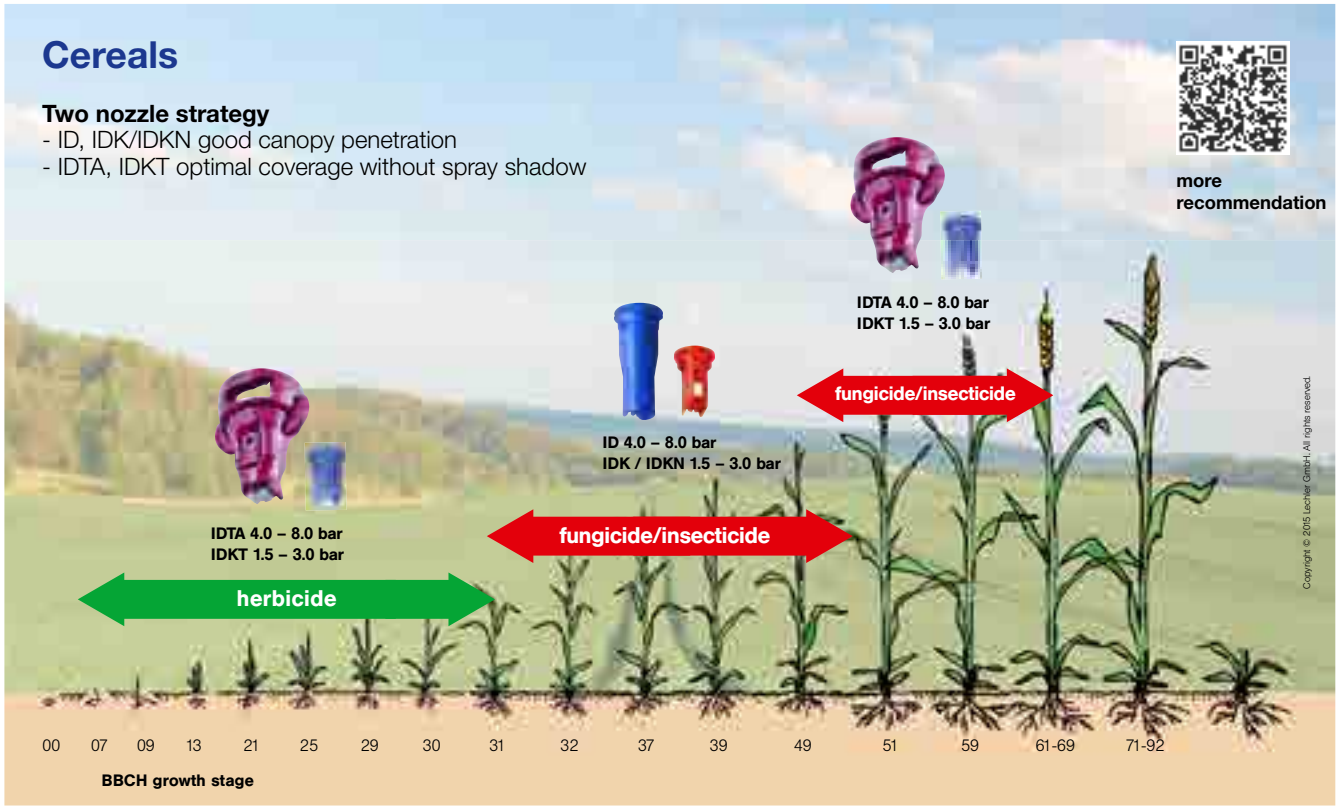
Application regulations for plant protection products, e.g. distance restrictions to water and field boundary structures, have been defined in order to protect non-target organisms. Depending on the toxicity of the plant protection product, the distances from water and field boundaries can be reduced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

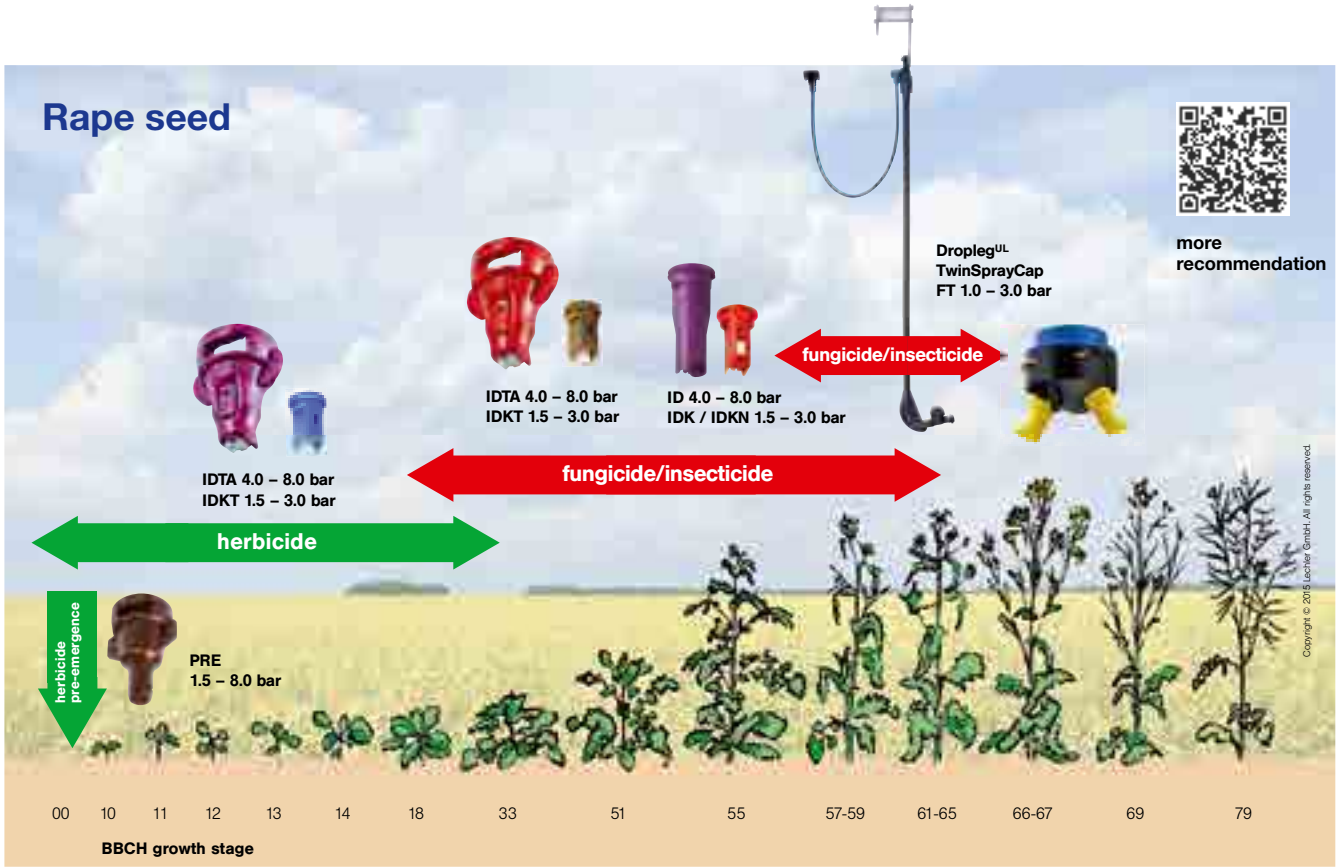
Lechler nozzles are officially approved in Germany, Austria, England, Finland, France, the Netherlands, Belgium and Sweden as drift-reducing devices in the drift reduction classes 99/95/90/75/66/50 and 25 %. The criteria on which the distance regulations are based in the individual countries comprise, 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.

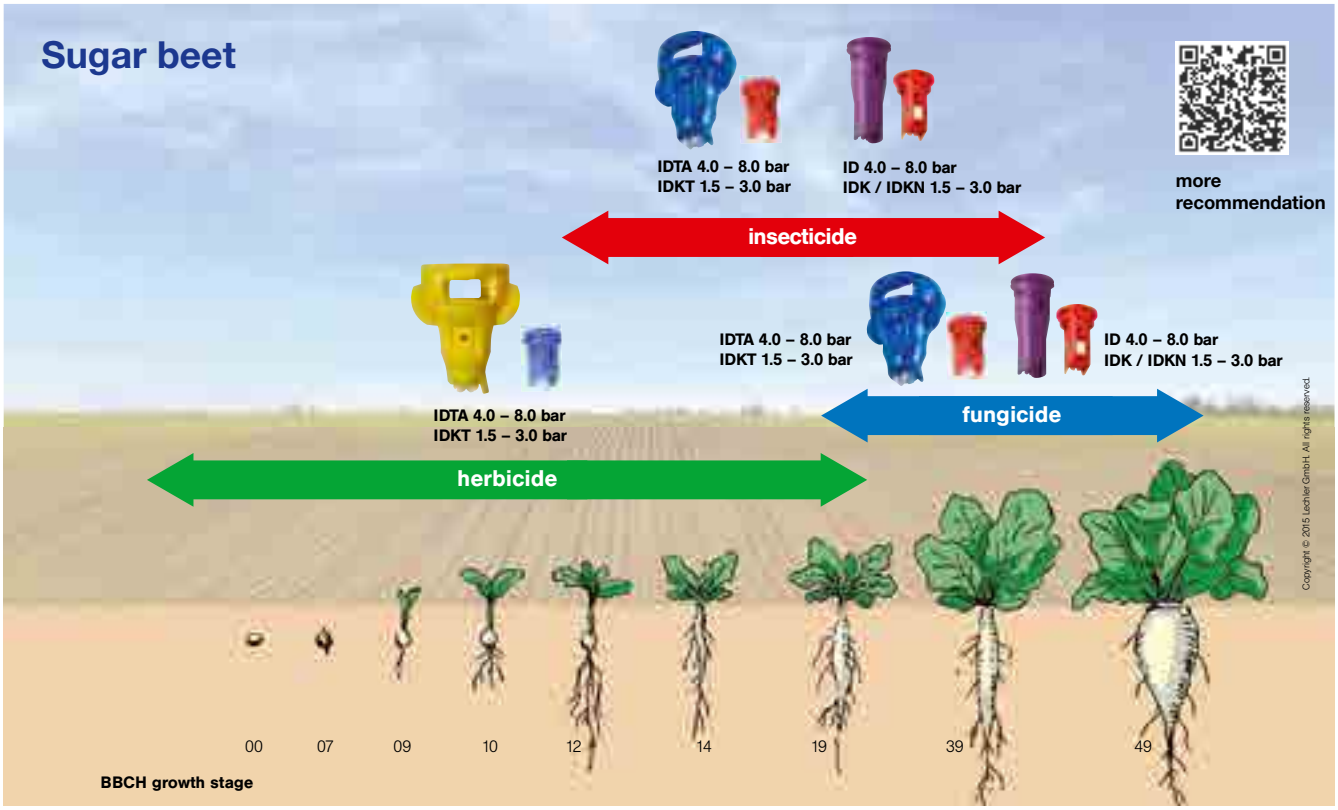
Drift-reducing Lechler nozzles allow areas to be used more efficiently while at the same time protecting field boundaries and water.

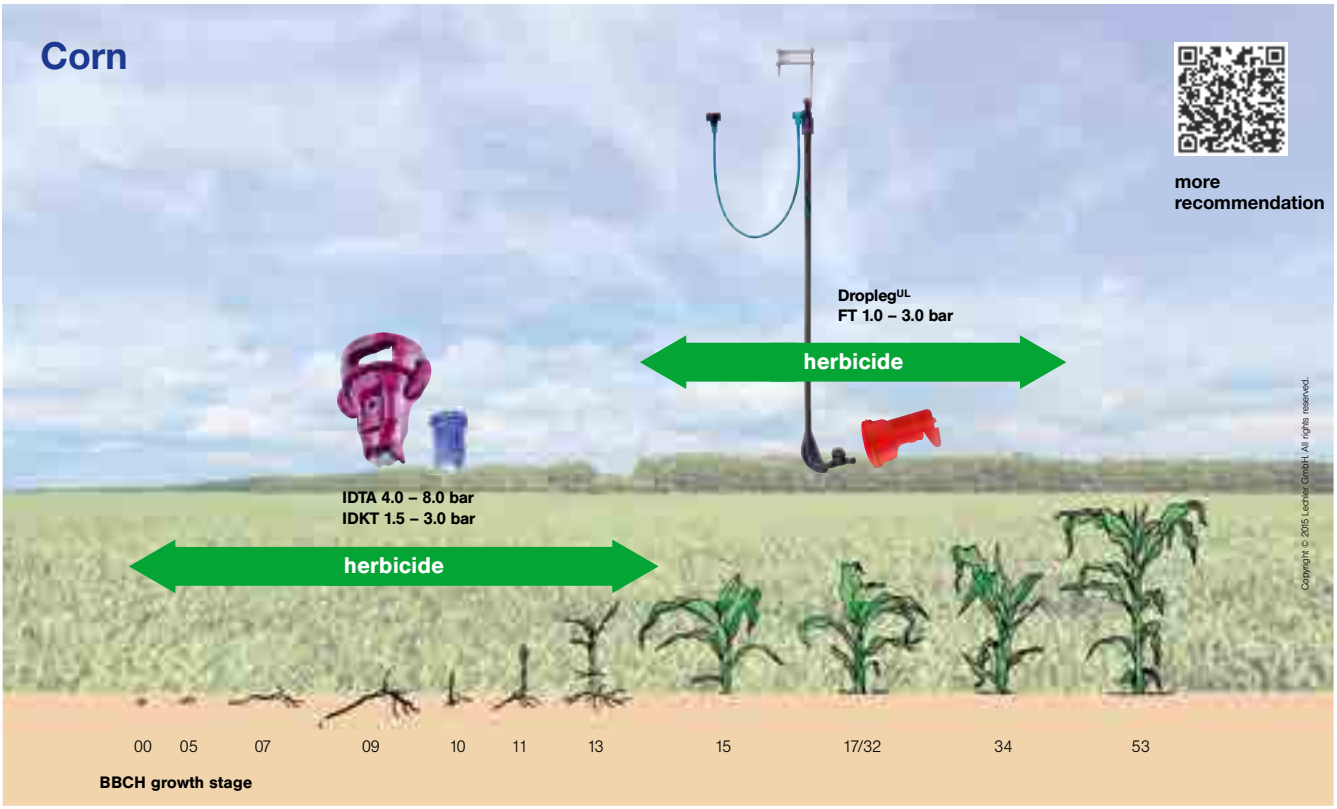


NOZZLE RECOMMENDATION FOR PESTICIDE APPLICATION






Sugar beet
IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar
ID 4.0 – 8.0 bar
IDK / IDKN 1.5 – 3.0 bar
more
recommendation
insecticide
IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar
IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar
ID 4.0 – 8.0 bar
IDK / IDKN 1.5 – 3.0 bar
fungicide
herbicide
00 07 09 10 12 14 19 39 49
BBCH growth stage
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Corn
more
recommendation
Dropleg^UL
FT 1.0 – 3.0 bar
herbicide
IDTA 4.0 – 8.0 bar
IDKT 1.5 – 3.0 bar
herbicide
00 05 07 09 10 11 13 15 17/32 34 53
BBCH growth stage
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LECHLER NOZZLES FOR THE CROP PRODUCTION

	ID3	IDK/ IDKN	IDTA	IDKT	PRE	AD	QS 80	LU	ST/SC	DF
										
Spray geometry										
Drift reduction	+ +	+	+ +	+	+ + +	o	o / –	o / –	–	– –
Seite	**34**	**36**	**48**	**50**	**38**	**40**	**44**	**42**	**46**	**52**

Broadcast spraying

Recommended pressure range (bar)		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	**2-3**-5
Herbicides	soil incorporated	●●	●●	●●	●●	●●	●●	●●	●●	●	-
	pre-emerge	●●	●●	●●	●●	●●	●●	●●	●●	●	-
	post-emerge (systemic)	●●	●●	●●	●●	-	●●	●●	●●	●	○
	post-emerge (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)	○ (1.5-2.0)	○ (1.5-2.0)	○ (2)	-
Growth regulators		●●	●●	●	●	-	●●	●	●	●	○
Irrigation (via boom)		●●	●●	●●	●●	●●	●●	●	●	●	-

Banding/row spraying – arable crops and speciality crops

Recommended pressure range (bar)		-	-	-	-	-	-	-	-	-	-
Herbicides	soil incorporated	-	-	-	-	-	-	-	-	-	-
	pre-emerge	-	-	-	-	-	-	-	-	-	-
	post-emerge (systemic)	-	-	-	-	-	-	-	-	-	-
	post-emerge (contact)	-	-	-	-	-	-	-	-	-	-
Fungicides	Contact	-	-	-	-	-	-	-	-	-	-
	Systemic	-	-	-	-	-	-	-	-	-	-
Insecticides	Contact	-	-	-	-	-	-	-	-	-	-
	Systemic	-	-	-	-	-	-	-	-	-	-
Liquid fertilizer		-	-	-	-	-	-	-	-	-	-
Growth regulators		-	-	-	-	-	-	-	-	-	-
Irrigation (via boom)		-	-	-	-	-	-	-	-	-	-

Orchards, vineyards and speciality crops

Recommended pressure range (bar)		-	-	-	-	-	-	-	-	5-**10-30**	-
Fungicides	Contact	-	-	-	-	-	-	-	-	●●	-
	Systemic	-	-	-	-	-	-	-	-	●●	-
Insecticides	Contact	-	-	-	-	-	-	-	-	●●	-
	Systemic	-	-	-	-	-	-	-	-	●●	-
Growth regulators		-	-	-	-	-	-	-	-	●●	-

Heed label of chemical company

Nozzle size: * ID3-01/-015 ** IDK-04/-05/-06 *** IDKT-03/-04/-05/-06 IDKN-03/-04

FT 90 (FT 140)	TR	ITR	FD	FL	IS	IDKS	BN	OC	E	ID 90	IDK 90	AD 90
												
												
+ (–)	– –	+	+ + +	+ + +	+ +	+	–	–	–	+ +	+	o
56	64	66	68	70	76	78	80	82	86	58	60	62

1-3-6 (**1-2**-3)	**3-8**	3-**5-10**	**1.5-4**	**1-5**	2-**4-8**	1****/**1.5-3**-6	-	**1.5-2.5**-5	-	2/3*-**4-8**	1**-/**1.5-3**-6	**1.5-3**-6
●●	○	●●	-	-	●●	●●	-	●●	-	●●	●●	●●
●●	○	○	-	-	●●	●●	-	●●	-	●●	●●	●●
●	○	○	-	-	●●	●●	-	●●	-	●●	●●	●●
●	●●	-	-	-	●	●	-	●●	-	●	●	●
●	●●	○	-	-	●	●	-	●●	-	●	●	●
●	●	●	-	-	●●	●●	-	●●	-	●●	●●	●●
●	●●	○	-	-	●	●	-	●●	-	●	●	●
●	●	●	-	-	●●	●●	-	●●	-	●●	●●	●●
● (1-2)	-	●● (3-5)	●●	●●	●● (2.0-4.0)	●● (1***/1.5-2.5)	-	○ (1.5-2.0)	-	●● (2-4)	●● (1**/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	-	-	-
-	○	-	-	-	●●	●●	●●	●●	●●	-	-	-
-	○	-	-	-	●●	●●	●●	●●	●●	-	-	-
-	○	-	-	-	●●	●●	●●	●●	●●	-	-	-
-	●●	-	-	-	●	●	●●	●●	●●	-	-	-
-	●●	-	-	-	●	●	●●	●●	●●	-	-	-
-	●	-	-	-	●●	●●	●●	●●	●●	-	-	-
-	●●	-	-	-	●	●	●●	●●	●●	-	-	-
-	●	-	-	-	●●	●●	●●	●●	●●	-	-	-
-	-	-	-	-	●● (2.0-4.0)	●● (1***/1.5-2.5)	○ (1-2)	○ (1.5-2.0)	○ (1-2)	-	-	-
-	○	-	-	-	●●	●●	●●	●●	●	-	-	-
-	-	-	-	-	●●	●●	●●	●	●	-	-	-

-	3-**8-20**	**10-30**	-	-	2-**8-15**	1****-/1.5-**8-15**	-	-	-	3-**8-15**-20	2-**8-15**-20	2-**8-15**-20
-	●●	●	-	-	●●	●●	-	-	-	●●	●●	●●
-	●●	●●	-	-	●●	●●	-	-	-	●●	●●	●●
-	●●	●	-	-	●●	●●	-	-	-	●●	●●	●●
-	●●	●●	-	-	●●	●●	-	-	-	●●	●●	●●
-	●●	●	-	-	●●	●●	-	-	-	●●	●●	●●

Nozzle size: **** IDKS-03/-04/-05/-06

– – = not drift reducing – = less drift reducing o = drift reducing + = very drift reducing + + = extremely drift reducing + + + = most drift reducing

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

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YOUR SPRAY SOLUTION

Ground care



LECHLER NOZZLES FOR GROUND CARE

Ground care includes all municipal green areas (e.g. parks), traffic areas (e.g. railroad tracks, airports, roads), golf courses, sports grounds and riding arenas. The applications are therefore very different and varied.

They extend from weed and pest control through to dust suppression and surface de-icing. The equipment used covers a wide range from simple backpack sprayer through to high-tech systems for airport de-icing.

In view of the large spray quantities in some cases, the factors of efficiency, durability and cost control are extremely important particularly for ground care applications.

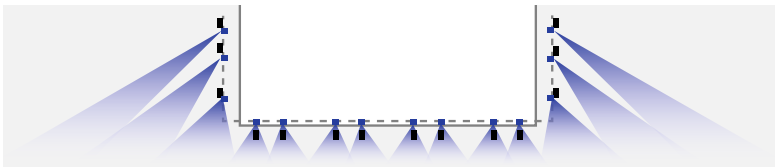
With our wide, solution-oriented product range, we ensure that the best-suited nozzle is available for every task.

Example applications



Low-drift application on golf courses with air-injector flat spray nozzles ID, IDK, IDTA and IDKT.





Spray train for weed control on railroad tracks equipped with low-drift ID nozzles in the middle section and narrow-jet flood or off center nozzles at the sides





Low-drift nozzles such as IDK nozzles provide optimum protection for users when carrying out pest control measures on trees and bushes.



Dust binding on traffic areas with ID and FD nozzles
Source: RAW Handel und Beratungs GmbH



De-icing of traffic areas (e.g. airports, roads) with saline solution is an effective and economical process. Here, low-drift ID nozzles are used in combination with VarioSelect® for variable nozzle control in order to maintain a constant application quantity at changing driving speeds.



Riding arena watering. A total of 3 nozzle rows equipped with the ID air-injector nozzle ensure an optimally watered arena floor in combination with a rake, tilling roller and smoothing attachment.



LECHLER NOZZLES FOR GROUND CARE

		ID3	IDK/ IDKN	IDTA	IDKT	PRE	AD	QS 80	LU	ST/SC
										
Spray geometry										
Drift reduction		+ +	+	+ +	+	+ + +	o	o / –	o / –	–
Page		**34**	**36**	**48**	**50**	**38**	**40**	**44**	**42**	**46**
Recommended pressure range (bar)		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
Herbicides	soil incorporated	●●	●●	●●	●●	●●	●●	●●	●●	●
	pre-emerge	●●	●●	●●	●●	●●	●●	●●	●●	●
	post-emerge (systemic)	●●	●●	●●	●●	-	●●	●●	●●	●
	post-emerge (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)	○ (1.5-2.0)	○ (1.5-2.0)	○ (2)
Growth regulators		●●	●●	●	○	-	●●	●	●	●
Irrigation (via boom)		●●	●●	●●	●●	●●	●●	●	●	●

Heed label of chemical company

Nozzle size: * ID3-01/-015 ** IDK-04/-05/-06 *** IDKT-03/-04/-05/-06
IDKN-03/-04

DF	FT 90 (FT 140)	TR	ITR	FD	FL	IS	IDKS	BN	OC	E	OC
											
											
– –	+ (–)	– –	+	+ + +	+ + +	+ +	+	–	–	–	–
52	**56**	**64**	**66**	**68**	**70**	**76**	**78**	**80**	**82**	**86**	**84**
2-3-5	**1-3**-6 (**1-2**-3)	**3-8**	3-**5-10**	**1.5-4**	**1-5**	2-**4-8**	1****/**1.5-3**-6	1-2-**4-6**	**1.5-2.5**-5	**1-3**-4	**2-5**
-	●●	○	●●	-	-	●●	●●	●●	●●	●●	●
-	●●	○	○	-	-	●●	●●	●●	●●	●●	●
○	●	○	○	-	-	●●	●●	●●	●●	●●	●
●●	●	●●	-	-	-	●	●	●●	●●	●●	●
●●	●	●●	○	-	-	●	●	●●	●●	●●	●
●	●	●	●	-	-	●●	●●	●●	●●	●●	●
●●	●	●●	○	-	-	●	●	●●	●●	●●	●
●	●	●	●	-	-	●●	●●	●●	●●	●●	●
-	● (1-2)	-	●● (3-5)	●●	●● (1-5)	●● (2.0-4.0)	●● (1****/1.5-2.5)	○ (1-2)	○ (1.5-2.0)	○ (1-2)	○ (2)
○	●	●	○	-	-	●●	●●	●●	●●	●	●
-	-	-	●	●●	●	●●	●●	●●	●	●	●●

Nozzle size: **** IDKS-03/-04/-05/-06

– – = not drift reducing – = less drift reducing o = drift reducing + = very drift reducing + + = extremely drift reducing + + + = most drift reducing

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

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Container and tank cleaning



LECHLER NOZZLES FOR CONTAINER AND TANK CLEANING

When it comes to tank and container cleaning, efficiency has the highest priority. Cleaning has to take place quickly and thoroughly to ensure that no residues are left.
The Lechler nozzle range offers innovative nozzle technologies as well as a large selection of sizes and materials for cleaning and flushing containers, tanks and induction hoppers as well as for homogenization of tank contents.

The scope of our portfolio is unique on the market and offers the perfect solution for every application. Application fields include plant protection, animal husbandry (feeding, milk industry) and wineries.



Nozzle selection

The choice of the right Lechler rotating cleaning nozzle or a suitable static spray ball is determined primarily by the type of dirt to be cleaned and the tank diameter.

Rinsing is often sufficient in the case of non-adhering substances. Static spray balls meet these requirements. However, the higher the level of soiling and the more stubborn the dirt, the more important the jet force of the nozzle. In such cases, cleaning with rotating cleaning nozzles is recommended.
It must be ensured that the diameter of the tank to be cleaned is smaller than the maximum possible tank diameter specified for the nozzle.

	Injector agitator nozzles	„WallCleaner“	Static spray ball 540/541	„MicroWhirly“ 500 and 566	„ContiCleaner“	„MiniWhirly“ 500.186	„CanCleaner“	„MiniSpinner“ 5MI
								
Spray geometry								
Page	**88**	**89**	**94**	**95**	**95**	**96**	**96**	**97**
Rinsing of container and tank	●●	-	●●	●●	●●	●	-	●●
Rinsing inside of induction hopper	-	●●	●	●●	○	●	●	-
Rinsing of canister	-	-	●	●	-	●	●●	-
Continuous internal cleaning	-	-	-	●	●●	●	-	-
Function and max. rinsable diameter	Mixing of liquids	Rinsing of products and side walls cleaning	Rinse up to max. 6 m	Rinse up to max. 1,6 m	Rinse up to max. 1,6 m	Rinse up to max. 1,3 m	Rinse up to max. 1,3 m	Rinse up to max. 2,6 m
Features	efficient mixing	Rinsing up to under the edge	high operating reliability	Easy start-up thanks to slide bearing	reliable start-up at low pressure	ball bearing-mounted	increased flow rate towards canister bottom	efficient rinsing of big tanks

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

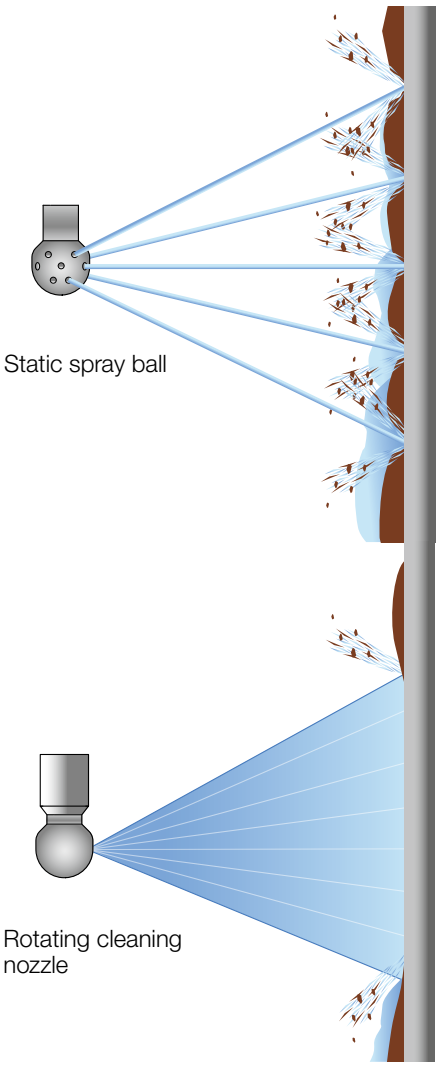
Nozzles for cleaning and rinsing

Static

Static spray balls do not rotate and therefore require considerably higher liquid quantities. They are used primarily for rinsing tanks. They are inexpensive to purchase and are very robust (trouble-free).

Free-spinning

The cleaning fluid drives the spray head by means of specially aligned nozzles.
The rapidly repeated impacts detach the dirt and rinse it from the tank surface. This results in optimum cleaning efficiency at low pressures in small to medium-sized tanks.



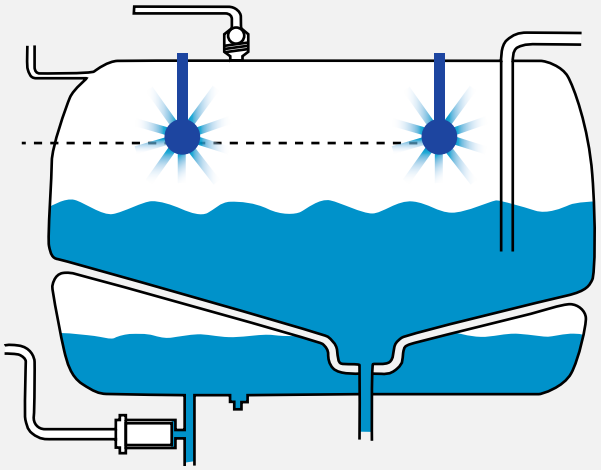
Static spray ball

Rotating cleaning nozzle

Nozzle positioning

The nozzles must be positioned in the upper part of the tank where possible. It must be ensured that sufficient cleaning fluid reaches the tank ceiling.

When cleaning large tanks, it is essential to install several nozzles. The nozzles should then be positioned so that their spray jets overlap. The spray jet can then reach almost every surface to be cleaned.



LECHLER NOZZLES FOR CONTAINER AND TANK CLEANING

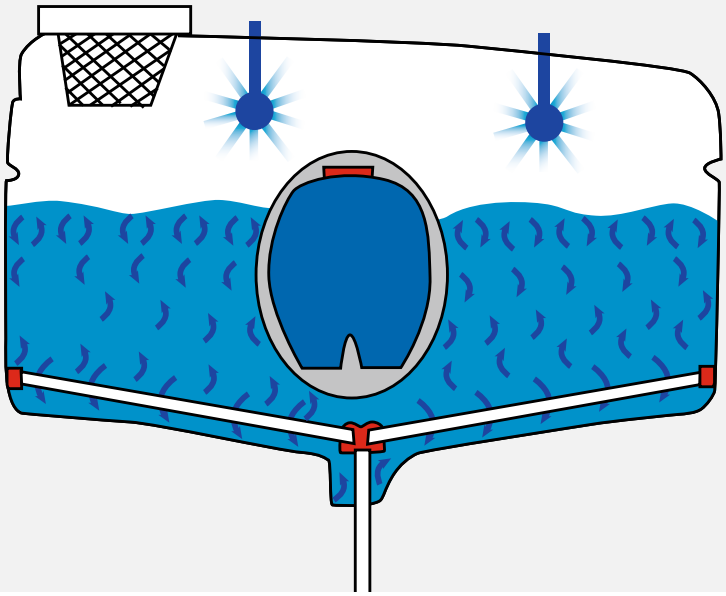


Avoidance of spray shadows

Baffles, agitators or lines prevent the spots behind them from being impacted directly by the spray jet of the tank cleaning nozzle. Cleaning by direct impact is not possible in these spots.

For this reason, several nozzles must be used in tanks and containers with built-in equipment.

The number of nozzles should be chosen so that the spray shadows of the individual nozzles are eliminated.



Nozzles for continuous internal cleaning

In the case of continuous internal cleaning, the nozzles are selected according to the working width of the field spray boom (number of nozzles). For an efficient cleaning, the volume flow of the cleaning nozzles should be max. 90% of the total nozzle output (all nozzles – full working width).
A boom sprayer with 15 m working width and 30 nozzles IDKN 120-03 has a total nozzle output of 29,1 l/min at 2 bar cleaning pressure. The nozzles for the continuous internal cleaning need an output of max. 26,2 l/min. This ensures that there remain no spray residues in the tank. The last remaining spray mixture is applied in the field via the nozzles.
The number of cleaning nozzles needed, depends on the shape of the tank and on fittings such as, for example, baffles in the tank. It is important that all corners are cleaned and that there are no dead angles. The “ContiCleaner” has been designed especially for this application. It runs easily with reduced volume flow even at low pressure. For larger working widths, depending on the total nozzle output, the “MicroWhirly” or the “MiniWhirly” can also be used for continuous internal cleaning.



Nozzles for agitation and homogenization

After the plant protection product is flushed into the tank of the sprayer, Lechler injector agitator nozzles ensure fast and homogeneous mixing of the spray mixture. The injector effect of the nozzle reinforces the turbulence of the solid jet. As a result, a large volume in the tank can be circulated in a short time with a low flow rate.

Several injector agitator nozzles with a lower volume flow produce a more intensive agitation effect than a single, large agitator nozzle. In particular, corners and suction sumps are reached more effectively.
Dead zones are avoided.



The agitator is located centrally in the fluid tank

Nozzles for induction hoppers

Lechler offers special, user-friendly nozzle technology for induction hoppers. This leads to improved user protection and effectively prevents residues. The induction hopper nozzles clean the wall surfaces of the induction hopper completely up to under the edge.

As a result of the rotating liquid flow, premixing already takes place during induction and therefore ensures lump-free induction of powder plant protection products by the rotating liquid flow.



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Product information



Air-Injector flat spray nozzles ID3

ID3

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

Advantages

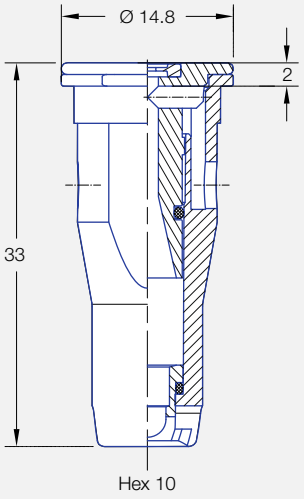
- Up to 90% drift reduction depending on nozzle size, pressure and country
- Long injector design ensures high drift stability over a wide pressure range
- Timely application even under adverse weather conditions
- Increased workrate due to flexible use over a wide pressure range
  - Adaptation by changing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

AMTLICH GEPRÜFT JKI Julius Kühn-Institut UND ANERKANNT

G 1965
G 1966
G 1968
G 1969
G 1970
G 1971
G 1972
G 1973
G 1974



ID3 ID3-C



Crop production | Ground care

Nozzle size
01 – 08

Spray angle
120°

Material
POM, ceramic

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

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

Droplet size
Extreme coarse – medium

Width across flats
10 mm

Application areas

Plant protection products and growth regulators

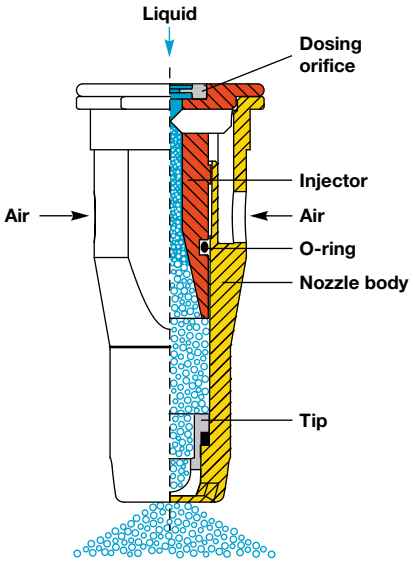
Liquid fertilizer (AHL UAN)

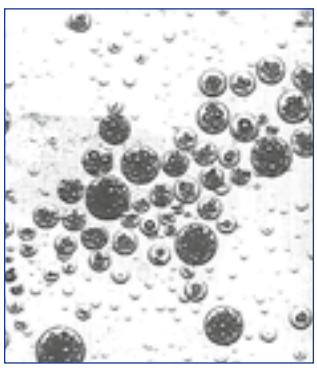
Border application can be combined with border nozzle IS 80 (see page 76)

Golf course



Toolless removable injector





Aeration effect

Spray table for air-injector flat spray nozzles ID3

	BCPC	3 bar	l/min	l/ha (0.5 m) 5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
ID-120-01 (80 M)	VC	3.0	0.39	94	78	67	59	47	39	33	29	26
	C	4.0	0.45	108	90	77	68	54	45	39	34	30
	C	5.0	0.51	122	102	87	77	61	51	44	38	34
	C	6.0	0.55	132	110	94	83	66	55	47	41	37
	M	7.0	0.60	144	120	103	90	72	60	51	45	40
	M	8.0	0.64	154	128	110	96	77	64	55	48	43
ID-120-015 (60 M)	VC	3.0	0.59	142	118	101	89	71	59	51	44	39
	C	4.0	0.68	163	136	117	102	82	68	58	51	45
	C	5.0	0.76	182	152	130	114	91	76	65	57	51
	C	6.0	0.83	199	166	142	125	100	83	71	62	55
	M	7.0	0.90	216	180	154	135	108	90	77	68	60
	M	8.0	0.96	230	192	165	144	115	96	82	72	64
ID-120-02 (60 M)	EC	2.0	0.65	156	130	111	98	78	65	56	49	43
	VC	3.0	0.80	192	160	137	120	96	80	69	60	53
	C	4.0	0.92	221	184	158	138	110	92	79	69	61
	C	5.0	1.03	247	206	177	155	124	103	88	77	69
	C	6.0	1.13	271	226	194	170	136	113	97	85	75
	M	7.0	1.22	293	244	209	183	146	122	105	92	81
	M	8.0	1.30	312	260	223	195	156	130	111	98	87
ID-120-025 (60 M)	EC	2.0	0.81	194	162	139	122	97	81	69	61	54
	VC	3.0	0.99	238	198	170	149	119	99	85	74	66
	C	4.0	1.15	276	230	197	173	138	115	99	86	77
	C	5.0	1.28	307	256	219	192	154	128	110	96	85
	C	6.0	1.40	336	280	240	210	168	140	120	105	93
	M	7.0	1.52	365	304	261	228	182	152	130	114	101
	M	8.0	1.62	389	324	278	243	194	162	139	122	108
ID-120-03 (60 M)	EC	2.0	0.97	233	194	166	146	116	97	83	73	65
	VC	3.0	1.19	286	238	204	179	143	119	102	89	79
	C	4.0	1.37	329	274	235	206	164	137	117	103	91
	C	5.0	1.53	367	306	262	230	184	153	131	115	102
	M	6.0	1.68	403	336	288	252	202	168	144	126	112
	M	7.0	1.81	434	362	310	272	217	181	155	136	121
	M	8.0	1.94	466	388	333	291	233	194	166	146	129
ID-120-04 (60 M)	EC	2.0	1.29	310	258	221	194	155	129	111	97	86
	VC	3.0	1.58	379	316	271	237	190	158	135	119	105
	C	4.0	1.82	437	364	312	273	218	182	156	137	121
	C	5.0	2.04	490	408	350	306	245	204	175	153	136
	M	6.0	2.23	535	446	382	335	268	223	191	167	149
	M	7.0	2.41	578	482	413	362	289	241	207	181	161
	M	8.0	2.58	619	516	442	387	310	258	221	194	172
ID-120-05 (25 M)	EC	2.0	1.61	386	322	276	242	193	161	138	121	107
	VC	3.0	1.97	473	394	338	296	236	197	169	148	131
	C	4.0	2.28	547	456	391	342	274	228	195	171	152
	C	5.0	2.55	612	510	437	383	306	255	219	191	170
	C	6.0	2.79	670	558	478	419	335	279	239	209	186
	M	7.0	3.01	722	602	516	452	361	301	258	226	201
	M	8.0	3.22	773	644	552	483	386	322	276	242	215
ID-120-06 (25 M)	EC	2.0	1.93	463	386	331	290	232	193	165	145	129
	EC	3.0	2.36	566	472	405	354	283	236	202	177	157
	VC	4.0	2.73	655	546	468	410	328	273	234	205	182
	VC	5.0	3.05	732	610	523	458	366	305	261	229	203
	C	6.0	3.34	802	668	573	501	401	334	286	251	223
	C	7.0	3.61	866	722	619	542	433	361	309	271	241
	C	8.0	3.86	926	772	662	579	463	386	331	290	257
ID-120-08 (25 M)	EC	2.0	2.58	619	516	442	387	310	258	221	194	172
	EC	3.0	3.16	758	632	542	474	379	316	271	237	211
	VC	4.0	3.65	876	730	626	548	438	365	313	274	243
	VC	5.0	4.08	979	816	699	612	490	408	350	306	272
	VC	6.0	4.47	1073	894	766	671	536	447	383	335	298
	C	7.0	4.83	1159	966	828	725	580	483	414	362	322
	C	8.0	5.16	1238	1032	885	774	619	516	442	387	344

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	= order number
ID3	120°	025	(POM)	= ID-120-025
ID3	120°	025	C (ceramic)	= ID-120-025 C

Drift reduction: 90/75/50 %

Current list under
www.lechler-agri.com

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Online nozzle calculator

Apple

Android

Air-injector flat spray compact nozzles IDK
Air-injector flat spray compact nozzles IDKN

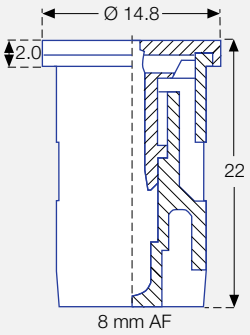
Very low-drift, compact air-injector flat spray nozzle with wide droplet spectrum (from extreme coarse to fine).

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

G 1661
G 1662
G 1663
G 1683
G 1718
G 1799
G 1800
G 1801
G 1802
G 1936





* IDKN-characteristic: body with white stripe

Crop production | Ground care

Nozzle size
01 – 06

Spray angle
90°, 120°

Material
POM, ceramic

Pressure range
- IDK-01 to -06:
  1 – **1.5 – 3** – 6 bar
- IDKN-03 to -04:
  1 – **1.5 – 3** – 6 bar

Recommended filters
80 M 01
60 M 015 – 04
25 M 05 – 06

Droplet size
Extreme coarse – fine

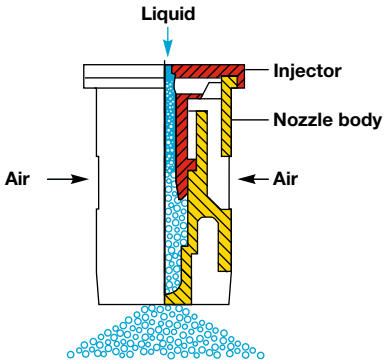
Width across flats
8 mm

Application areas

- Plant protection products and growth regulators
- Liquid fertilizer
- Spray frame
- Border application can be combined with border nozzle IDKS 80 (see page 78)
- Golf course
- Backpack sprayer
- Greenhouse



Toolless removable injector



Spray table for air-injector flat spray compact nozzles IDK / IDKN

	BCPC			l/min	l/ha (0,5 m)								
	IDKN	IDK	bar		5,0 km/h	6,0 km/h	7,0 km/h	8,0 km/h	10,0 km/h	12,0 km/h	14,0 km/h	16,0 km/h	18,0 km/h
IDK 120-01 90-01 (80 M)		C	1.0	0.23	55	46	39	35	28	23	20	17	15
		C	1.5	0.28	67	56	48	42	34	28	24	21	19
		C	2.0	0.32	77	64	55	48	38	32	27	24	21
		C	2.5	0.36	86	72	62	54	43	36	31	27	24
		M	3.0	0.39	94	78	67	59	47	39	33	29	26
		M	4.0	0.45	108	90	77	68	54	45	39	34	30
		M	5.0	0.51	122	102	87	77	61	51	44	38	34
		F	6.0	0.55	132	110	94	83	66	55	47	41	37
IDK 120-015 90-015 (60 M)		VC	1.0	0.34	82	68	58	51	41	34	29	26	23
		C	1.5	0.42	101	84	72	63	50	42	36	32	28
		C	2.0	0.48	115	96	82	72	58	48	41	36	32
		C	2.5	0.54	130	108	93	81	65	54	46	41	36
		C	3.0	0.59	142	118	101	89	71	59	51	44	39
		M	4.0	0.68	163	136	117	102	82	68	58	51	45
		M	5.0	0.76	182	152	130	114	91	76	65	57	51
		F	6.0	0.83	199	166	142	125	100	83	71	62	55
IDK 120-02 90-02 (60 M)		VC	1.0	0.46	110	92	79	69	55	46	39	35	31
		VC	1.5	0.56	134	112	96	84	67	56	48	42	37
		C	2.0	0.65	156	130	111	98	78	65	56	49	43
		C	2.5	0.73	175	146	125	110	88	73	63	55	49
		C	3.0	0.80	192	160	137	120	96	80	69	60	53
		M	4.0	0.92	221	184	158	138	110	92	79	69	61
		M	5.0	1.03	247	206	177	155	124	103	88	77	69
		M	6.0	1.13	271	226	194	170	136	113	97	85	75
IDK 120-025 90-025 (60 M)		VC	1.0	0.57	137	114	98	86	68	57	49	43	38
		VC	1.5	0.70	168	140	120	105	84	70	60	53	47
		VC	2.0	0.81	194	162	139	122	97	81	69	61	54
		C	2.5	0.91	218	182	156	137	109	91	78	68	61
		C	3.0	0.99	238	198	170	149	119	99	85	74	66
		C	4.0	1.15	276	230	197	173	138	115	99	86	77
		M	5.0	1.28	307	256	219	192	154	128	110	96	85
		M	6.0	1.40	336	280	240	210	168	140	120	105	93
IDK 120-03 90-03 IDKN 120-03 (60 M)	EC	VC	1.0	0.69	166	138	118	104	83	69	59	52	46
	VC	VC	1.5	0.84	202	168	144	126	101	84	72	63	56
	VC	VC	2.0	0.97	233	194	166	146	116	97	83	73	65
	VC	VC	2.5	1.08	259	216	185	162	130	108	93	81	72
	C	C	3.0	1.19	286	238	204	179	143	119	102	89	79
	C	C	4.0	1.37	329	274	235	206	164	137	117	103	91
	M	M	5.0	1.53	367	306	262	230	184	153	131	115	102
	M	M	6.0	1.68	403	336	288	252	202	168	144	126	112
IDK IDKN 120-04 (60 M)	EC	EC	1.0	0.91	218	182	156	137	109	91	78	68	61
	VC	VC	1.5	1.12	269	224	192	168	134	112	96	84	75
	VC	VC	2.0	1.29	310	258	221	194	155	129	111	97	86
	VC	VC	2.5	1.44	346	288	247	216	173	144	123	108	96
	VC	VC	3.0	1.58	379	316	271	237	190	158	135	119	105
	C	C	4.0	1.82	437	364	312	273	218	182	156	137	121
	C	C	5.0	2.04	490	408	350	306	245	204	175	153	136
	M	M	6.0	2.23	535	446	382	335	268	223	191	167	149
IDK 120-05 (25 M)		EC	1.0	1.14	274	228	195	171	137	114	98	86	76
		VC	1.5	1.39	334	278	238	209	167	139	119	104	93
		VC	2.0	1.61	386	322	276	242	193	161	138	121	107
		VC	2.5	1.80	432	360	309	270	216	180	154	135	120
		VC	3.0	1.97	473	394	338	296	236	197	169	148	131
		C	4.0	2.28	547	456	391	342	274	228	195	171	152
		C	5.0	2.55	612	510	437	383	306	255	219	191	170
		M	6.0	2.79	670	558	478	419	335	279	239	209	186
IDK 120-06 (25 M)		EC	1.0	1.36	326	272	233	204	163	136	117	102	91
		EC	1.5	1.67	401	334	286	251	200	167	143	125	111
		VC	2.0	1.93	463	386	331	290	232	193	165	145	129
		VC	2.5	2.15	516	430	369	323	258	215	184	161	143
		VC	3.0	2.36	566	472	405	354	283	236	202	177	157
		VC	4.0	2.73	655	546	468	410	328	273	234	205	182
		C	5.0	3.05	732	610	523	458	366	305	261	229	203
		C	6.0	3.34	802	668	573	501	401	334	286	251	223

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	= order number
IDK	120°	01	(POM)	= IDK 120-01
IDK	120°	01	C (ceramic)	= IDK 120-01 C
MultiCap IDK	120°	01	(POM)	= MultiCap IDK 120-01

Drift reduction: 90/75/50 %

Current list under
www.lechler-agri.com

BCPC Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme Coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.



Best Protection of IDK/IDKN/IDKS/ IDKT nozzles through long side walls of MultiCap (see page 106).

Available assembled with IDK-, IDKT- and IDKN nozzle

Online nozzle calculator

Apple

Android

Pre-emergence flat spray nozzle PRE

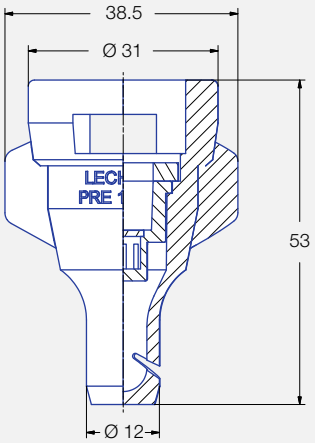
Extremely low-drift flat spray nozzle for timely application of pre-emergence herbicides.

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

G 1981





Crop production | Ground care

Nozzle size
05

Spray angle
130°

Material
POM

Pressure range
1.5 – 8 bar

Recommended filters
25 M

Droplet size
Extreme coarse

Application areas

Herbicides pre-emerge

Liquid fertilizer

Golf course



Spray table for pre-emergence flat spray nozzle PRE

	BCPC		l/min	l/ha 0.5m								
				5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
PRE 130-05 (25 M)	EC	1.5	1.55	372	310	266	233	186	155	133	116	103
	EC	2.0	1.73	415	346	297	260	208	173	148	130	115
	EC	3.0	2.00	480	400	343	300	240	200	171	150	133
	EC	4.0	2.24	538	448	384	336	269	224	192	168	149
	EC	5.0	2.45	588	490	420	368	294	245	210	184	163
	EC	6.0	2.64	634	528	453	396	317	264	226	198	176
	EC	7.0	2.82	677	564	483	423	338	282	242	212	188
	EC	8.0	2.99	718	598	513	449	359	299	256	224	199

Example of ordering

Type	+ spray angle	+	int'l nozzle size	+	material	=	order number
PRE	130°		05		(POM)	=	PRE 130-05

Drift reduction: 95/90 %

Current list under
www.lechler-agri.com

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.



Anti-drift flat spray nozzles AD

NEW

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
- Pre-chamber can be removed for cleaning

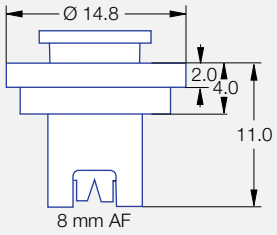
G 1666
G 1667
G 1668



AD



AD-C



Crop production | Ground care

Nozzle size
01 – 04

Spray angle
90°, 120°

Material
POM, ceramic

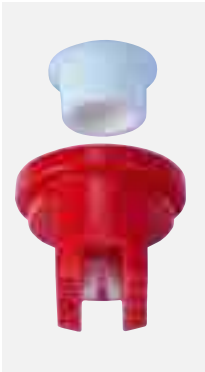
Pressure range
1.5 – 3 – 6 bar

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

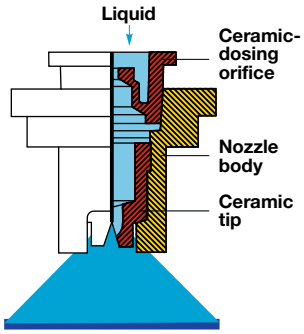
Droplet size
Coarse – fine

Width across flats
8 mm

Application areas
Plant protection products and growth regulators



Removable preatomizer





Cleaning brush for AD nozzles
Order no. 06A.D30.56.00
*Clearance

Spray table for anti-drift flat spray nozzles AD

	BCPC	3 bar	l/min	l/ha (0.5 m) 5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
AD 90-01 (80 M)	M	1.5	0.28	67	56	48	42	34	28	24	21	19
	M	2.0	0.32	77	64	55	48	38	32	27	24	21
	M	2.5	0.36	86	72	62	54	43	36	31	27	24
	M	3.0	0.39	94	78	67	59	47	39	33	29	26
	F	4.0	0.45	108	90	77	68	54	45	39	34	30
	F	5.0	0.51	122	102	87	77	61	51	44	38	34
	F	6.0	0.55	132	110	94	83	66	55	47	41	37
AD 120-015 90-015 (80 M)	M	1.5	0.42	101	84	72	63	50	42	36	32	28
	M	2.0	0.48	115	96	82	72	58	48	41	36	32
	M	2.5	0.54	130	108	93	81	65	54	45	41	36
	M	3.0	0.59	142	118	101	89	71	59	51	44	39
	F	3.5	0.63	151	126	108	95	76	63	54	47	42
	F	4.0	0.68	163	136	117	102	82	68	58	51	45
	F	4.5	0.72	173	144	123	108	86	72	62	54	48
	F	5.0	0.76	182	152	130	114	91	76	65	57	51
	F	6.0	0.83	199	166	142	125	100	83	72	62	55
AD 120-02 90-02 (60 M)	C	1.5	0.56	134	112	96	84	67	56	47	42	37
	M	2.0	0.65	156	130	111	98	78	65	54	49	43
	M	2.5	0.73	175	146	125	110	88	73	61	55	49
	M	3.0	0.80	192	160	137	120	96	80	67	60	53
	M	3.5	0.86	206	172	147	129	103	86	73	65	57
	M	4.0	0.92	221	184	158	138	110	92	77	69	61
	F	4.5	0.98	235	196	168	147	118	98	82	74	65
	F	5.0	1.03	247	206	177	155	124	103	87	77	69
	F	6.0	1.13	271	226	194	170	136	113	95	85	75
AD 120-03 90-03 (60 M)	C	1.5	0.84	202	168	144	126	101	84	70	63	56
	C	2.0	0.97	233	194	166	146	116	97	81	73	65
	C	2.5	1.08	259	216	185	162	130	108	91	81	72
	M	3.0	1.19	286	238	204	179	143	119	100	89	79
	M	3.5	1.28	307	256	219	192	154	128	108	96	85
	M	4.0	1.37	329	274	235	206	164	137	116	103	91
	M	4.5	1.46	350	292	250	219	175	146	123	110	97
	M	5.0	1.53	367	306	262	230	184	153	130	115	102
	F	6.0	1.68	403	336	288	252	202	168	141	126	112
AD 120-04 90-03 (60 M)	C	1.5	1.12	269	224	192	168	134	112	93	84	75
	C	2.0	1.29	310	258	221	194	155	129	108	97	86
	C	2.5	1.44	346	288	247	216	173	144	122	108	96
	C	3.0	1.58	379	316	271	237	190	158	133	119	105
	C	3.5	1.71	410	342	293	257	205	171	144	128	114
	M	4.0	1.82	437	364	312	273	218	182	154	137	121
	M	4.5	1.94	466	388	333	291	233	194	164	146	129
	M	5.0	2.04	490	408	350	306	245	204	173	153	136
	M	6.0	2.23	535	446	382	335	268	223	189	167	149

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	= order number
AD	120°	02	(POM)	= AD 120-02
AD	120°	02	C (ceramic)	= AD 120-02 C

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Online nozzle calculator

Apple

Android

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

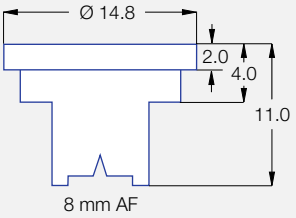
G 1240
G 1242
G 1524
G 1596
G 1597



LU



LU-C





LU-S

Crop production | Ground care

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 – fine

Width across flats
8 mm

Application areas

Plant protection products and growth regulators

Border application can be combined with border nozzle OC (see page 82)

Backpack sprayer

Greenhouse

Spray table for multirange flat spray nozzles LU

	BCPC	3 bar	l/min	l/ha (0.5 m) 5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
LU 120-01 90-01 (80 M)	F	1.5	0.28	67	56	48	42	34	28	24	21	19
	F	2.0	0.32	77	64	55	48	38	32	27	24	21
	F	3.0	0.39	94	78	67	59	47	39	33	29	26
	F	4.0	0.45	108	90	77	68	54	45	39	34	30
	F	5.0	0.51	122	102	87	77	61	51	44	38	34
LU 120-015 90-015 (80 M)	F	1.5	0.42	101	84	72	63	50	42	36	32	28
	F	2.0	0.48	115	96	82	72	58	48	41	36	32
	F	3.0	0.59	142	118	101	89	71	59	51	44	39
	F	4.0	0.68	163	136	117	102	82	68	58	51	45
	F	5.0	0.76	182	152	130	114	91	76	65	57	51
LU 120-02 90-02 (60 M)	F	1.5	0.56	134	112	96	84	67	56	48	42	37
	F	2.0	0.65	156	130	111	98	78	65	56	49	43
	F	3.0	0.80	192	160	137	120	96	80	69	60	53
	F	4.0	0.92	221	184	158	138	110	92	79	69	61
	F	5.0	1.03	247	206	177	155	124	103	88	77	69
LU 120-025 (60 M)	F	1.5	0.70	168	140	120	105	84	70	60	53	47
	F	2.0	0.81	194	162	139	122	97	81	69	61	54
	F	3.0	0.99	238	198	170	149	119	99	85	74	66
	F	4.0	1.15	276	230	197	173	138	115	99	86	77
	F	5.0	1.28	307	256	219	192	154	128	110	96	85
LU 120-03 90-03 (60 M)	M	1.5	0.84	202	168	144	126	101	84	72	63	56
	F	2.0	0.97	233	194	166	146	116	97	83	73	65
	F	3.0	1.19	286	238	204	179	143	119	102	89	79
	F	4.0	1.37	329	274	235	206	164	137	117	103	91
	F	5.0	1.53	367	306	262	230	184	153	131	115	102
LU 120-04 90-04 (60 M)	M	1.5	1.12	269	224	192	168	134	112	96	84	75
	M	2.0	1.29	310	258	221	194	155	129	111	97	86
	M	3.0	1.58	379	316	271	237	190	158	135	119	105
	F	4.0	1.82	437	364	312	273	218	182	156	137	121
	F	5.0	2.04	490	408	350	306	245	204	175	153	136
LU 120-05 90-05 (25 M)	M	1.5	1.39	334	278	238	209	167	139	119	104	93
	M	2.0	1.61	386	322	276	242	193	161	138	121	107
	M	3.0	1.97	473	394	338	296	236	197	169	148	131
	M	4.0	2.28	547	456	391	342	274	228	195	171	152
	M	5.0	2.55	612	510	437	383	306	255	219	191	170
LU 120-06 90-06 (25 M)	C	1.5	1.67	401	334	286	251	200	167	143	125	111
	C	2.0	1.93	463	386	331	290	232	193	165	145	129
	M	3.0	2.36	566	472	405	354	283	236	202	177	157
	M	4.0	2.73	655	546	468	410	328	273	234	205	182
	M	5.0	3.05	732	610	523	458	366	305	261	229	203
LU 120-08 90-08 (25 M)	C	1.5	2.23	535	446	382	335	268	223	191	167	149
	C	2.0	2.58	619	516	442	387	310	258	221	194	172
	C	3.0	3.16	758	632	542	474	379	316	271	237	211
	C	4.0	3.65	876	730	626	548	438	365	313	274	243
	M	5.0	4.08	979	816	699	612	490	408	350	306	272

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	= order number
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

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Online nozzle calculator

Apple

Android

Quality
flat spray nozzles QS 80

Ceramic universal flat spray nozzles with a finer droplet spectrum, for low l/ha rates and higher workrates.

Advantages

- 80° flat spray reduces drift in comparison with 110°/120° flat spray
- Higher droplet density thanks to optimized droplet spectrum
- Lower volume flow tolerance of +1 / -3 % due to high manufacturing quality.
- Optimum cross distribution for boom heights of 0.6 – 0.9 m
- Ceramic tip ensures high wear resistance



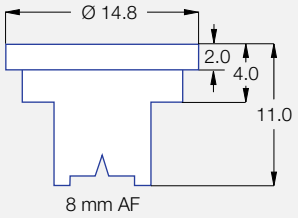
QS 80-015 C



QS 80-02 C



QS 80-025 C



Crop production | Ground care

Nozzle size
015 – 025

Spray angle
80°

Material
Ceramic

Pressure range
1.5 – 5 bar

Recommended filters
80M 015
60M 02 – 025

Droplet size
Medium – fine

Width across flats
8 mm

Application areas

Plant protection products and growth regulators

Border application can be combined with border nozzle OC (see page 84)

Spray table for quality flat spray nozzles QS 80

	BCPC	bar	l/min	l/ha									
				5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	9.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h	20.0 km/h
QS 80-015 (80 M)	M	1.5	0.42	101	84	72	63	56	50	42	36	32	28	25
	F	2.0	0.48	115	96	82	72	64	58	48	41	36	32	29
	F	2.5	0.54	130	108	93	81	72	65	54	46	41	36	32
	F	3.0	0.59	142	118	101	89	79	71	59	51	44	39	35
	F	3.5	0.63	151	126	108	95	84	76	63	54	47	42	38
	F	4.0	0.68	163	136	117	102	91	82	68	58	51	45	41
	F	5.0	0.76	182	152	130	114	101	91	76	650	57	51	46
QS 80-02 (60 M)	M	1.5	0.56	134	112	96	84	75	67	56	48	42	37	34
	M	2.0	0.65	156	130	111	98	87	78	65	56	49	43	39
	F	2.5	0.73	175	146	125	110	97	88	73	63	55	49	44
	F	3.0	0.80	192	160	137	120	107	96	80	69	60	53	48
	F	3.5	0.86	206	172	147	129	115	103	86	74	65	57	52
	F	4.0	0.92	221	184	158	138	123	110	92	79	69	61	55
	F	5.0	1.03	247	206	177	155	137	124	103	97	77	69	62
QS 80-025 (60 M)	M	1.5	0.70	168	140	120	105	93	84	70	60	53	47	42
	M	2.0	0.81	194	162	139	122	108	97	81	69	61	54	49
	M	2.5	0.91	218	182	156	137	121	109	91	78	68	61	55
	F	3.0	0.99	238	198	170	149	132	119	99	85	74	66	59
	F	3.5	1.07	257	214	183	161	143	129	107	92	80	71	64
	F	4.0	1.15	276	230	197	173	153	138	115	99	86	77	69
	F	5.0	1.28	307	256	219	192	171	154	128	110	96	85	77

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
QS		80°		015		C (ceramic)	=	QS 80-015 C

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Standard
flat spray nozzles ST / SC

Standard flat spray nozzle (ST) or nozzle in cap system MULTIJET (SC).

Advantages
- Color coding in accordance with ISO Standard 10625
- Inexpensive flat spray nozzle
- Nozzle in cap offers
  - lower assembly and storage costs
  - simple and fast assembly



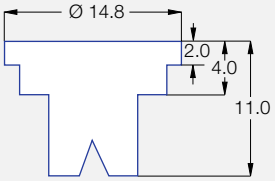
ST



ST-C



SC



8 mm AF

Crop production | Ground care

Nozzle size
01 – 08

Spray angle
80°, 110°

Material
POM, ceramic, brass on request

Pressure range
- SC 025 – 05:
  2 – 3 – 5 bar
- ST 01 – 08:
  2 – 3 – 5 bar

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

Droplet size
Coarse – fine

Width across flats
8 mm

Application areas

Plant protection products and growth regulators

Border application can be combined with border nozzle OC (see page 82)

Backpack sprayer (only ST)

Spray table for standard flat spray nozzles ST / SC

	bar	l/min	l/ha 0.5m								
			5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
ST 110-01 80-01 (80 M)	2.0	0.32	77	64	55	48	38	32	27	24	21
	2.5	0.36	86	72	62	54	43	36	31	27	24
	3.0	0.39	94	78	67	59	47	39	33	29	26
	4.0	0.45	108	90	77	68	54	45	39	34	30
	5.0	0.51	122	102	87	77	61	51	44	38	34
ST 110-015 80-015 (80 M)	2.0	0.48	115	96	82	72	58	48	41	36	32
	2.5	0.54	130	108	93	81	65	54	46	41	36
	3.0	0.59	142	118	101	89	71	59	51	44	39
	4.0	0.68	163	136	117	102	82	68	58	51	45
	5.0	0.76	182	152	130	114	91	76	65	57	51
ST 110-02 80-02 (60 M)	2.0	0.65	156	130	111	98	78	65	56	49	43
	2.5	0.73	175	146	125	110	88	73	63	55	49
	3.0	0.80	192	160	137	120	96	80	69	60	53
	4.0	0.92	221	184	158	138	110	92	79	69	61
	5.0	1.03	247	206	177	155	124	103	88	77	69
SC 110-025 (60 M)	2.0	0.81	194	162	139	122	97	81	69	61	54
	2.5	0.91	218	182	156	137	109	91	78	68	61
	3.0	0.99	238	198	170	149	119	99	85	74	66
	4.0	1.15	276	230	197	173	138	115	99	86	77
	5.0	1.28	307	256	219	192	154	128	110	96	85
SC/ST 110-03 80-03 (60 M)	2.0	0.97	233	194	166	146	116	97	83	73	65
	2.5	1.08	259	216	185	162	130	108	93	81	72
	3.0	1.19	286	238	204	179	143	119	102	89	79
	4.0	1.37	329	274	235	206	164	137	117	103	91
	5.0	1.53	367	306	262	230	184	153	131	115	102
SC/ST 110-04 80-04 (60 M)	2.0	1.29	310	258	221	194	155	129	111	97	86
	2.5	1.44	346	288	247	216	173	144	123	108	96
	3.0	1.58	379	316	271	237	190	158	135	119	105
	4.0	1.82	437	364	312	273	218	182	156	137	121
	5.0	2.04	490	408	350	306	245	204	175	153	136
SC/ST 110-05 80-05 (25 M)	2.0	1.61	386	322	276	242	193	161	138	121	107
	2.5	1.80	432	360	309	270	216	180	154	135	120
	3.0	1.97	473	394	338	296	236	197	169	148	131
	4.0	2.28	547	456	391	342	274	228	195	171	152
	5.0	2.55	612	510	437	383	306	255	219	191	170
ST 110-06 80-06 (25 M)	2.0	1.93	463	386	331	290	232	193	165	145	129
	2.5	2.16	518	432	370	324	259	216	185	162	144
	3.0	2.36	566	472	405	354	283	236	202	177	157
	4.0	2.73	655	546	468	410	328	273	234	205	182
	5.0	3.05	732	610	523	458	366	305	261	229	203
ST 110-08 80-08 (25 M)	2.0	2.58	619	516	442	387	310	258	221	194	172
	2.5	2.88	691	576	494	432	346	288	247	216	192
	3.0	3.16	758	632	542	474	379	316	271	237	211
	4.0	3.65	876	730	626	548	438	365	313	274	243
	5.0	4.08	979	816	699	612	490	408	350	306	272

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Example of ordering

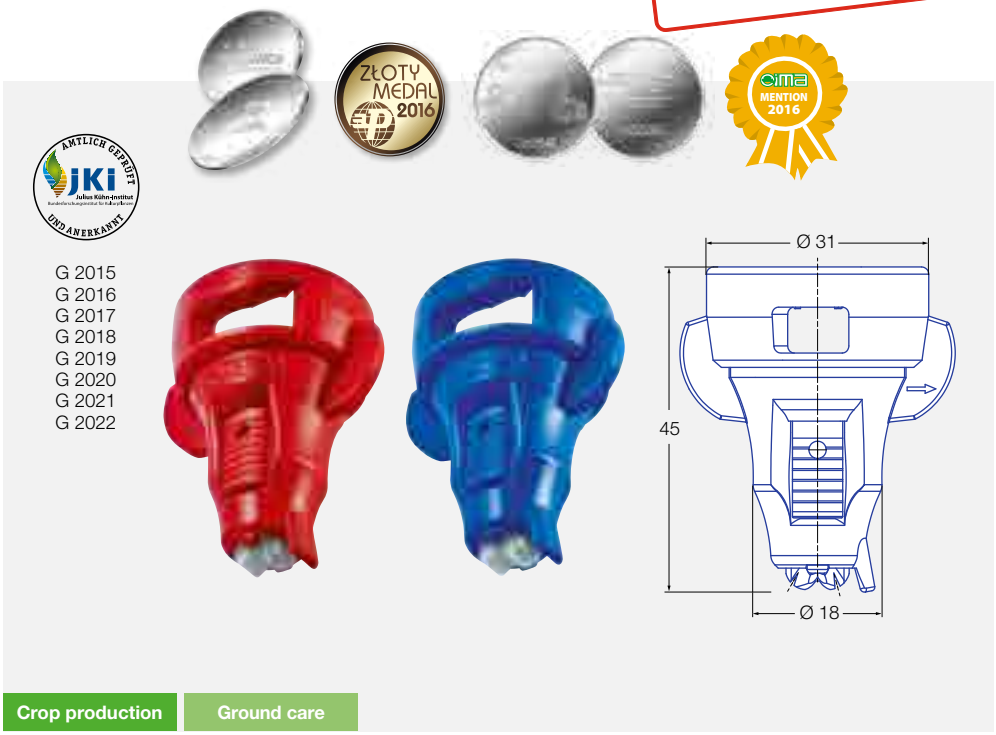
Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
SC		110°		03		(POM)	=	SC 110-03
ST		110°		06		(POM)	=	ST 110-06
ST		110°		06		C (ceramic)	=	ST 110-06 C

Asymmetrical twin flat spray air-injector nozzles IDTA

IDTA
Twin Asymmetric Full Coverage

PATENTED

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



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

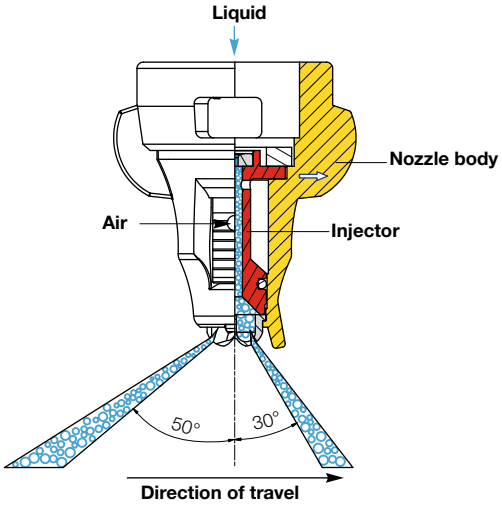
Crop production | Ground care

Advantages

- High drift reduction over entire pressure range
- Nozzle in cap with MULTIJET bayonet system
- 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
  - Precise border application in combination with IS border nozzle
- 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



Toolless removable injector



Nozzle size
02 – 08

Spray angle
front 120°/
back 90°

Material
Ceramic

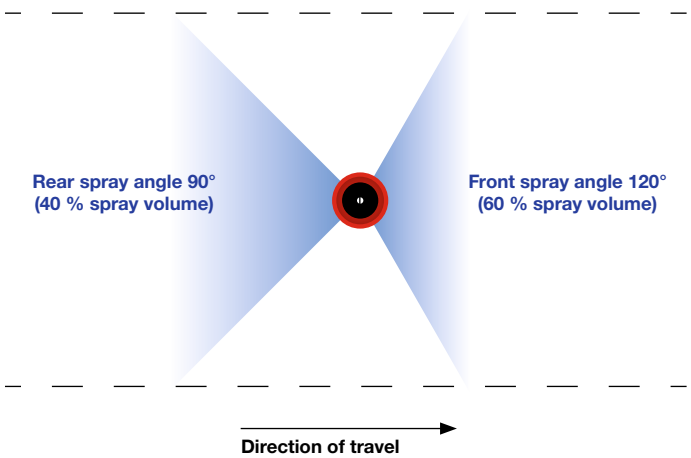
Pressure range
1 – **4 – 8** bar

Recommended filters
80M 02
60M 025 – 08

Droplet size
Extreme coarse – medium

Application areas

- Plant protection products and growth regulators
- Border application can be combined with border nozzle IS 80 (see page 76)
- Golf course



Spray table for asymmetrical twin flat spray air-injector nozzles IDTA

	BCPC	3 bar	l/min	l/ha (0.5 m)								
				5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
IDTA 120-02 (80 M)	EC	1.0	0.46	110	92	79	69	55	46	39	35	31
	EC	1.5	0.56	134	112	96	84	67	56	48	42	37
	EC	2.0	0.65	156	130	111	98	78	65	56	49	43
	VC	3.0	0.80	192	160	137	120	96	80	69	60	53
	VC	4.0	0.92	221	184	158	138	110	92	79	69	61
	C	5.0	1.03	247	206	177	155	124	103	88	77	69
	C	6.0	1.13	271	226	194	170	136	113	97	85	75
	C	7.0	1.22	293	244	209	183	146	122	105	92	81
	M	8.0	1.30	312	260	223	195	156	130	111	98	87
IDTA 120-025 (60 M)	EC	1.0	0.57	137	114	98	86	68	57	49	43	38
	EC	1.5	0.70	168	140	120	105	84	70	60	53	47
	EC	2.0	0.81	194	162	139	122	97	81	69	61	54
	VC	3.0	0.99	238	198	170	149	119	99	85	74	66
	VC	4.0	1.15	276	230	197	173	138	115	99	86	77
	C	5.0	1.28	307	256	219	192	154	128	110	96	85
	C	6.0	1.40	336	280	240	210	168	140	120	105	93
	C	7.0	1.52	365	304	261	228	182	152	130	114	101
	M	8.0	1.62	389	324	278	243	194	162	139	122	108
IDTA 120-03 (60 M)	EC	1.0	0.69	166	138	118	104	83	69	59	52	46
	EC	1.5	0.84	202	168	144	126	101	84	72	63	56
	EC	2.0	0.97	233	194	166	146	116	97	83	73	65
	VC	3.0	1.19	286	238	204	179	143	119	102	89	79
	VC	4.0	1.37	329	274	235	206	164	137	117	103	91
	C	5.0	1.53	367	306	262	230	184	153	131	115	102
	C	6.0	1.68	403	336	288	252	202	168	144	126	112
	C	7.0	1.81	434	362	310	272	217	181	155	136	121
	M	8.0	1.94	466	388	333	291	233	194	166	146	129
IDTA 120-04 (60 M)	EC	1.0	0.91	218	182	156	137	109	91	78	68	61
	EC	1.5	1.12	269	224	192	168	134	112	96	84	75
	EC	2.0	1.29	310	258	221	194	155	129	111	97	86
	VC	3.0	1.58	379	316	271	237	190	158	135	119	105
	VC	4.0	1.82	437	364	312	273	218	182	156	137	121
	C	5.0	2.04	490	408	350	306	245	204	175	153	136
	C	6.0	2.23	535	446	382	335	268	223	191	167	149
	C	7.0	2.41	578	482	413	362	289	241	207	181	161
	M	8.0	2.58	619	516	442	387	310	258	221	194	172
IDTA 120-05 (60 M)	EC	1.0	1.14	274	228	195	171	137	114	98	86	76
	EC	1.5	1.39	334	278	238	209	167	139	119	104	93
	EC	2.0	1.61	386	322	276	242	193	161	138	121	107
	VC	3.0	1.97	473	394	338	296	236	197	169	148	131
	C	4.0	2.28	547	456	391	342	274	228	195	171	152
	C	5.0	2.55	612	510	437	383	306	255	219	191	170
	C	6.0	2.79	670	558	478	419	335	279	239	209	186
	M	7.0	3.01	722	602	516	452	361	301	258	226	201
	M	8.0	3.22	773	644	552	483	386	322	276	242	215
IDTA 120-06 (60 M)	EC	1.0	1.36	326	272	233	204	163	136	117	102	91
	EC	1.5	1.67	401	334	286	251	200	167	143	125	111
	VC	2.0	1.93	463	386	331	290	232	193	165	145	129
	C	3.0	2.36	566	472	405	354	283	236	202	177	157
	C	4.0	2.73	655	546	468	410	328	273	234	205	182
	C	5.0	3.05	732	610	523	458	366	305	261	229	203
	M	6.0	3.34	802	668	573	501	401	334	286	251	223
	M	7.0	3.61	866	722	619	542	433	361	309	271	241
	M	8.0	3.86	926	772	662	579	463	386	331	290	257
IDTA 120-08 (60 M)	EC	1.5	2.23	535	446	382	335	268	223	191	167	149
	EC	2.0	2.58	619	516	442	387	310	258	221	194	172
	VC	3.0	3.16	758	632	542	474	379	316	271	237	211
	C	4.0	3.65	876	730	626	548	438	365	313	274	243
	C	5.0	4.08	979	816	699	612	490	408	350	306	272
	M	6.0	4.47	1073	894	766	671	536	447	383	335	298
	M	7.0	4.83	1159	966	828	725	580	483	414	362	322
	M	8.0	5.16	1238	1032	885	774	619	516	442	387	344

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	= order number
IDTA	120°	025	C (ceramic)	= IDTA 120-025 C

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Online nozzle calculator

Apple Android

For further intermediate adapter for other bayonet systems please see page 107

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

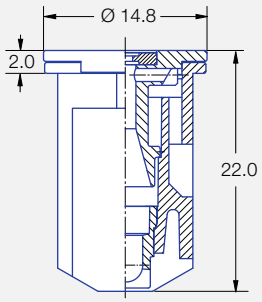
G 1836
G 1837
G 1865
G 1882
G 1883
G 1884
G 1911
G 1912
G 1932
G 1933
G 1934
G 1935
G 1937



IDKT-C



IDKT



8 mm AF

Crop production | Ground care

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
80M 015 – 02
60M 025 – 06

Droplet size
Extreme coarse – medium

Width across flats
8 mm

Application areas

Plant protection products and growth regulators

Spray frame

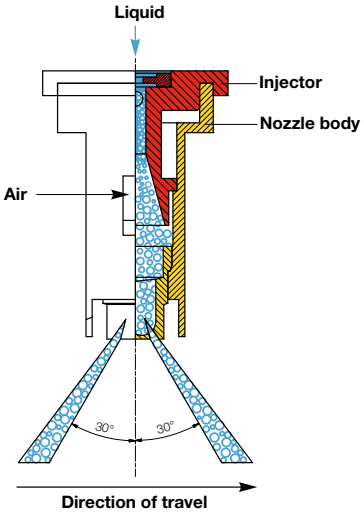
Border application can be combined with border nozzle IDKS 80 (see page 78)

Golf course

Greenhouse



Toolless removable injector



Spray table for symmetrical TWIN flat spray air-injector compact nozzles IDKT

	BCPC		l/min	l/ha (0.5 m)								
				5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
IDKT 120-015 (80 M)	EC	1.5	0.42	101	84	72	63	50	42	36	32	28
	EC	2.0	0.48	115	96	82	72	58	48	41	36	32
	EC	2.5	0.54	130	108	93	81	65	54	46	41	36
	VC	3.0	0.59	142	118	101	89	71	59	51	44	39
	VC	3.5	0.64	154	128	110	96	77	64	55	48	43
	C	4.0	0.68	163	136	117	102	82	68	58	51	45
	C	5.0	0.76	182	152	130	114	91	76	65	57	51
	M	6.0	0.83	199	166	142	125	100	83	71	62	55
IDKT 120-02 (80 M)	EC	1.5	0.56	134	112	96	84	67	56	48	42	37
	VC	2.0	0.65	156	130	111	98	78	65	56	49	43
	VC	2.5	0.73	175	146	125	110	88	73	63	55	49
	C	3.0	0.80	192	160	137	120	96	80	69	60	53
	C	3.5	0.86	206	172	147	129	103	86	74	65	57
	C	4.0	0.92	221	184	158	138	110	92	79	69	61
	M	5.0	1.03	247	206	177	155	124	103	88	77	69
	M	6.0	1.13	271	226	194	170	136	113	97	85	75
IDKT 120-025 (60 M)	VC	1.5	0.70	168	140	120	105	84	70	60	53	47
	VC	2.0	0.81	194	162	139	122	97	81	69	61	54
	VC	2.5	0.91	218	182	156	137	109	91	78	68	61
	C	3.0	0.99	238	198	170	149	119	99	85	74	66
	C	3.5	1.07	257	214	183	161	128	107	92	80	71
	M	4.0	1.15	276	230	197	173	138	115	99	86	77
	M	5.0	1.28	307	256	219	192	154	128	110	96	85
	M	6.0	1.40	336	280	240	210	168	140	120	105	93
IDKT 120-03 (60 M)	EC	1.0	0.69	166	138	118	104	83	69	59	61	54
	VC	1.5	0.84	202	168	144	126	101	84	72	63	56
	VC	2.0	0.97	233	194	166	146	116	97	83	73	65
	VC	2.5	1.08	259	216	185	162	130	108	93	81	72
	C	3.0	1.19	286	238	204	179	143	119	102	89	79
	C	3.5	1.28	307	256	219	192	154	128	110	96	85
	M	4.0	1.37	329	274	235	206	164	137	117	103	91
	M	5.0	1.53	367	306	262	230	184	153	131	115	102
	M	6.0	1.68	403	336	288	252	202	168	144	126	112
IDKT 120-04 (60 M)	EC	1.0	0.91	218	182	156	137	109	91	78	68	61
	VC	1.5	1.12	269	224	192	168	134	112	96	84	75
	C	2.0	1.29	310	258	221	194	155	129	111	97	86
	C	2.5	1.44	346	288	247	216	173	144	123	108	96
	C	3.0	1.58	379	316	271	237	190	158	135	119	105
	C	3.5	1.71	410	342	293	257	205	171	147	128	114
	M	4.0	1.82	437	364	312	273	218	182	156	137	121
	M	5.0	2.04	490	408	350	306	245	204	175	153	136
	M	6.0	2.23	535	446	382	335	268	223	191	167	149
IDKT 120-05 (60 M)	EC	1.0	1.14	274	228	195	171	137	114	98	86	76
	VC	1.5	1.39	334	278	238	209	167	139	119	104	93
	C	2.0	1.61	386	322	276	242	193	161	138	121	107
	C	2.5	1.80	432	360	309	270	216	180	154	135	120
	C	3.0	1.97	473	394	338	296	236	197	169	148	131
	C	3.5	2.13	511	426	365	320	256	213	183	160	142
	M	4.0	2.28	547	456	391	342	274	228	195	171	152
	M	5.0	2.55	612	510	437	383	306	255	219	191	170
	M	6.0	2.79	670	558	478	419	335	279	239	209	186
IDKT 120-06 (60 M)	EC	1.0	1.36	326	272	233	204	163	136	117	102	91
	VC	1.5	1.67	401	334	286	251	200	167	143	125	111
	VC	2.0	1.93	463	386	331	290	232	193	165	145	129
	VC	2.5	2.15	516	430	369	323	258	215	184	161	143
	C	3.0	2.36	566	472	405	354	283	236	202	177	157
	C	3.5	2.55	612	510	437	383	306	255	219	191	170
	C	4.0	2.73	655	546	468	410	328	273	234	205	182
	M	5.0	3.05	732	610	523	458	366	305	261	229	203
	M	6.0	3.34	802	668	573	501	401	334	286	251	223

Example of ordering

Type	+ spray angle	+ int'l nozzle size	+ material	=	order number
IDKT	120°	04	(POM)	=	IDKT 120-04
IDKT	120°	04	C (ceramic)	=	IDKT 120-04 C
MultiCap IDKT	120°	04	(POM)	=	MultiCap IDKT 120-04

Drift reduction: 90/75/50 %

Current list under **www.lechler-agri.com**

Each also in association with IDKS-border nozzles identical size.

JKI-approval for mixed nozzle equipping

Find out more on our website.

BCPC
Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extreme coarse

Classifications are subject to change

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.



Recommendation: Best protection of IDKT nozzles through long side walls of MultiCap (see page 106).

Online nozzle calculator

Apple

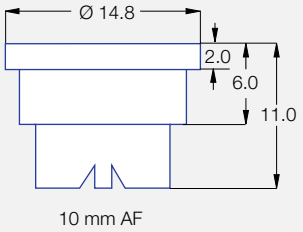
Android

Twin flat spray nozzles DF

Standard twin flat spray nozzle.

Advantages
- Twin flat spray nozzle for fine-droplet application
- Symmetrical double flat spray jet 30°/30°
- Good wetting even on vertical target surfaces
- Low risk of clogging due to central supply flow cross-section





Crop production | Ground care

Nozzle size
02 – 06

Spray angle
120°

Material
Stainless steel

Pressure range
2 – 3 – 5 bar

Recommended filters
80 M 02 – 03
60 M 04 – 06

Droplet size
Fein

Width across flats
10 mm

Application areas

Plant protection products and growth regulators

Border application can be combined with border nozzle OC (see page 82)

Spray table for twin flat spray nozzles DF

	bar	l/min	l/ha (0.5 m)									
			4.0 km/h	5.0 km/h	5.5 km/h	6.0 km/h	6.5 km/h	7.0 km/h	7.5 km/h	8.0 km/h	10.0 km/h	12.0 km/h
DF 120-02 (80 M)	2.0	0.65	195	156	142	130	120	111	104	98	78	65
	2.5	0.73	219	175	159	146	135	125	117	110	88	73
	3.0	0.80	240	192	175	160	148	137	128	120	96	80
	3.5	0.86	258	206	188	172	159	147	138	129	103	86
	4.0	0.92	276	221	201	184	170	158	147	138	110	92
	4.5	0.98	294	235	214	196	181	168	157	147	118	98
	5.0	1.03	309	247	225	206	190	177	165	155	124	103
DF 120-03 (80 M)	2.0	0.97	291	233	212	194	179	166	155	146	116	97
	2.5	1.08	324	259	236	216	199	185	173	162	130	108
	3.0	1.19	357	286	260	238	220	204	190	179	143	119
	3.5	1.28	384	307	279	256	236	219	205	192	154	128
	4.0	1.37	411	329	299	274	253	235	219	206	164	137
	4.5	1.46	438	350	319	292	270	250	234	219	175	146
	5.0	1.53	459	367	334	306	282	262	245	230	184	153
DF 120-04 (60 M)	2.0	1.29	387	310	281	258	238	221	206	194	155	129
	2.5	1.44	432	346	314	288	266	247	230	216	173	144
	3.0	1.58	474	379	345	316	292	271	253	237	190	158
	3.5	1.71	513	410	373	342	316	293	274	257	205	171
	4.0	1.82	546	437	397	364	336	312	291	273	218	182
	4.5	1.94	582	466	423	388	358	333	310	291	233	194
	5.0	2.04	612	490	445	408	377	350	326	306	245	204
DF 120-05 (60 M)	2.0	1.61	483	386	351	322	297	276	258	242	193	161
	2.5	1.80	540	432	393	360	332	309	288	270	216	180
	3.0	1.97	591	473	430	394	364	338	315	296	236	197
	3.5	2.13	639	511	465	426	393	365	341	320	256	213
	4.0	2.28	684	547	497	456	421	391	365	342	274	228
	4.5	2.42	726	581	528	484	447	415	387	363	290	242
	5.0	2.55	765	612	556	510	471	437	408	383	306	255
DF 120-06 (60 M)	2.0	1.93	579	463	421	386	356	331	309	290	232	193
	2.5	2.16	648	518	471	432	399	370	346	324	259	216
	3.0	2.36	708	566	515	472	436	405	378	354	283	236
	3.5	2.55	765	612	556	510	471	437	408	383	306	255
	4.0	2.73	819	655	596	546	504	468	437	410	328	273
	4.5	2.90	870	696	633	580	535	497	464	435	348	290
	5.0	3.05	915	732	665	610	563	523	488	458	366	305

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
DF		120°		02		S (stainless steel)	=	DF 120-02 S

TwinSprayCap
Bayonet combi-cap for air-injector nozzles and flat spray nozzles

Bayonet combi-cap with symmetrical twin flat spray jet 30°/30° for flexible nozzle equipment.

Advantages

- Variable nozzle selection also of different nozzle types and sizes
- Enhanced deposition through combination of low-drift injector nozzles and standard flat spray nozzles
- Suitable for flat spray nozzles AF 8 and 10
- Nozzle assembly without tools through plug-in clip system
- Assembly via MULTIJET and Hardi bayonet system or intermediate and extension adapters (see page 107)



Crop production | Ground care

Width across flats
8 and 10 mm

Application areas

Plant protection products and growth regulators

Spray frame

Dropleg[UL]



MULTIJET with round hole bore, e.g. for use on Dropleg[UL] (see page 105)
Order. no.: 092.163.56.10



MULTIJET

Order. no.: 092.163.56.00



Hardi

Order. no.: 092.163.56.01

Recommendation for installations

Wet gasket with water before assembling on nozzle holder.

Note

Select the nozzle size using the l/ha spraying tables – the correct rating corresponds to the determined nozzle size divided by two, e.g. two times -02 corresponds to the application rate of -04 or alternatively one time -015 and one time -025 corresponds as well to -04.

Example of ordering	
Type	
TwinSprayCap (incl. Gasket no. 095.015.6C.08.59.0) System MULTIJET	**= 092.163.56.00**
TwinSprayCap (incl. Gasket no. 095.015.6C.08.59.0) System MULTIJET with round hole bore	**= 092.163.56.10**
TwinSprayCap (incl. Gasket no. 095.015.73.01.60.0) System Hardi	**= 092.163.56.01**

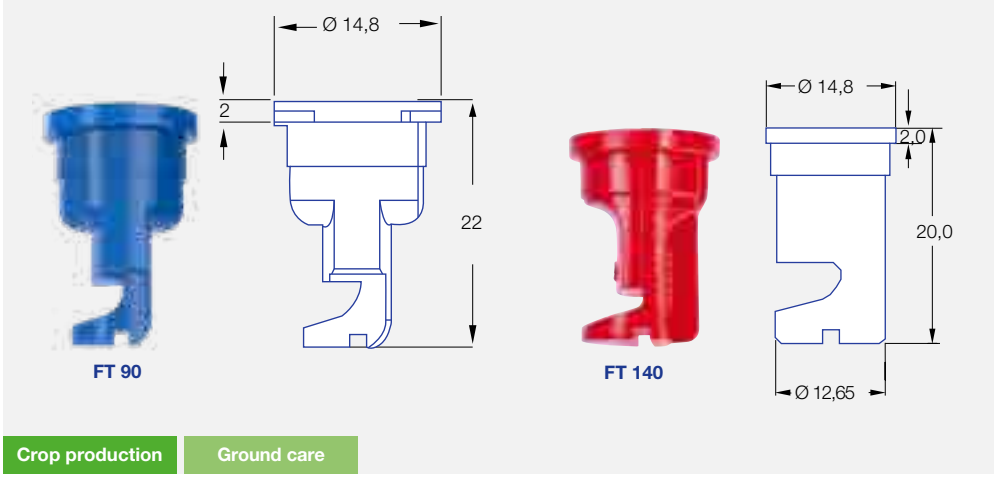


Flood nozzles FT

NEU

Clog-resistant
flat spray nozzle.

Advantages
- Compact design
- Large, round flow cross-sections
- Self cleaning of jet forming area
- Jet build-up already from 1 bar
- FT 90 high drift reduction thanks to integrated pre-chamber



Crop production | Ground care

Nozzle size
0.5 – 10.0

Spray angle
90°, 140°

Material
POM, stainless steel

Pressure range
FT 90: **1 – 3** – 6 bar
FT 140: **1 – 2** – 3 bar

Recommended filters
80 M 0.5
60 M 0.5 – 2.0
25 M 2.5 – 10.0

Droplet size
Medium – fine

Width across flats
Ø 12.65 mm

Application areas

Plant protection products and growth regulators

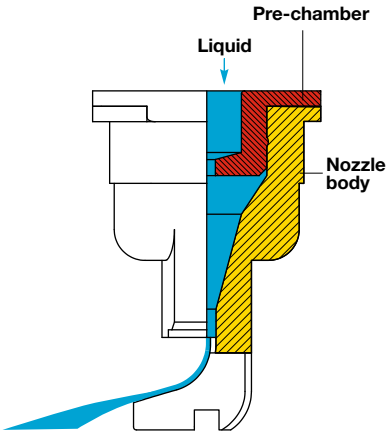
Backpack sprayer

Dropleg[UL]

Greenhouse

Band spraying
FT 90





Spray table for flood nozzles FT

		l/min	l/ha 0,5 m						l/ha 0,75 m					
			6 km/h	8 km/h	10 km/h	12 km/h	14 km/h	16 km/h	6 km/h	8 km/h	10 km/h	12 km/h	14 km/h	16 km/h
FT 90-01 140-01 (80 M)	1	0.23	46	35	28	23	20	17	31	23	18	15	13	12
	2	0.32	64	48	38	32	27	24	43	32	26	21	18	16
	3	0.39	78	59	47	39	33	29	52	39	31	26	22	20
	4	0.45	90	68	54	45	39	34	60	45	36	30	26	23
	6	0.55	110	83	66	55	47	41	73	55	44	37	31	28
FT 90-015 140-015 (60 M)	1	0.34	68	51	41	34	29	26	45	34	27	23	19	17
	2	0.48	96	72	58	48	41	36	64	48	38	32	27	24
	3	0.59	118	89	71	59	51	44	79	59	47	39	34	30
	4	0.68	136	102	82	68	58	51	91	68	54	45	39	34
	6	0.83	166	125	100	83	71	62	111	83	66	55	47	42
FT 90-02 140-02 (60 M)	1	0.46	92	69	55	46	39	35	61	46	37	31	26	23
	2	0.65	130	98	78	65	56	49	87	65	52	43	37	33
	3	0.80	160	120	96	80	69	60	107	80	64	53	46	40
	4	0.92	184	138	110	92	79	69	123	92	74	61	53	46
	6	1.13	226	170	136	113	97	85	151	113	90	75	65	57
FT 90-03 140-03 (60 M)	1	0.69	138	104	83	69	59	52	92	69	55	46	39	35
	2	0.97	194	146	116	97	83	73	129	97	78	65	55	49
	3	1.19	238	179	143	119	102	89	159	119	95	79	68	60
	4	1.37	274	206	164	137	117	103	183	137	110	91	78	69
	6	1.68	336	252	202	168	144	126	224	168	134	112	96	84
FT 90-04 140-04 (60 M)	1	0.91	182	137	109	91	78	68	121	91	73	61	52	46
	2	1.29	258	194	155	129	111	97	172	129	103	86	74	65
	3	1.58	316	237	190	158	135	119	211	158	126	105	90	79
	4	1.82	364	273	218	182	156	137	243	182	146	121	104	91
	6	2.23	446	335	268	223	191	167	297	223	178	149	127	112
FT 90-05 140-05 (25 M)	1	1.14	228	171	137	114	98	86	152	114	91	76	65	57
	2	1.61	322	242	193	161	138	121	215	161	129	107	92	81
	3	1.97	394	296	236	197	169	148	263	197	158	131	113	99
	4	2.27	454	341	272	227	195	170	303	227	182	151	130	114
	5	2.54	508	381	305	254	218	191	339	254	203	169	145	127
	6	2.79	558	419	335	279	239	209	372	279	223	186	159	140
FT 140-06 (25 M)	1	1.36	272	204	163	136	117	102	181	136	109	91	78	68
	2	1.93	386	290	232	193	165	145	257	193	154	129	110	97
	3	2.36	472	354	283	236	202	177	315	236	189	157	135	118
FT 140-08 (25 M)	1	1.82	364	273	218	182	156	137	243	182	146	121	104	91
	2	2.58	516	387	310	258	221	194	344	258	206	172	147	129
	3	3.16	632	474	379	316	271	237	421	316	253	211	181	158
FT 140-10 (25 M)	1	2.27	454	341	272	227	195	170	303	227	182	151	130	114
	2	3.22	644	483	386	322	276	242	429	322	258	215	184	161
	3	3.94	788	591	473	394	338	296	525	394	315	263	225	197
FT 140-15 (25 M)	1	3.41	682	512	409	341	292	256	455	341	273	227	195	171
	2	4.83	966	725	580	483	414	362	644	483	386	322	276	242
	3	5.91	1182	887	709	591	507	443	788	591	473	394	338	296
FT 140-20 (25 M)	1	4.55	910	683	546	455	390	341	607	455	364	303	260	228
	2	6.43	1286	965	772	643	551	482	857	643	514	429	367	322
	3	7.88	1576	1182	946	788	675	591	1051	788	630	525	450	394

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
FT 90		90°		03		(POM)	=	FT 90-03 POM
FT 140		140°		04		(POM)	=	FT 140-04 POM

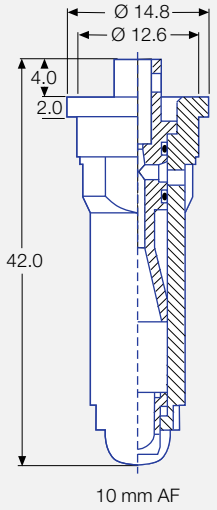
Air-injector flat spray nozzles ID 90

Extremely low-drift, air-injector flat spray nozzle in entire pressure range.

Advantages
- 99/95/90/75/50 % drift reduction depending on nozzle size, pressure and country
- Exceptionally low-drift also in the high-pressure range up to 20 bar
- Extremely wear resistant full ceramic injector
- Large clog-resistant flow cross-sections
- Significantly improved crop penetration

G 1612
G 1632
G 1659
G 1660





Crop production

Nozzle size
01 – 06

Spray angle
90°

Material
Ceramic

Pressure range
3 – **8 – 15** – 20 bar

Recommended filters
60 M 01 – 04
25 M 05 – 06

Droplet size
Very coarse – coarse

Width across flats
10 mm

Application areas

Plant protection products and growth regulators

Plant protection in viticulture, orchard and speciality crops

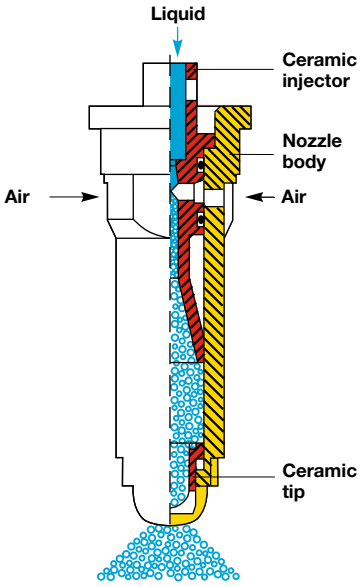
Sensor technique

Vertical linkage

Spray frame



Toolless removable injector



More detailed information is available in Lechler brochure for viticulture, orchard and speciality crops as well as www.lechler-agri.com



Spray table for air-injector flat spray nozzles ID 90

		l/min																
		3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
ID 90-01	60 M	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.72	0.85	0.88	0.91	0.93	0.99	1.01
ID 90-015	60 M	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
ID 90-02	60 M	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07
ID 90-025	60 M	0.99	1.15	1.28	1.40	1.52	1.62	1.71	1.81	1.90	1.98	2.06	2.14	2.21	2.29	2.36	2.49	2.56
ID 90-03	60 M	1.19	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.28	2.38	2.48	2.57	2.66	2.75	2.83	2.99	3.07
ID 90-04	60 M	1.58	1.82	2.04	2.23	2.41	2.58	2.74	2.88	3.03	3.16	3.29	3.41	3.53	3.65	3.76	3.98	4.08
ID 90-05	25 M	1.97	2.28	2.55	2.79	3.01	3.22	3.42	3.60	3.77	3.94	4.10	4.26	4.41	4.55	4.69	4.96	5.09
ID 90-06	25 M	2.36	2.73	3.05	3.34	3.61	3.86	4.09	4.32	4.52	4.72	4.91	5.10	5.28	5.45	5.62	5.94	6.09

Drift reduction: 99/95/75/50 %

Current list under
www.lechler-agri.com

- The stated liter-per-hectare rates apply to water
- Prior to each spraying season, verify the table data by gauging the flow rates
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

NEW

Online nozzle calculator

Apple Android

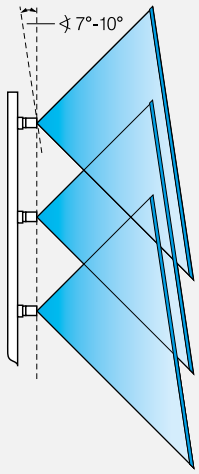
Example of ordering

Type	+ spray angle	+	int'l nozzle size	+	material	=	order number
ID	90°		02		C (ceramic)	=	ID 90-02 C

Installation instructions

Adjust the nozzles to a spray-plane offset of 7° to 10°. Use a 10-mm fork wrench to make the adjustments.

For optimal assembly and fitting of nozzles use:
- with cup-strainer, gasket 3.0 mm (order no. 065.240.73.01)
- without cup-strainer, gasket 5.0 mm (order no. 095.015.6C.07.10)



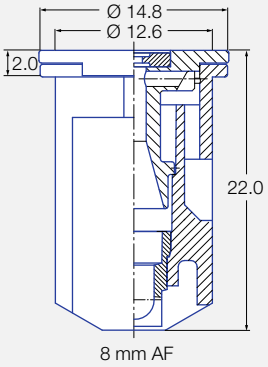
Air-injector flat spray compact nozzles IDK 90

Very low-drift, compact air-injector flat spray nozzle.

Advantages
- 99/95/90/75/50 % drift reduction depending on nozzle size, pressure and country
- Most compact low-drift air injector flat spray nozzle
- Only 7 mm longer than TR hollow cone nozzle
- Large clog-resistant cross-sections
- Soiling on dosing orifice can be simply wiped off
- Breakage-resistant nozzle housing with beveled edges and reinforced walls

G 1834
G 1835
G 1886
G 1941





IDK 90-01 C
75 % drift reduction according to MABO dosage modell

Crop production

Nozzle size
0067 – 03

Spray angle
90°

Material
Ceramic

Pressure range
2 – **8 – 15** – 20 bar

Recommended filters
60 M 0067 – 03

Droplet size
Very coarse – medium

Width across flats
8 mm

Application areas

Plant protection products and growth regulators

Plant protection in viticulture, orchard and speciality crops

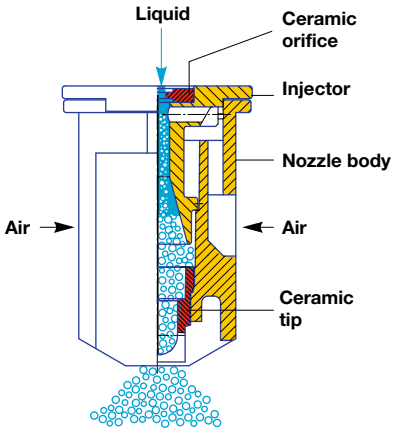
Sensor technique

Vertical linkage

Spray frame



Removable injector



More detailed information is available in Lechler brochure for viticulture, orchard and speciality crops as well as www.lechler-agri.com



Spray table for air-injector flat spray compact nozzles IDK 90

		l/min																	
		2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
IDK 90-0067	60 M	0.22	0.27	0.31	0.35	0.38	0.41	0.44	0.47	0.49	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.68	0.70
IDK 90-01	60 M	0.32	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.72	0.85	0.88	0.91	0.93	0.99	1.01
IDK 90-015	60 M	0.48	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
IDK 90-02	60 M	0.65	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07
IDK 90-025	60 M	0.81	0.99	1.15	1.28	1.40	1.52	1.62	1.71	1.81	1.90	1.98	2.06	2.14	2.21	2.29	2.36	2.49	2.56
IDK 90-03	60 M	0.97	1.19	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.28	2.38	2.48	2.57	2.66	2.75	2.83	2.99	3.07

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
IDK		90°		02		C (Ceramic)	=	IDK 90-02 C

Drift reduction: 99/95/90/75/50 %

Current list under
www.lechler-agri.com

- The stated liter-per-hectare rates apply to water
- Prior to each spraying season, verify the table data by gauging the flow rates
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

NEW

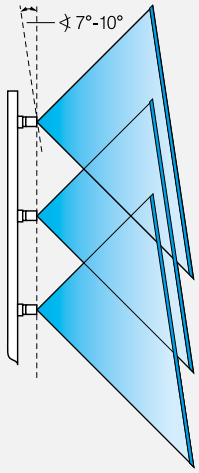
Online nozzle calculator

Apple Android

Installation instructions

Adjust the nozzles to a spray-plane offset of 7° to 10°. Use a 8-mm fork wrench to make the adjustments.

For optimal assembly and fitting of nozzles use:
- with cup-strainer, gasket 3.0 mm (order no. 065.240.73.01)
- without cup-strainer, gasket 5.0 mm (order no. 095.015.6C.07.10)



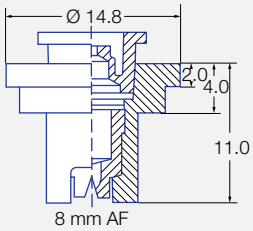
Anti-drift flat spray nozzles AD 90

Low-drift flat spray nozzle.

Advantages
- 99/95/90/75/50 % drift reduction depending on nozzle size, pressure and country
- Fine droplets at higher pressure
- Pre-atomizer can be removed without tools for cleaning purposes
- Ideal for cramped installation conditions thanks to compact design (4 mm shorter than TR hollow cone nozzle)
- Particularly suitable for sensor control thanks to very fast jet build-up and reduction

G 1666
G 1667
G 1668





Crop production

Nozzle size
01 – 04

Spray angle
90°

Material
Ceramic

Pressure range
2 – **8 – 15** – 20 bar

Recommended filters
60 M 01 – 04

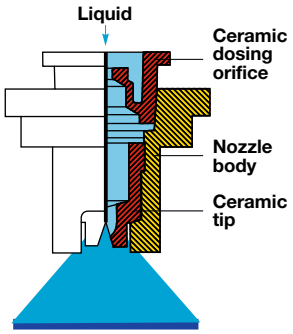
Droplet size
Coarse – fine

Width across flats
8 mm

Application areas
- Plant protection products and growth regulators
- Plant protection in viticulture, orchard and speciality crops
- Sensor technique
- Vertical linkage



Removable preatomizer





Cleaning brush for AD nozzles
Order No. 06A.D30.56.00
*Clearance

More detailed information is available in Lechler brochure for viticulture, orchard and speciality crops as well as www.lechler-agri.com



Spray table for anti-drift flat spray nozzles AD 90

		l/min																	
		2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
AD 90-01	60 M	0.32	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.72	0.85	0.88	0.91	0.93	0.99	1.01
AD 90-015	60 M	0.48	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
AD 90-02	60 M	0.65	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07
AD 90-03	60 M	0.97	1.19	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.28	2.38	2.48	2.57	2.66	2.75	2.83	2.99	3.07
AD 90-04	60 M	1.29	1.58	1.82	2.04	2.23	2.41	2.58	2.74	2.88	3.03	3.16	3.29	3.41	3.53	3.65	3.76	3.98	4.08

Drift reduction: 99/95/90/75/50 %

Current list under **www.lechler-agri.com**

- The stated liter-per-hectare rates apply to water
- Prior to each spraying season, verify the table data by gauging the flow rates
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
AD		90°		03		C (ceramic)	=	AD 90-03 C

NEW

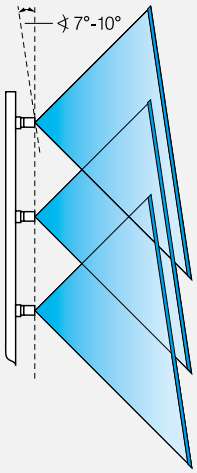
Online nozzle calculator

Apple Android

Installation instructions

Adjust the nozzles to a spray-plane offset of 7° to 10°. Use a 8-mm fork wrench to make the adjustments.

For optimal assembly and fitting of nozzles use:
- with cup-strainer, gasket 3.0 mm (order no. 065.240.73.01)
- without cup-strainer, gasket 5.0 mm (order no. 095.015.6C.07.10)



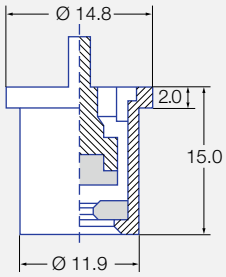
Hollow cone nozzles TR

Fine-droplet hollow cone nozzle.

Advantages
- Optimized narrow droplet spectrum
- Fine droplets ensure high coverage
- Nozzle insert secured to prevent it falling out by means of snap closure
- Resistant to clogging due to round bore
- ISO color-coded

G 1496
G 1497
G 1498





Crop production | Ground care

Nozzle size
005 – 05

Spray angle
80°

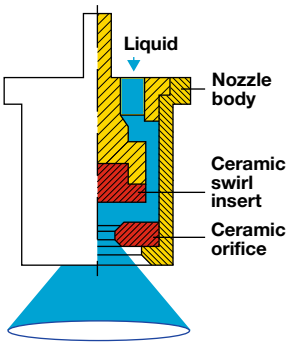
Material
Ceramic

Pressure range
3 – **8 – 20** bar

Recommended filters
60 M 005 – 04
25 M 05

Droplet size
Fine – very fine

Width across flats
Ø 11.9 mm



Application areas

Plant protection products and growth regulators

Plant protection in viticulture, orchard and speciality crops

Backpack sprayer

Greenhouse

More detailed information is available in Lechler brochure for viticulture, orchard and speciality crops as well as www.lechler-agri.com



Spray table for hollow cone nozzles TR

		l/min																
		3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
TR 80-005	60 M	0.20	0.23	0.25	0.28	0.30	0.32	0.34	0.36	0.38	0.39	0.41	0.42	0.44	0.45	0.47	0.49	0.51
TR 80-0067	60 M	0.27	0.31	0.35	0.38	0.41	0.44	0.47	0.49	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.68	0.70
TR 80-01	60 M	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.72	0.85	0.88	0.91	0.93	0.99	1.01
TR 80-015	60 M	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
TR 80-02	60 M	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07
TR 80-03	60 M	1.19	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.28	2.38	2.48	2.57	2.66	2.75	2.83	2.99	3.07
TR 80-04	60 M	1.58	1.82	2.04	2.23	2.41	2.58	2.74	2.88	3.03	3.16	3.29	3.41	3.53	3.65	3.76	3.98	4.08
TR 80-05	25 M	1.97	2.28	2.55	2.79	3.01	3.22	3.42	3.60	3.77	3.94	4.10	4.26	4.41	4.55	4.69	4.96	5.09

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
TR		80°		02		C (ceramic)	=	TR 80-02 C

- The stated liter-per-hectare rates apply to water
- Prior to each spraying season, verify the table data by gauging the flow rates
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

NEW

Online nozzle calculator

Apple

Android

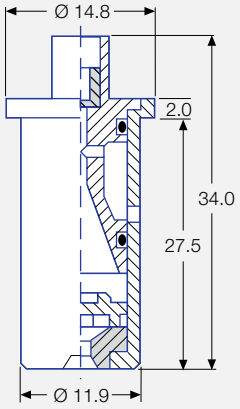
Air-injector hollow cone nozzles ITR

Extremely low-drift, air-injector hollow cone nozzle.

Advantages
- 95/90/75/50 % drift reduction depending on nozzle size, pressure and country
- Resistant to clogging due to round bore
- ISO color-coded

G 2023





Crop production | Ground care

Nozzle size
01 – 02

Spray angle
80°

Material
Ceramic

Pressure range
3 – **10 – 30** bar

Recommended filters
60 M 01 – 02

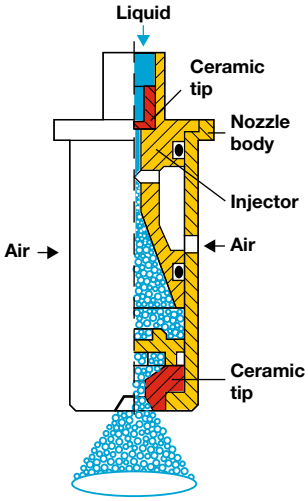
Droplet size
Extreme coarse – coarse

Width across flats
Ø 11.9 mm

Application areas

Plant protection products and growth regulators

Plant protection in viticulture, orchard and speciality crops



More detailed information is available in Lechler brochure for viticulture, orchard and speciality crops as well as www.lechler-agri.com



Spray table for air-injector hollow cone nozzles ITR

		l/min																
		3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
ITR 80-01	60 M	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.72	0.85	0.88	0.91	0.93	0.99	1.01
ITR 80-015	60 M	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
ITR 80-02	60 M	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07

Example of ordering

Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
ITR		80°		02		C (ceramic)	=	ITR 80-02 C

Drift reduction: 95/90/75/50 %

Current list under
www.lechler-agri.com

- The stated liter-per-hectare rates apply to water
- Prior to each spraying season, verify the table data by gauging the flow rates
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

NEW

Online nozzle calculator

Apple

Android



Liquid fertilizer nozzles FD

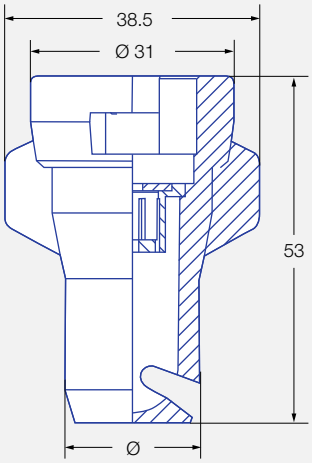
PATENTED

Flat spray nozzle with horizontal spray pattern for uniform cross-distribution.

Advantages

- Gentle liquid fertilizer application thanks to extremely low spray impact
- Minimum risk of crop scorching due to extremely coarse-droplet application
- No streaking due to optimum cross-distribution
- Nozzle in cap for standard bayonet connection system MULTIJET
- Nozzle sizes ISO color-coded





FD 08 – 20 = Ø 20.5
FD 03 – 06 = Ø 12

Crop production | Ground care

Nozzle size
03 – 20

Spray angle
130°

Material
POM

Pressure range
1.5 – 4 bar

Recommended filters
60 M FD 03 – 04
25 M FD 05 – 20

Droplet size
Extreme coarse

Application areas

Liquid fertilizer

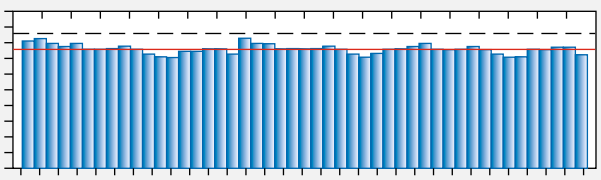
Greenhouse

Golf course



Toolless removable dosing orifice

FD-04 Cross distribution on patternator (with water)
Spray pressure: 2 bar – spray height: 600mm – CV: 3.4 %





More detailed information is available in Lechler brochure for application of liquid fertilizer as well as www.lechler-agri.com

Spray table for liquid fertilizer nozzles FD

	bar	l/min		UAN l/ha 0,5m				
		Water	UAN	6.0 km/h	8.0 km/h	10.0 km/h	14.0 km/h	18.0 km/h
FD 03 (60 M)	1.5	0.85	0.75	150	113	90	64	50
	2.0	0.98	0.87	173	130	104	74	58
	3.0	1.20	1.06	212	159	127	91	71
	4.0	1.39	1.23	246	184	147	105	82
FD 04 (60 M)	1.5	1.13	1.00	200	150	120	86	67
	2.0	1.31	1.16	232	174	139	99	77
	3.0	1.60	1.41	283	212	170	121	94
	4.0	1.85	1.64	327	245	196	140	109
FD 05 (25 M)	1.5	1.41	1.25	249	187	149	107	83
	2.0	1.63	1.44	288	216	173	123	96
	3.0	2.00	1.77	354	265	212	152	118
	4.0	2.31	2.04	408	306	245	175	136
FD 06 (25 M)	1.5	1.70	1.50	301	225	180	129	100
	2.0	1.96	1.73	346	260	208	148	115
	3.0	2.40	2.12	424	318	255	182	141
	4.0	2.77	2.45	490	367	294	210	163
FD 08 (25 M)	1.5	2.26	2.00	400	300	240	171	133
	2.0	2.61	2.31	461	346	277	198	154
	3.0	3.20	2.83	566	424	339	242	189
	4.0	3.70	3.27	654	491	392	280	218
FD 10 (25 M)	1.5	2.83	2.50	500	375	300	214	167
	2.0	3.27	2.89	578	434	347	248	193
	3.0	4.00	3.54	707	530	424	303	236
	4.0	4.62	4.08	817	613	490	350	272
FD 15 (25 M)	1.5	4.24	3.75	750	562	450	321	250
	2.0	4.90	4.33	866	650	520	371	289
	3.0	6.00	5.30	1061	795	636	455	354
	4.0	6.93	6.13	1225	919	735	525	408
FD 20 (25 M)	1.5	5.66	5.00	1001	750	600	429	334
	2.0	6.53	5.77	1154	866	693	495	385
	3.0	8.00	7.07	1414	1061	849	606	471
	4.0	9.24	8.17	1633	1225	980	700	544

UAN

- Spray pressure at the nozzle tip (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to UAN (28/1.28 kg/l)
- Nozzle spacing 0.5 m
- Prior to each spraying season, verify the table data by gauging the flow rates
- Make sure that all nozzles have the same settings

Example of ordering

Type	+	int'l nozzle size	+	material	=	order number
FD		06		(POM)	=	FD 06

Intermediate and extension adaptor



Intermediate adaptor* Sys. Lechler Twistloc (092.163.56.00.22.1)
Extension: 22 mm



Intermediate adaptor* Sys. Rau (092.163.56.00.21.0)
Extension: 20 mm



Intermediate adaptor* Sys. Hardi (092.163.56.00.20.1)
Extension: 17 mm



Extension adaptor* System Multijet (092.163.56.00.23.1)
Extension: 32 mm

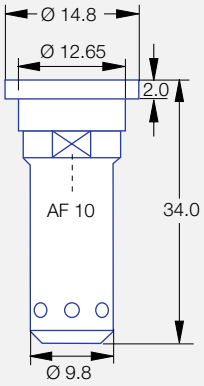
*incl. gasket

5-orifice nozzles FL (for liquid fertilizers)

Five-orifice nozzle with horizontal spray formation.

Advantages
- Black and gray nozzle sizes can be combined with dosing orifices
- Change in delivery rate by replacing the dosing orifice
- No leaf damage due to extremely coarse droplets





Crop production | Ground care

Bore diameter
0.8 – 1.8 mm

Spray angle
160°

Material
- Nozzle body: POM, stainless steel
- Dosing orifice: stainless steel

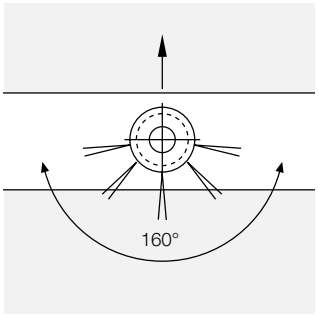
Pressure range
- Dosing orifice 0.8 – 1.0: **1 – 5** bar
- Dosing orifice 1.2: **1 – 4** bar
- Dosing orifice 1.5 – 1.8: **1 – 3** bar

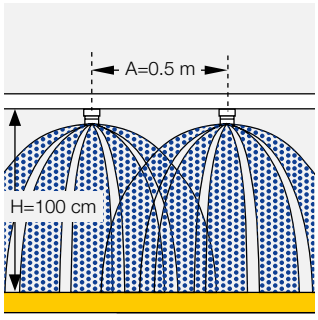
Recommended filters
25 M

Droplet size
Extreme coarse

Width across flats
10 mm

Application area
Liquid fertilizer







More detailed information is available in Lechler brochure for application of liquid fertilizer as well as www.lechler-agri.com

Spray table for 5-orifice nozzles FL (for liquid fertilizers)

Ø mm	bar	l/min		UAN l/ha (0,5m)										
		Water	UAN	5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	9.0 km/h	10.0 km/h	11.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
0.8/32	1.0	0.31	0.27	66	55	47	41	37	33	30	27	23	20	18
	2.0	0.43	0.38	91	76	65	57	51	46	41	38	33	29	25
	3.0	0.53	0.47	112	94	80	70	62	56	51	47	40	35	31
	4.0	0.61	0.54	129	108	92	81	72	65	59	54	46	40	36
	5.0	0.68	0.60	144	120	103	90	80	72	66	60	52	45	40
1.0/39	1.0	0.46	0.41	98	81	70	61	54	49	44	41	35	30	27
	2.0	0.65	0.57	138	115	98	86	77	69	63	57	49	43	38
	3.0	0.80	0.71	170	141	121	106	94	85	77	71	61	53	47
	4.0	0.92	0.81	195	163	139	122	108	98	89	81	70	61	54
	5.0	1.03	0.91	218	182	156	137	121	109	99	91	78	68	61
1.2/48	1.0	0.67	0.59	142	118	102	89	79	71	65	59	51	44	39
	2.0	0.95	0.84	202	168	144	126	112	101	92	84	72	63	56
	3.0	1.16	1.03	246	205	176	154	137	123	112	103	88	77	68
	4.0	1.34	1.18	284	237	203	178	158	142	129	118	102	89	79
1.5/59	1.0	0.98	0.87	208	173	148	130	115	104	94	87	74	65	58
	2.0	1.38	1.22	293	244	209	183	163	146	133	122	105	91	81
	3.0	1.69	1.49	359	299	256	224	199	179	163	149	128	112	100
1.8/72	1.0	1.39	1.23	295	246	211	184	164	147	134	123	105	92	82
	2.0	1.96	1.73	416	346	297	260	231	208	189	173	148	130	115
	3.0	2.40	2.12	509	424	364	318	283	255	231	212	182	159	141

UAN

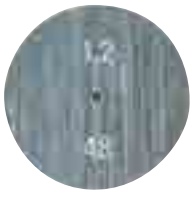
- Spray pressure at the nozzle tip (gauged with a diaphragm valve).
- Lateral spacing 0.5 m.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.
- The stated liter-per-hectare rates apply to UAN (28/1.28 kg/l).

Ordering
When ordering, please include both order numbers, that of the nozzle and that of the dosing orifice.

Recommendation
Please use grey 5-orifice nozzles (order no. 500.179.56.01) for combination with large dosing orifices (1.2, 1.5 and 1.8 mm)

Description	Order. no.
5-orifice nozzles FL (excl. dosing orifice)	
Stainless steel	500.179.16
POM (■ black) for dosing orifices 0.8/1.0/1.2 mm Ø	500.179.56.00
POM (■ grey) for dosing orifices 1.2/1.5/1.8 mm Ø	500.179.56.01
Dosing orifices	
0.8 mm/32 Stainless steel	050.030.1C.00.00
1.0 mm/39 Stainless steel	050.030.1C.01.00
1.2 mm/48 Stainless steel	050.030.1C.03.00
1.5 mm/59 Stainless steell	050.030.1C.02.00
1.8 mm/72 Stainless steel	050.030.1C.04.00

Assembly instruction
Inscription on dosing orifice must face upwards when inserted in the bayonet cap!

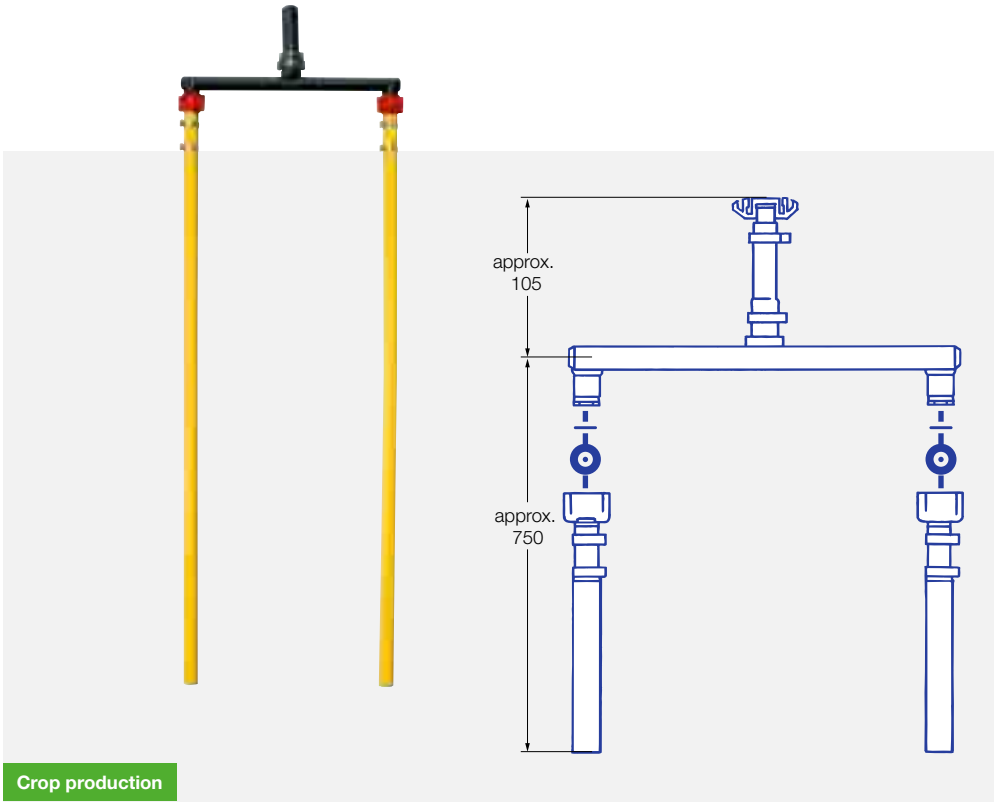


Hose drop system for boom sprayers

Hose drop system for late liquid fertilizer application.

Advantages

- No risk of scorching of upper plant parts
- Greater independence from the influence of the weather
- Partial area-specific fertilization with N-sensor
- N-fertilization according to CULTAN method by line deposition on the soil
- Thin tube hoses slide easily through the crop



Clearance

Tube spacing
0.25 m

Pressure range
1 – 10 bar

Application area

Liquid fertilizer

Ø mm*	bar	l/min Water	l/min UAN	UAN l/ha (0.25 m) 5.0 km/h	6.0 km/h	7.0 km/h	8.0 km/h	9.0 km/h	10.0 km/h	11.0 km/h	12.0 km/h	14.0 km/h	16.0 km/h	18.0 km/h
0.8/32	1.0	0.31	0.27	130	108	93	81	72	65	59	54	46	41	36
	2.0	043	0.38	182	152	130	114	101	91	83	76	65	57	51
	3.0	0.53	0.47	226	188	161	141	125	113	103	94	81	71	63
	4.0	0.62	0.55	264	220	189	165	147	132	120	110	94	83	73
	5.0	0.69	0.61	293	244	209	183	163	146	133	122	105	92	81
	6.0	0.76	0.67	322	268	230	201	179	161	146	134	115	101	89
	7.0	0.82	0.72	346	288	247	216	192	173	157	144	123	108	96
	8.0	0.87	0.77	370	308	264	231	205	185	168	154	132	116	103
	10.0	0.96	0.85	408	340	291	255	227	204	185	170	146	128	113
1.0/39	1.0	0.46	0.41	197	164	141	123	109	98	89	82	70	62	55
	2.0	0.65	0.57	274	228	195	171	152	137	124	114	98	86	76
	3.0	0.80	0.70	336	280	240	210	187	168	153	140	120	105	93
	4.0	0.92	0.81	389	324	278	243	216	194	177	162	139	122	108
	5.0	1.03	0.91	437	364	312	273	243	218	199	182	156	137	121
	6.0	1.13	1.00	480	400	343	300	267	240	218	200	171	150	133
	7.0	1.22	1.07	514	428	367	321	285	257	233	214	183	161	143
	8.0	1.30	1.15	552	460	394	345	307	276	251	230	197	173	153
	10.0	1.45	1.27	610	508	435	381	339	305	277	254	218	191	169
1.2/48	2.0	0.95	0.84	403	336	288	252	224	202	183	168	144	126	112
	4.0	1.34	1.18	566	472	405	354	315	283	257	236	202	177	157
	6.0	1.65	1.45	696	580	497	435	387	348	316	290	249	218	193
	8.0	1.90	1.67	802	668	573	501	445	401	364	334	286	251	223
1.5/59	2.0	1.38	1.22	586	488	418	366	325	293	266	244	209	183	163
	4.0	1.95	1.72	826	688	590	516	459	413	375	344	295	258	229
	6.0	2.39	2.10	1008	840	720	630	560	504	458	420	360	315	280
	8.0	2.76	2.43	1166	972	833	729	648	583	530	486	417	365	324
1.8/72	2.0	1.96	1.73	830	692	593	519	461	415	377	346	297	260	231
	4.0	2.77	2.44	1171	976	837	732	651	586	532	488	418	366	325
	6.0	3.39	2.98	1430	1192	1022	894	795	715	650	596	511	447	397
	8.0	3.92	3.45	1656	1380	1183	1035	920	828	753	690	591	518	460

UAN

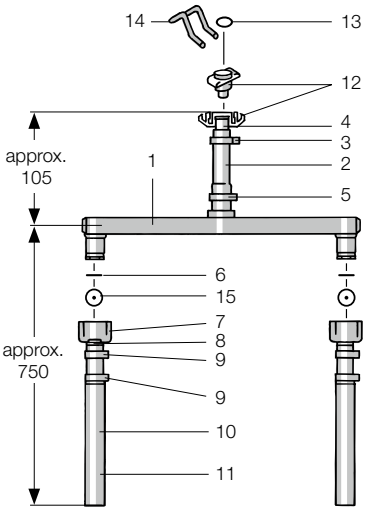
* Additional spray table on request

- Prior to each spraying season verify the table data by gauging the flow rates
- Make sure that in all hoses the same dosing orifice are fitted
- Lateral hose spacing 0.25 m
- Spray pressure at dosing orifice (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to UAN (28/1.29 kg/l)

More detailed information is available in Lechler brochure for application of liquid fertilizer as well as www.lechler-agri.com

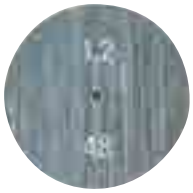


Item	Qty.	Description	Order. no.
1 – 11	1	**Hose drop system complete** (excl. dosing orifices and bayonet cap)	092.160.00.00
1	1	Tee	095.016.56.09.41
2	2	Fabric hose, L = 80 mm	–
3	1	2-eye clamp	095.016.1C.09.44
4	1	Hose shank	095.016.56.07.49
5	1	2-eye clamp	095.009.1C.13.67
6	2	Gasket Ø 11 x Ø 18 x 2.0	095.015.73.06.92
7	2	Threaded cap M 20 x 1.5	095.016.56.09.42
8	2	Hose shank with vent bore	095.009.56.10.44
9	4	Hose clamp	095.009.1C.10.45
10	2	Pipe, L = 686 mm	095.009.50.13.47
11	2	Fabric hose, L = 713 mm	–
12		**Bayonet cap**	
12	1	– System Twistloc, (cf. page 109) (incl. gasket 065.242.73.00)	065.202.56.11.00
12 **13** **13**	1 1 1	– System: MULTIJET etc (cf. page 107) (incl. 3.0 gasket A.402.200.04.00) optional 4.0 mm gasket**	A.402.904.10 095.015.6C.02.85.0
12 **13**	1 1	– System RAU Gasket	095.016.56.05.93.0 095.015.73.04.61.0
14	1	Safety stirrup	095.016.16.05.94.0
15	2	**Dosing orifices**	
		D = 0.8 mm/32; OD = 17.4 mm	050.033.1C.00.00***
		D = 1.0 mm/39; OD = 17.4 mm	050.033.1C.01.00***
		D = 1.2 mm/48; OD = 14.8 mm	050.030.1C.03.00
		D = 1.5 mm/59; OD = 14.8 mm	050.030.1C.02.00
		D = 1.8 mm/72; OD = 14.8 mm	050.030.1C.04.00



** for tight fit of bayonet cap
*** outer diameter 17.4 mm; adapted to Pos. 7

Assembly instruction
Inscription on dosing orifice must face upwards when inserted in the bayonet cap!



Hose drop system 5S and 5SL

Flexible hose drop system with weight loaded 5-orifice tip for late liquid fertilizer application.

Advantages

- No scorching, because weight-loaded 5-orifice tip is submerged in crop
- 5-orifice tip distributes the liquid fertilizer uniformly in the crop with 0.5 m hose spacing
- In comparison with 0.25 m hose drop system, lower boom loading when pulling through the crop
- Compliance with transport width by ideal adaption of the hose when boom is folded
- Extension as spacer with hose attachment prevents paint damage to the sprayer when folded in
- Including bayonet cap system MULTIJET (incl. gasket) as standard
- Selection of l/ha rate by nozzle plates

Tube spacing
0.25 and 0.5 m (depending on boom)

Dosing orifice
- 5S:
  1.0 and 1.2 mm
- 5SL:
  1.5 and 1.8 mm

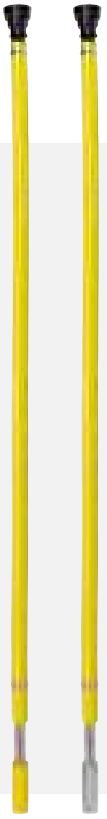
Spray angle
160°

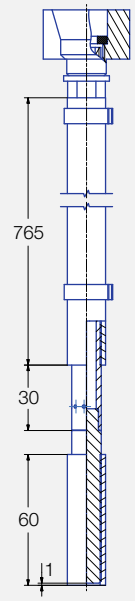
Pressure range
1 – 5 bar

Application area

Liquid fertilizer
- 5S:
50 - 300 l/ha UAN
- 5SL:
180 - 550 l/ha UAN

NEW



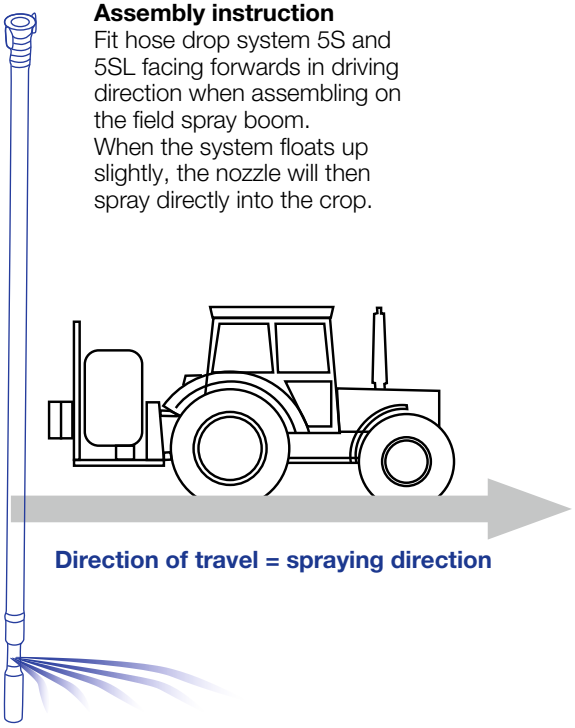


Crop production

Assembly instruction
Inscription on dosing orifice must face upwards when inserted in the bayonet cap!



Assembly instruction
Fit hose drop system 5S and 5SL facing forwards in driving direction when assembling on the field spray boom.
When the system floats up slightly, the nozzle will then spray directly into the crop.



Spray table for hose drop system 5S and 5SL

ø mm	bar	l/min	UAN l/ha at 0.5 m nozzle spacing						UAN l/ha at 0.75 m nozzle spacing				
		Water	UAN	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h
1,0/39 5S	1	0.46	0.41	98	81	70	61	49	65	54	46	41	33
	2	0.65	0.57	138	115	98	86	69	92	77	66	57	46
	3	0.80	0.71	170	141	121	106	85	113	95	81	71	57
	4	0.92	0.81	195	163	139	122	98	130	108	93	81	65
	5	1.03	0.91	218	182	156	137	109	146	121	104	91	73
1,2/48 5S	1	0.67	0.59	142	118	102	89	71	95	79	68	59	47
	2	0.95	0.84	202	168	144	126	101	134	112	96	84	67
	3	1.16	1.03	246	205	176	154	123	164	137	118	103	82
	4	1.34	1.18	284	237	203	178	142	190	158	135	118	95
	5	1.50	1.33	318	265	227	199	159	212	177	152	133	106
1,5/59 5SL	1	0.98	0.87	208	173	148	130	104	139	115	99	87	69
	2	1.38	1.22	293	244	209	183	146	195	163	139	122	98
	3	1.69	1.49	359	299	256	224	179	239	199	171	149	120
	4	1.95	1.72	414	345	295	259	207	276	230	197	172	138
	5	2.18	1.93	462	385	330	289	231	308	257	220	193	154
1,8/72 5SL	1	1.39	1.23	295	246	211	184	147	197	164	140	123	98
	2	1.96	1.73	416	346	297	260	208	277	231	198	173	139
	3	2.40	2.12	509	424	364	318	255	339	283	242	212	170
	4	2.77	2.45	588	490	420	367	294	392	326	280	245	196
	5	3.10	2.74	658	548	470	411	329	438	365	313	274	219

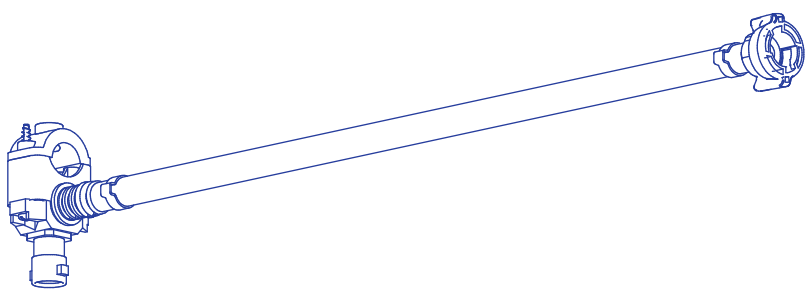
UAN

Description	Order. no.
Hose drop system 5S	092.173.00
Dosing orifices	
1.0 mm/39 stainless steel	050.030.1C.01.00
1.2 mm/48 stainless steel	050.030.1C.03.00
Relocation kit nozzle holder	092.174.00.00.00.0

Description	Order. no.
Hose drop system 5SL	092.173.00.01.00
Dosing orifices	
1.5 mm/59 stainless steel	050.030.1C.02.00
1.8 mm/72 stainless steel	050.030.1C.04.00

- Prior to each spraying season verify the table data by gauging the flow rates
- Make sure that in all hoses the same dosing orifice are fitted
- Lateral hose spacing 0.5 m
- Spray pressure at dosing orifice (gauged with a diaphragm valve)
- The stated liter-per-hectare rates apply to UAN (28/1.29 kg/l)

NEU



Row width adaption (e.g. corn 0.75 cm row spacing) with relocation kit nozzle holder
3/4“ (25 - 28 cm) on request
assembly to wet boom 1/2“ (20 - 22 cm)

Find further information in our manual:

www.lechler-agri.com/manuals

Air-injector off center nozzles IS

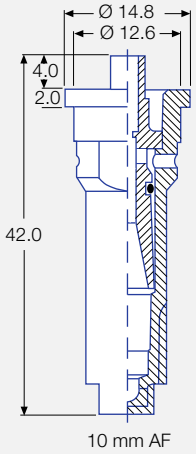
Extremely low-drift, air-injector off center nozzle for border application and banding.

Advantages

- Same JKI drift reduction class in combination with ID3/ID/IDN nozzles in the field spray boom
- Volume flow adapted for optimum cross distribution in combination with ID3/ID/IDN/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)

G 1682
G 1753
G 1754
G 1755
G 1999
G 2000





Crop production | Ground care

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
Very coarse – coarse

Width across flats
10 mm

Application areas

Border nozzle

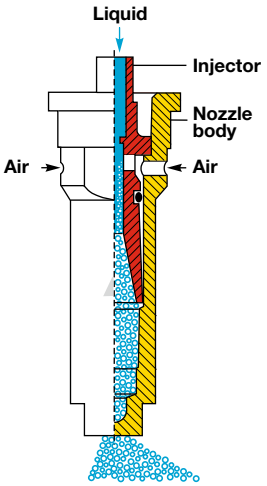
Band spraying in orchards and vineyards

Vertical boom

Spray frame



Toolless removable injector



Spray table for air-injector off center nozzles IS

		l/min						
		2.0	3.0	4.0	5.0	6.0	7.0	8.0
IS 80-02	60 M	0.49	0.60	0.69	0.77	0.84	0.91	0.97
IS 80-025	60 M	0.70	0.86	0.90	1.13	1.24	1.34	1.43
IS 80-03	60 M	0.86	1.05	1.21	1.35	1.48	1.60	1.71
IS 80-04	60 M	1.11	1.36	1.57	1.75	1.92	2.07	2.21
IS 80-05	25 M	1.23	1.51	1.74	1.95	2.14	2.31	2.47
IS 80-06	25 M	1.36	1.67	1.93	2.16	2.37	2.56	2.73

Drift reduction: 90/75/50 %

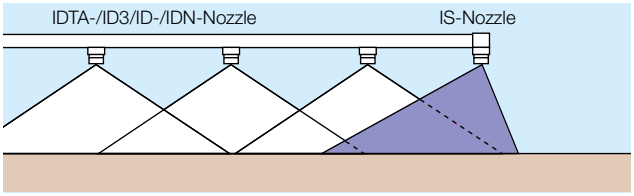
Current list under
www.lechler-agri.com

- Application data valid for water
- Gauge the nozzle flow rates prior to each spraying season
- Spray pressure at the nozzle tip

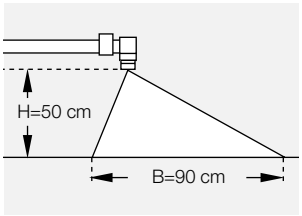
Please ask for additional installation instructions A100 for broadcast spraying and A 200 for banding.

Example of ordering

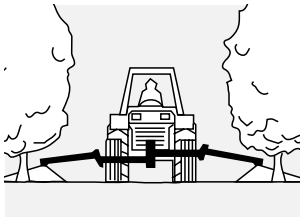
Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
IS		80°		02		(POM)	=	IS 80-02



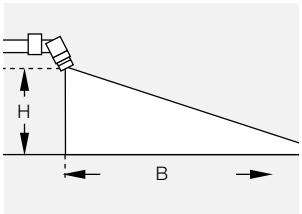
Defined border spraying



Spray dimensions



Band spraying in orchards/ vineyards



Accessories: swivel nozzle holders, etc. (see page 110)



Underleaf spraying in row crops

Air-injector off center compact nozzles IDKS

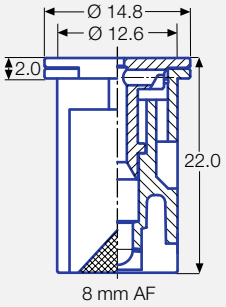
Very low-drift, compact air-injector off center nozzle for border application and banding.

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)

G 1786
G 1787
G 1788
G 1789
G 1998





Crop production | Ground care

Nozzle size
015 – 06

Spray angle
80°

Material
POM

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

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

Droplet size
Very coarse – medium

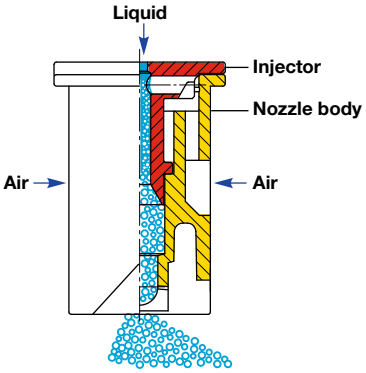
Width across flats
8 mm

Application areas

- Border nozzle
- Band spraying in orchards and vineyards
- Vertical boom
- Spray frame
- Backpack sprayer
- Greenhouse



Toolless removable injector



Spray table for air-injector off center compact nozzles IDKS

		l/min						
		bar						
		1.0	1.5	2.0	3.0	4.0	5.0	6.0
IDKS 80-015	60 M	-	0.28	0.32	0.39	0.45	0.51	0.55
IDKS 80-02	60 M	-	0.42	0.48	0.59	0.68	0.76	0.83
IDKS 80-025	60 M	-	0.56	0.65	0.80	0.92	1.03	1.13
IDKS 80-03	60 M	0.57	0.70	0.81	0.99	1.15	1.28	1.40
IDKS 80-04	60 M	0.69	0.84	0.97	1.19	1.37	1.53	1.68
IDKS 80-05	25 M	0.91	1.12	1.29	1.58	1.82	2.04	2.23
IDKS 80-06	25 M	1.14	1.39	1.61	1.97	2.28	2.55	2.79

Drift reduction: 90/75/50 %

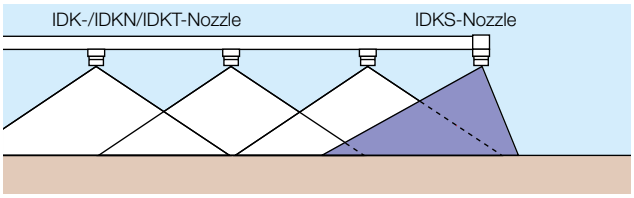
Current list under **www.lechler-agri.com**

- Application data valid for water
- Gauge the nozzle flow rates prior to each spraying season
- Spray pressure at the nozzle tip

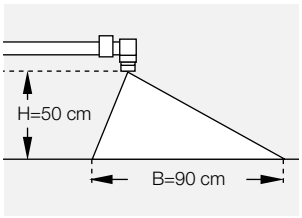
Please ask for additional installation instructions A100 for broadcast spraying and A 200 for banding.

Example of ordering

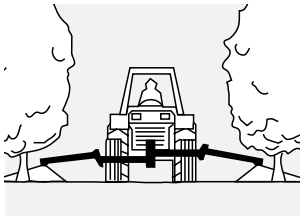
Type	+	spray angle	+	int'l nozzle size	+	material	=	order number
IDKS		80°		02		(POM)	=	IDKS 80-02



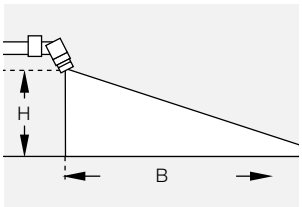
Defined border spraying



Spray dimensions



Band spraying in orchards/ vineyards



Accessories: swivel nozzle holders, etc. (see page 110)



Underleaf spraying in row crops

Off center flat spray nozzles BN

Off center nozzle with wide throw characteristic for area spraying without spray boom as well as for border application and banding.

Advantages

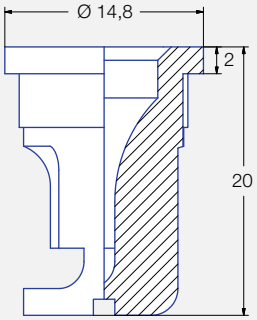
- Asymmetrical flat spray nozzle
- Robust and clog-resistant flood nozzle design
- Spraying on both sides with max. 2.75 m spray bandwidth at 0.5 m spray height
- Color marking of left-spraying (white) and right-spraying (black) nozzles
- Uniform cross distribution of nozzle combination



BN 07 L



BN 07 R



Crop production | Ground care

Nozzle size
07

Spray angle
100°

Material
POM

Pressure range
1 – **2** – **4** – 6 bar

Recommended filters
25 M

Droplet size
Medium – fine

Width across flats
Ø 12.65 mm

Application areas

Banding

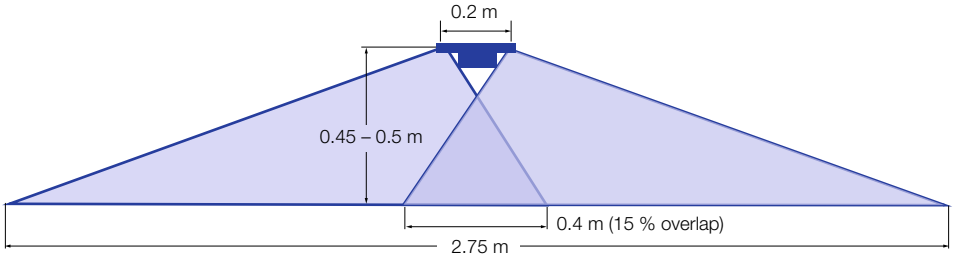
Boomless application

Spray table for
off center flat spray nozzles BN

		l/min					
		[bar]					
		1.0	2.0	3.0	4.0	5.0	6.0
BN 07	25 M	1.59	2.25	2.76	3.18	3.56	3.90

Example of ordering						
Type	**+ spray angle**	**+ int'l nozzle size**	**+**	**material**	**=**	**order nuumber**
BN	**100°**	**07**		**POM L (white)**	**=**	**BN 07 L**
BN	**100°**	**07**		**POM R (black)**	**=**	**BN 07 R**

Configuration of the nozzle in the bandage:



Fixed installation of BN-nozzle on special bayonet cap system MULTIJET (see page 107) and TWISTLOC (see page 109) for tongue nozzles



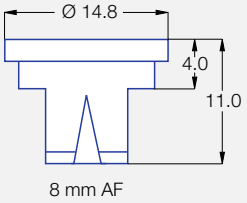
Alternative mounting of the nozzle with a round hole bayonet cap (see page 107) or union nut 3/8“ (see page 112).
The correct adjustment and alignment is done by twisting the nozzle e.g. with screwdriver slot on the tongue.

Off center flat spray nozzles OC

Off center nozzle for border application and banding.

Advantages
- Laterally offset orifice
- Asymmetrical flat spray nozzle





Crop production | Ground care

Nozzle size
2 – 30

Spray angle
90°

Material
Brass, stainless steel

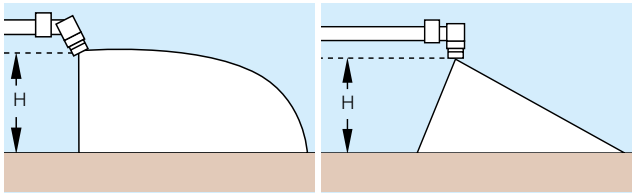
Pressure range
1.5 – 2.5 – 5 bar

Recommended filters
60 M 2 – 4
25 M 5 – 30

Droplet size
Medium – fine

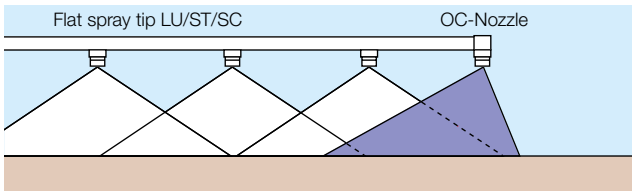
Width across flats
8 mm

Application areas
- Border nozzle
- Band spraying in orchards and vineyards
- Vertical boom
- Spray frame
- Backpack sprayer
- Greenhouse
- Riding arena floor



Spray dimensions

OC nozzles mounted on individual or double swivel joints* allow adjustment to any angle and, hence, wide and narrow covered areas.
*(see page 110)



Defined border spraying

Spray table for off center flat spray nozzles OC

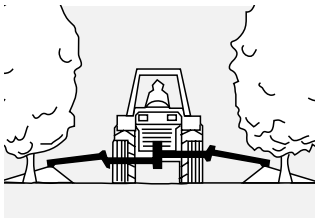
		l/min [bar]				
		1.5	2.0	3.0	4.0	5.0
OC 2	60 M	0.49	0.65	0.80	0.92	1.03
OC 3	60 M	0.88	1.01	1.24	1.43	1.60
OC 4	60 M	1.11	1.28	1.56	1.81	2.02
OC 5	25 M	1.37	1.58	1.94	2.24	2.50
OC 6	25 M	1.64	1.90	2.32	2.68	3.00
OC 8	25 M	2.16	2.50	3.06	3.53	3.95
OC 12	25 M	3.47	4.00	4.90	5.66	6.33
OC 20	25 M	5.45	6.30	7.71	8.91	9.96
OC 30	25 M	8.66	10.00	12.25	14.14	15.81

- Application data valid for water
- Gauge the nozzle flow rates prior to each spraying season
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

Example of ordering

Type	+	int'l nozzle size	+	material	=	order number
OC		2		S (stainless steel)	=	OC 2 S
OC		2		Brass	=	OC 2 brass

Nozzle size in boom (LU/ST/SC)	Recommended OC-end nozzle
	Defined border spraying
-02	OC 2
-03	OC 3
-04	OC 4
-05	OC 5
-06	OC 6
-08	OC 8



Banding in orchards/vineyards



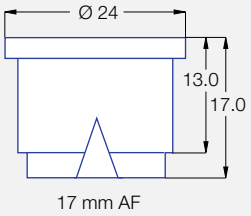
Underleaf spraying in row crops

Off center flat spray nozzles OC

Off center nozzle with wide throw width characteristic.

Advantages
- Laterally offset orifice
- Asymmetrical flat spray nozzle
- Spraying range 6 – 8 m





Crop production | Ground care

Nozzle size
40 – 80

Spray angle
90°

Material
Brass

Pressure range
2 – 5 bar

Recommended filters
25 M

Droplet size
Medium – fine

Width across flats
17 mm

Application areas

Greenhouse

Riding arena floor

Boomless application

Spray table for off center flat spray nozzles OC

	l/min [bar]				Recommended combination with flat-spray nozzles, e.g. LU-/IDK-/IDKN-nozzles
	2.0	3.0	4.0	5.0	
OC 40-846	12.50	15.30	17.70	19.80	-03/-04
OC 60-926	20.00	24.49	28.28	31.62	-05/-06
OC 80-966	25.00	30.62	35.36	39.53	-06/-08

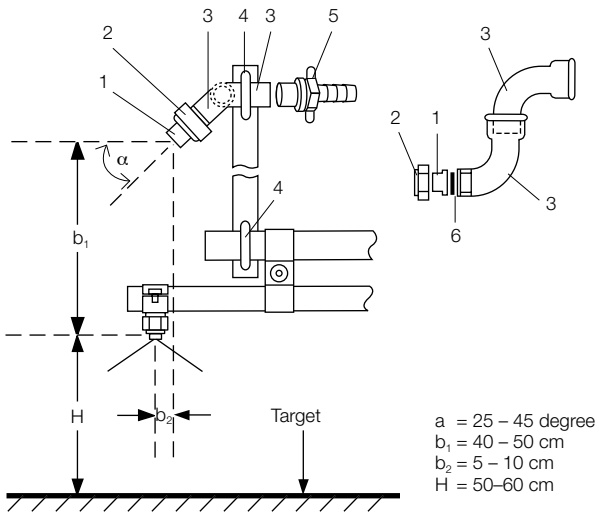
- Application data valid for water
- Gauge the nozzle flow rates prior to each spraying season
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

Mounting/adjusting of boom-sprayer nozzles

Mount one wide-angle nozzle at each end of the boom. The individual nozzles are supplied with liquid via separate section valve or T-connector from adequately sized feedlines.

Take care to ensure that the implement has a sufficiently powerful pump, because a pair of wide-angle nozzles consume up to 80 l/min.

Item	Description	Order. no.
1	OC nozzle	OC 40-846 OC 60-926 OC 80-966
2	Threaded cap	065.600.30.00
3	90° elbow 3/4“ male and female threads	see page 114
4	Pipe clamp	-
5	3/4" hose shank	see page 113
6	Gasket	065.640.72.00



Spraying range/ effective working width

The spraying range is a function of the setting angle α:

Setting angle α (degree)	Spraying range a (m) ca.
25	9.0
30	8.5
35	8.0
40	6.0
45	5.5



Nippel
Order. no.
065.611.30



Gasket
Order. no.
065.640.72



OC nozzle



Threaded cap 3/4“
Order. no.
065.600.xx
(Brass or stainless steel)

Even flat spray nozzles E

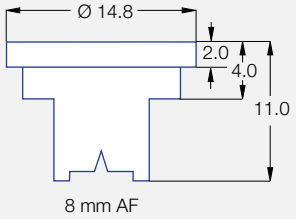
Flat spray nozzle with rectangular liquid distribution for band and row spraying.

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
- Product application quantity only 10 – 50 % in comparison with full-area treatment

G 1435
G 1436
G 1437
G 1438







Crop production | Ground care

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
Coarse – fine

Width across flats
8 mm

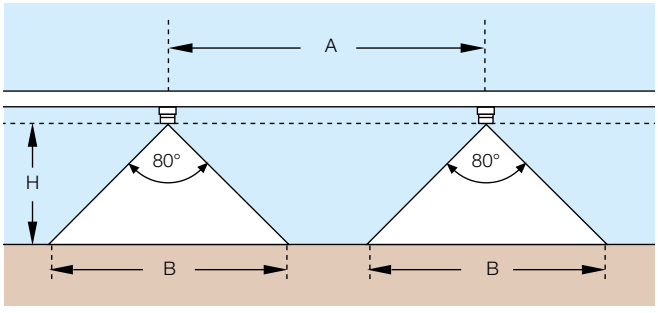
Application areas

Band spraying

Backpack sprayer

Nozzle alignment

Lechler's even flat spray nozzles ES 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

See page 9 for a formula to calculate the application rate for band and row spraying.

Spray height H cm	Band width B cm	Application rate* (in %), for a 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

* Percentages in comparison with full-area treatment

Spray table for even flat spray nozzles E

		l/min	(l/ha)														
			Row spacing 0.5 m					Row spacing 0.75 m					Row spacing 1 m				
			5.0 km/h	6.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	5.0 km/h	6.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h	5.0 km/h	6.0 km/h	8.0 km/h	10.0 km/h	12.0 km/h
E 8001 (80 M)	1.0	0.23	55	46	35	28	23	37	31	23	18	15	28	23	17	14	12
	1.5	0.28	67	56	42	34	28	45	37	28	22	19	34	28	21	17	14
	2.0	0.32	77	64	48	38	32	51	43	32	26	21	38	32	24	19	16
	3.0	0.39	94	78	59	47	39	62	52	39	31	26	47	39	29	23	20
	4.0	0.45	108	90	68	54	45	72	60	45	36	30	54	45	34	27	23
E 80015 (80 M)	1.0	0.34	82	68	51	41	34	54	45	34	27	23	41	34	26	20	17
	1.5	0.42	101	84	63	50	42	67	56	42	34	28	50	42	32	25	21
	2.0	0.48	115	96	72	58	48	77	64	48	38	32	58	48	36	29	24
	3.0	0.59	142	118	89	71	59	94	79	59	47	39	71	59	44	35	30
	4.0	0.68	163	136	102	82	68	109	91	68	54	45	82	68	51	41	34
E 8002 (60 M)	1.0	0.46	110	92	69	55	46	74	61	46	37	31	55	46	35	28	50
	1.5	0.56	134	112	84	67	56	90	75	56	45	37	67	56	42	34	57
	2.0	0.65	156	130	98	78	65	104	87	65	52	43	78	65	49	39	71
	3.0	0.80	192	160	120	96	80	128	107	80	64	53	96	80	60	48	57
	4.0	0.92	221	184	138	110	92	147	123	92	74	61	110	92	69	55	81
E 8003 (60 M)	1.0	0.72	173	144	108	86	72	115	96	72	58	48	86	72	54	43	36
	1.5	0.88	211	176	132	106	88	141	117	88	70	59	106	88	66	53	44
	2.0	1.01	242	202	152	121	101	162	135	101	81	67	121	101	76	61	51
	3.0	1.24	298	248	186	149	124	198	165	124	99	83	149	124	93	74	62
	4.0	1.43	343	286	215	172	143	229	191	143	114	95	172	143	107	86	72
E 8004 (60 M)	1.0	0.91	218	182	137	109	91	146	121	91	73	61	109	91	68	55	46
	1.5	1.12	269	224	168	134	112	179	149	112	90	75	134	112	84	67	56
	2.0	1.29	310	258	194	155	129	206	172	129	103	86	155	129	97	77	65
	3.0	1.58	379	316	237	190	158	253	211	158	126	105	190	158	119	95	79
	4.0	1.82	437	364	273	218	182	291	243	182	146	121	218	182	137	109	91
E 8005 (25 M)	1.0	1.14	274	228	171	137	114	182	152	114	91	76	137	114	86	68	57
	1.5	1.39	334	278	209	167	139	222	185	139	111	93	167	139	104	83	70
	2.0	1.61	386	322	242	193	161	258	215	161	129	107	193	161	121	97	81
	3.0	1.97	473	394	296	236	197	315	263	197	158	131	236	197	148	118	99
	4.0	2.28	547	456	342	274	228	365	304	228	182	152	274	228	171	137	114
E 8006 (25 M)	1.0	1.36	326	272	204	163	136	218	181	136	109	91	163	136	102	82	68
	1.5	1.67	401	334	251	200	167	267	223	167	134	111	200	167	125	100	84
	2.0	1.93	463	386	290	232	193	309	257	193	154	129	232	193	145	116	97
	3.0	2.36	566	472	354	283	236	378	315	236	189	157	283	236	177	142	118
	4.0	2.73	655	546	410	328	273	437	364	273	218	182	328	273	205	164	137
E 8008 (25 M)	1.0	1.82	437	364	273	218	182	291	243	182	146	121	218	182	137	109	91
	1.5	2.23	535	446	335	268	223	357	297	223	178	149	268	223	167	134	112
	2.0	2.58	619	516	387	310	258	413	344	258	206	172	310	258	194	155	129
	3.0	3.16	758	632	474	379	316	506	421	316	253	211	379	316	237	190	158
	4.0	3.65	876	730	548	438	365	584	487	365	292	243	438	365	274	219	183

Drift reduction: 90/75/50 %

Current list under
www.lechler-agri.com

- Spray pressure at the nozzle tip (gauged with a diaphragm valve).
- The stated liter-per-hectare rates apply to water.
- Prior to each spraying season, verify the table data by gauging the flow rates.
- Make sure that all nozzles have the same settings.

Example of ordering

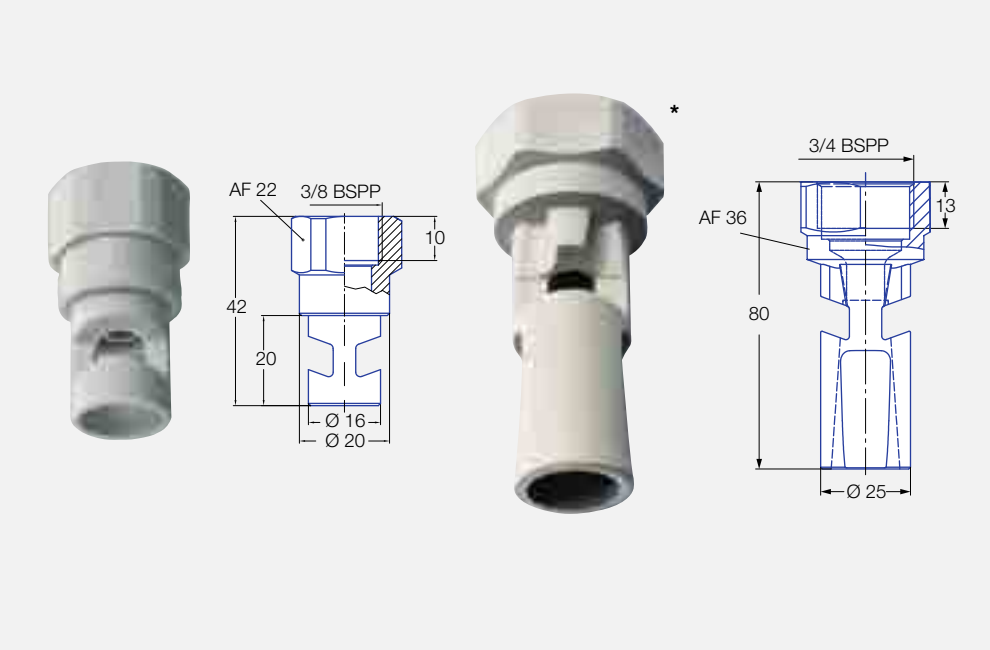
Type +	spray angle +	int'l nozzle size +	material =	order number
E	80°	02	Brass =	8002 E brass
E	80°	02	POM =	8002 E



Injector agitator nozzles

Agitator nozzle for fast and homogeneous mixing in tanks.

Advantages
- Injector effect reinforces turbulence of the solid jet in the tank
- Effective circulation of large liquid quantities with a relatively small flow rate
- Clog-resistant due to large cross-sections



Bore diameter
Ø 2.2 – 10.55 mm

Material
PP

Pressure range
2 – 10 bar

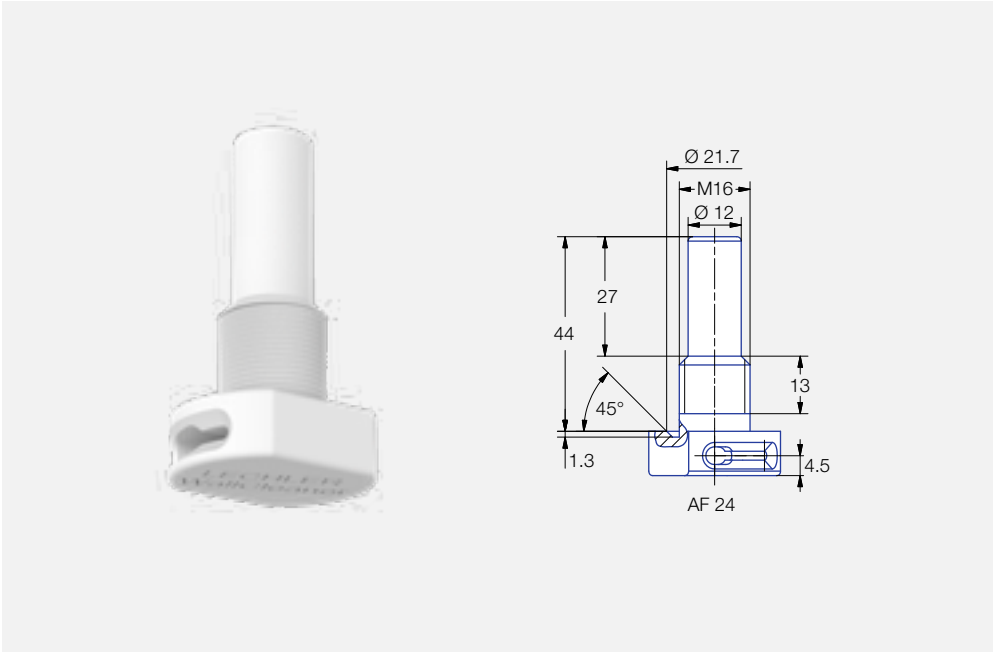
Order. no.	Bore-Ø (mm)	l/min				
		2.0 bar	4.0 bar	6.0 bar	8.0 bar	10.0 bar
500.262.53.02	2.2	4.4	6.3	7.7	8.9	9.9
500.262.53.04	3.6	11.1	15.7	19.2	22.1	27.7
500.262.53.06	4.5	18.3	26.0	31.8	36.7	41.0
500.262.53.08	6.0	31.6	44.7	54.8	63.2	70.7
*500.262.53.20	10.55	96.1	136.0	166.5	192.3	215.0

Cleaning nozzle for induction hopper „WallCleaner“

Special nozzle for induction hoppers for induction and cleaning.

Advantages

- Lump-free induction of plant protection products by rotating liquid flow
- Complete rinsing of inner wall up to under the edge for round induction hoppers
- Simple assembly by
- M16 bolt/nut design
- Plug connection for rinsing water (Ø 12 mm)
- Simple alignment of nozzle head with open-end wrench 24 AF



Bore diameter
Ø 4.0 mm

Spray angle
60°

Material
POM

Pressure range
4 – 8 bar

Order. no.	Bore-Ø (mm)	l/min		
		4.0 bar	6.0 bar	8.0 bar
600.569.56.01	4.0	19.8	24.3	28



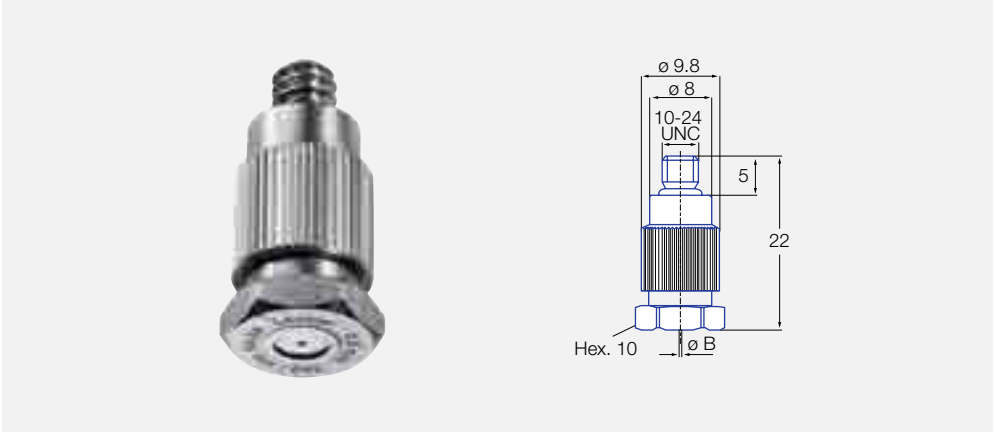
High-pressure fog nozzle 2MN

High-pressure nozzle for extremely fine, fog-like spray. For air moisturization, adiabatic cooling and disinfection of stables and greenhouses.

Advantages
- Extremely fine, fog-like hollow cone spray
- Non-return valve included

Connection
10-24 UNC

Additional versions on request:
- Bore diameters
  - 0.6 mm
  - 0.7 mm
- Connections
  - 12-24 UNC
  - M5
- Material
  - 316L SS
- Gasket
  - FKM/viton (brown)
- Nozzle plug



	Ordering no.		B Ø [mm]	V̇ [l/h]							
	Type	Mat. no. 16 303 SS		p [bar] (p_{min} = 30 bar)* (p_{max} = 130 bar)**							
				30	40	50	60	70	80	90	100
55°	**2MN.014.16.00.00**	○	0.15	1.44	2.28	2.58	2.82	3.00	3.48	3.84	4.08
70°	**2MN.025.16.00.00**	○	0.2	2.46	3.42	3.78	4.26	4.50	5.10	5.10	5.46
85°	**2MN.055.16.00.00**	○	0.3	4.20	4.92	5.46	6.12	6.30	6.96	7.32	7.92
90°	**2MN.086.16.00.00**	○	0.4	5.64	6.96	7.68	8.52	9.00	9.54	10.14	11.10
95°	**2MN.106.16.00.00**	○	0.5	7.02	8.16	9.60	10.80	11.40	11.70	12.54	13.68

B = bore diameter
* Opening pressure: approx. 8 bar
** The pipe system is the limiting factor.

Bore diameter
0.15 - 0.5
0.6 and 0.7 on request

Spray angle
55° – 95°

Materials
303 SS, nozzle tip
316L SS, spring
302 SS,
gasket NBR (black)

Pressure range
30 - **60 - 80** - 130 bar

Application areas
Greenhouse

Stable

High-pressure cleaning nozzles

Solid and flat spray nozzles for high-pressure cleaners.

Advantages

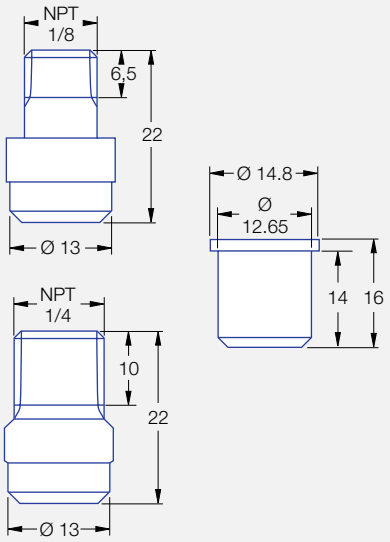
- Maximum cleaning force due to „razor-sharp“ cleaning jets
- Wear-resistant, hardened special stainless steel for long service life
- Recessed outlet opening protects nozzle against mechanical damage
- Maximum precision for uniform, concentrated jet force
- Connection possible via external thread and union nut



Flat spray nozzles



Cluster solid jets



Nozzle sizes
04-06

Spray angle
0° – 40°

Material
hardened stainless steel, (hard-metal insert on request)

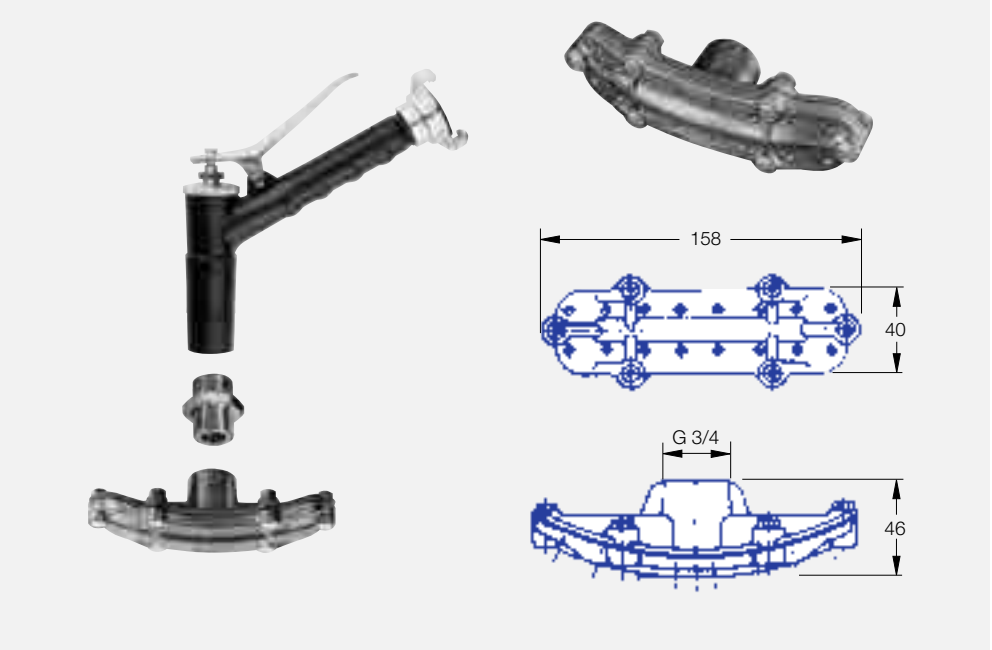
Pressure range
40 – 200 bar

	Nozzle type	l/min [bar]		Order. no.		
				Male threads		Threaded version G 3/8
		60.0	100.0	NPT 1/8	NPT 1/4	
0°	00-04	7.1	9.2	550.450	546.450	548.450
	00-05	8.9	11.5	550.480	546.480	548.480
	00-06	10.6	13.6	550.520	546.520	548.520
15°	15-04	7.1	9.2	608.451	602.451	652.451
	15-05	8.9	11.5	608.481	602.481	652.481
	15-06	10.6	13.6	608.521	602.521	652.521
25°	25-04	7.1	9.2	608.452	602.452	652.452
	25-05	8.9	11.5	608.482	602.482	652.482
	25-06	10.6	13.6	608.522	602.522	652.522
40°	40-04	7.1	9.2	608.453	602.453	652.453
	40-05	8.9	11.5	608.483	602.483	652.483
	40-06	10.6	13.6	608.523	602.523	652.523

Fan nozzles

Special nozzle for gentle delivery of large liquid quantities.

Advantages
- Fine, gentle atomization
- Gentle plant irrigation
- Effective disinfection of livestock buildings. Please observe the safety instructions of the chemical label
- Optionally available with spray gun and GEKA connection coupling



Material
Light alloy

Pressure range
2 – 10 bar

Order. no. Nozzle with spray gun GEKA connector	**Order. no.** Double nipple G 3/4“
095.016.00.01.76	065.611.30

Order. no. Nozzle excl. stay tube 3/4“ connector	**Flow rate** l/min, at 2.0 bar	5.0 bar	10.0 bar
531.003.41.00	31.5	49.8	70.4
531.093.41.00	53.0	83.8	119
531.133.41.00	67.0	106	150



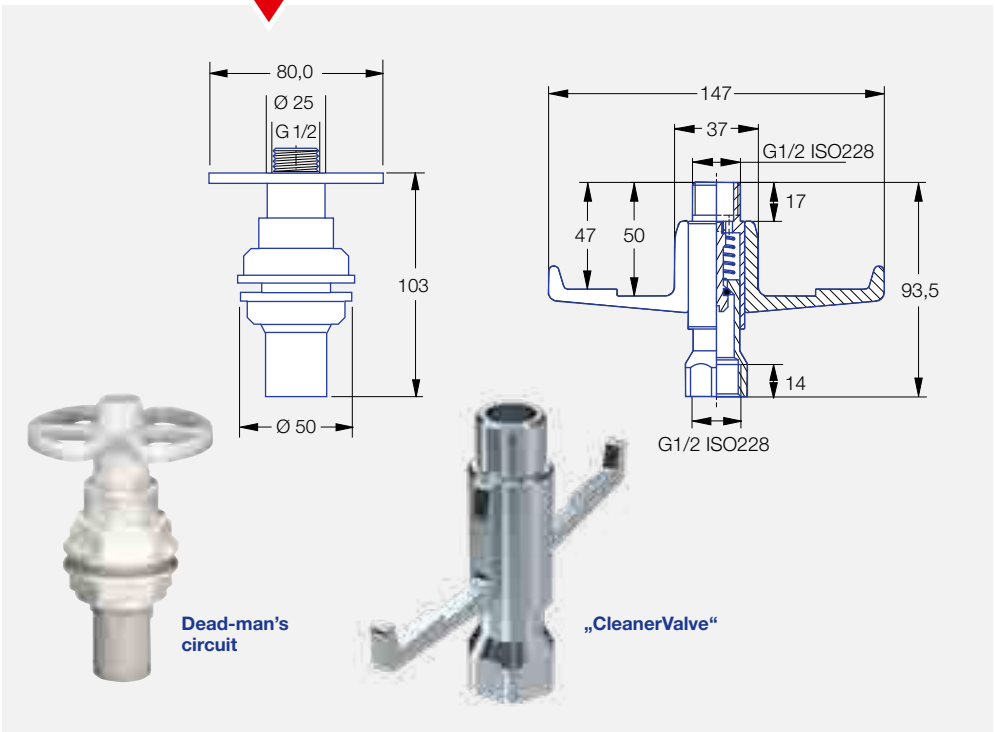
Dead-man's circuit and „CleanerValve“

NEW

Safety valve for practical canister cleaning.

Advantages

- Valve is simple and convenient to operate
- Safety valve opens only in the event of container pressure
- Can be combined with static and rotating container cleaning nozzles
- Suitable for internal cleaning of all common canisters, containers and plant protection product packaging
- Better cleaning effect with stainless steel version in that container cleaning nozzle plunges deeper into container



Material
POM,
stainless steel

Pressure range
2 – 5 bar
>5 bar: use orifice for reduction of the pressure

Width across flats
CleanerValve
hex
Ø 27 mm

Material	Order. no.
POM	A.510.100.00
stainless steel	092.175.17.00.00.0

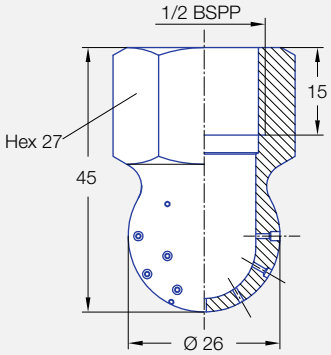


Static spray ball Series 540 / 541

Static multichannel solid jet nozzle.

Advantages
- Ideal for rinsing containers
- Compact design
- Self-draining
- No moving parts and thus fault-free
- Easy to inspect





Spray angle
240°

Material
Solid stainless steel, PVC

Pressure range
2 - **3** - 10 bar

Operating principle
Static

Installation
Operation in every direction is possible

Max. tank diameter
7.5 m

	Order. no.	l/min					Max. tank diameter [m]
		2,0 bar	3,0 bar	4,0 bar	5,0 bar	10,0 bar	
240°	540.909.16[1]	18.0	22.0	25.4	28.5	40.2	6.5
	540.989.16[1]	28.0	34.3	39.6	44.3	62.6	7.0
	541.109.16	57.0	69.8	80.6	90.1	127.5	7.5

[1] Also available in PVC

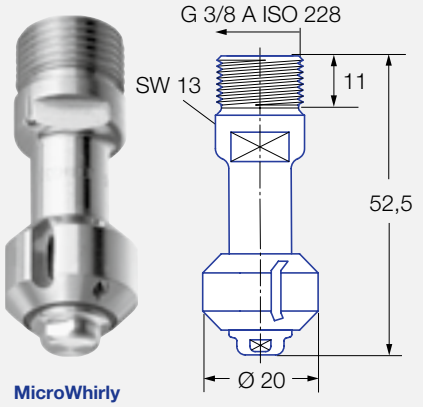
Rotating cleaning nozzles „MicroWhirly“ and „ContiCleaner“ with slide bearing

NEW

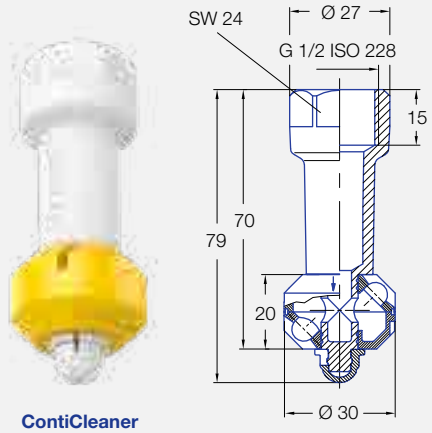
Rotating cleaning head with flat spray nozzles and slide bearings.

Advantages
- Effective rotating cleaning by means of flat spray nozzles
- Optimum internal cleaning of plant protection equipment tanks, canisters, containers and plant protection product packaging
- Self-powered, without external drive
- Robust design
- Resistant to chemicals

ContiCleaner
- optimised for continuous internal cleaning
- It runs easily even at low pressure
- especially for small working widths (ca. 15 m) and sprayers for wine and orchards; for continuous internal cleaning without spray residues in the tank



MicroWhirly



ContiCleaner

Order. no. Type	Material-code 316 LSS	5E PVDF	PTFE and PVDF	l/min 2.0 bar	3.0 bar	5.0 bar	Dimensions H_1	H_2	D	G	SW	Max. tank diameter [m]
360° 500.191	–	○	○	20	24	31	79	15	30	G 1/2 ISO 228	24	1.1
566.939.1Y.AE	○	–	○	21	26.0	33.6	52.5	11	20	G 3/8 ISO 228	13	1.7
500.191.55.60.00.0			○	20.4	25	32.3	79	15	30	G 1/2 ISO 228	24	1.6
500.191.55.33.00.0			○	9.8	12	15.5	79	15	30	G 1/2 ISO 228	24	1.6
500.191.55.25.00.0			○	8.2	10	12.9	79	15	30	G 1/2 ISO 228	24	1.6
500.191.55.12.00.0			○	4.1	5	6.5	79	15	30	G 1/2 ISO 228	24	1.6

Spray angle
360°

Material
PVDF, stainless steel

Pressure range
2 - 5 bar

Operating principle
Free-spinning

Installation
Operation in every direction is possible

Max. tank diameter
Type 566: 1.7 m
Type 500.191: 1.1 m

Filtration
Line strainer with a mesh size of 0.3 mm/50 mesh

Bearing
Slide bearing made of PEEK and PVDF



Function video

Scan the QR-code or go to:
www.lechler.de/MicroWhirlyGB



Function video

Scan the QR-code or go to:
www.lechler.de/PVDFMicroWhirlyGB

Rotating cleaning nozzles, „CanCleaner“ and „MiniWhirly“ ball bearing-mounted

NEW

Rotating cleaning head with flat spray nozzles and ball bearings.

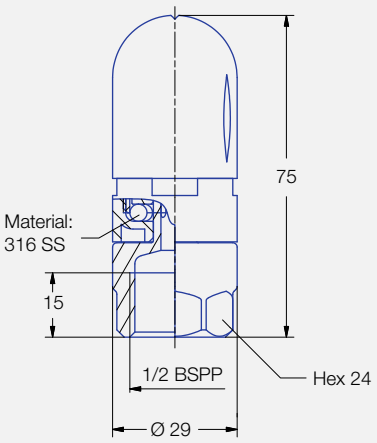
Advantages
- Effective rotating cleaning by means of flat spray nozzles
- Optimum internal cleaning of plant protection equipment tanks, canisters, containers and plant protection product packaging
- Self-powered, without external drive
- Slow rotation for optimum cleaning effect
- Resistant to chemicals

CanCleaner
- 20% increased flow rate towards canister bottom



CanCleaner

MiniWhirly



Spray angle
300°

Material
POM

Pressure range
2 - 3 - 5 bar

Operating principle
Free-spinning

Max. tank diameter
1.3 m

Filtration
Line strainer with a mesh size of 0.3 mm/50 mesh

Bearing
Ball bearing made of stainless steel

	Order. no.	l/min				Max. tank diameter [m]
		2.0 bar	3.0 bar	4.0 bar	5.0 bar	
300°	500.186.56.AH	18.0	22.0	25.4	28.4	1.3
	500.186.56.06.00.0	24.7	27.3	29.3	31	1.3



Function video

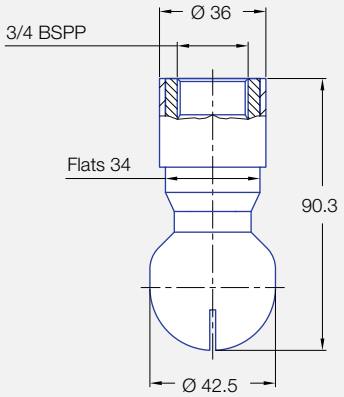
Scan the QR-code or go to:
www.lechler.de/MiniWhirlyGB

Rotating tank cleaning nozzle „MiniSpinner“ double ball bearing mounted

Rotating cleaning head with flat spray nozzles and double ball bearings.

Advantages
- Efficient internal cleaning thanks to innovative slot design
- Reliable and long service life due to double ball bearings
- Self-powered, without external drive
- Resistant to chemicals





Spray angle
360°

Material
Stainless steel

Pressure range
1 - **2** - 3 bar

Operating principle
Free-spinning

Installation
Operation in every direction is possible

Max. tank diameter
2.3 m

Filtration
Line strainer with a mesh size of 0.1 mm/170 Mesh

Bearing
Double ball bearing made of AISI 440C

	Order. no.	l/min			Max. tank diameter [m]
		1.0 bar	2.0 bar	3.0 bar	
360°	5MI.054.1Y.AL	21	30	37	1.8
	5MI.074.1Y.AL	35	49	60	2.1
	5MI.014.1Y.AL	49	69	85	2.3



Function video

Scan the QR-code or go to:
www.lechler.de/SpinnerGB

ENGINEERING
YOUR SPRAY SOLUTION

Accessories



ESV (Electrical Stop Valve)

PATENTED

NEW

Electrical Stop Valve to control individual nozzles in a field spray boom.

Advantages:
- Energy storage device with boost- and buck-mode (patented)
- Very precise application thanks to individual nozzle control
- Ability to communicate with ISOBUS
- Simple cabling allows easy upgrade
- Very robust thanks to encapsulated electronics and ventilation of the valves
- Low power consumption thanks to charge control and energy storage device





Electrical Stop Valve: More precision and less costs thanks to less overlapping

Designation	Order no.
Valve inside (black)	065.288.00.00.00
Valve outside (grey)	065.288.00.01.00
Terminating resistor	065.288.00.30.00
Adapter box	065.288.00.40.00
Extension cable 2.5 m	065.288.00.20.00

Power consumption
Max. 120 mA

Emergency stop
(at input voltage < 8V)

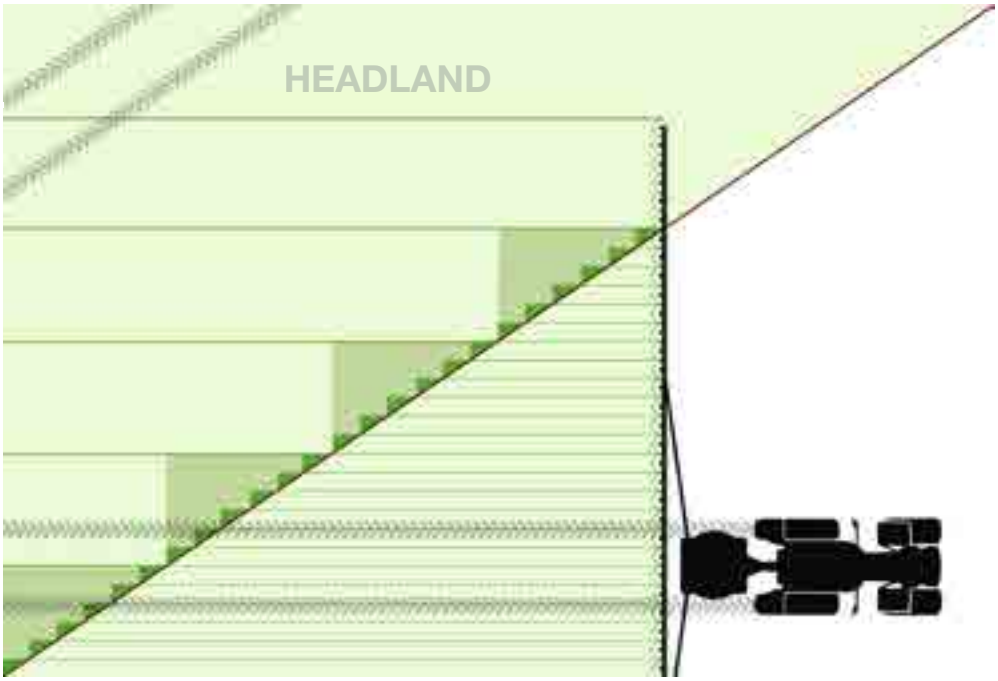
Switching valve
open: 0.3 sec
close: 0.45 sec

Protection class connectors
IP68

Material
PA, POM, PVDF, Viton

Pressure range
Max. 8 bar

Comparison of 3 m and 0.5 m part-width sections



Single nozzle control with the ESV
Part-widths of 50 cm and 25 cm possible
Example: 24 m working width with 50 cm nozzle spacing

= sprayed once
= overlap with 3 m part-width sections
= overlap with ESV

PSV (Pneumatic Stop Valve) with single nozzle holder

Single nozzle holder with pneumatic control.

Advantages

- Continuous field spray line design as ring line with circulation and return
- Spray pressure is held in the spray line when nozzles are closed
- Immediate spray jet build-up at all nozzles after opening the pneumatic shut-off valves
- Easier boom design as no control units are required
- Rotating pneumatic connector facilitates assembly and routing of the air pressure line in the boom



Single nozzle holder with pneumatic shut off

Note: Perfect operation of the PSV requires oil in the pneumatic system.

Material
PA, POM, Viton, PTFE, stainless steel

Pressure range
Max. 8 bar
air pressure
min. 4.5 bar

Emergency stop
at input voltage
4.5 bar

Switching valve
0.2 sec

Code for pipe diameter:		Code for pre-assembled pneu-matic quick connectors (optional):	
20 mm	20	Basis	B
1/2“	21	90°	A
25 mm	25	Straight	S
3/4“	27	Y	Y
1“	34	T	T

Example of ordering

PSV 1/2“ with 90° pneumatic connection **065.282.56.21.0A.0**

VarioSelect® / VarioSelect® II
2- and 4-way nozzle holder

2-way or 4-way nozzle holder with pneumatic control for variable application rate control.

Advantages

- Operation optionally in „Vario“ or „Select“ mode
  - Vario: Fully-automatic control of nozzles/nozzle combination and continuously variable adaptation of the application rate and pressure
  - Select: Manual activation and deactivation of individual nozzles/nozzle combinations
- V2 in new more compact design with proven PSV valve technology (see page 101)
- V4 in modular design
- Single valve located directly in front of the nozzle
- Central liquid supply



VarioSelect® II 2-way nozzle holder (pneumatic quick-action connectors optional)



VarioSelect® 4-way nozzle holder (pneumatic quick-action connectors optional)

Note: Fit all valve bodies on the boom in the same nozzle configuration (size, type), perfect operation of the VarioSelect® requires oil in the pneumatic system.

Material
POM, POM fibre glass reinforced, EPDM, Viton, FPM, stainless steel

Pressure range
Max. 8 bar

Emergency stop
at input voltage 4.5 bar

Switching valve
0.2 sec

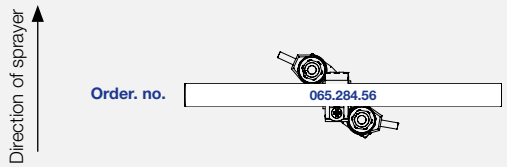
Code for pipe diameter:	
20 mm	20
25 mm	25
1/2“, 22 mm	21
3/4“	27
1“	34

Code for pre-assembled pneumatic quick-action connection (optional):	
90°	A
Basis	B
Y	Y
Others on request.	

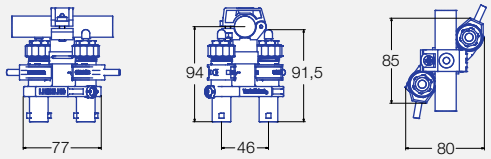
Example of ordering

V2, 1/2“ with Y pneumatic connection	**065.284.56.21.Y0.0**
V4, 3/4“ with 90° pneumatic connection	**065.286.MN.27.A0.0**

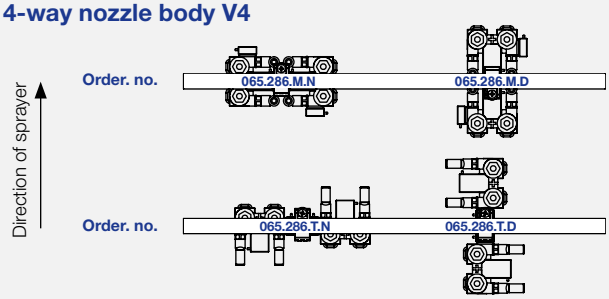
2-way nozzle body V2



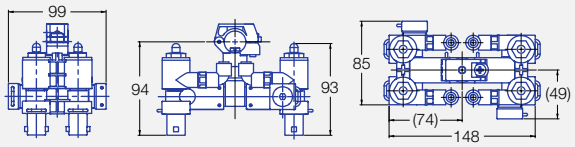
Main dimensions of 2-way nozzle body 1/2“



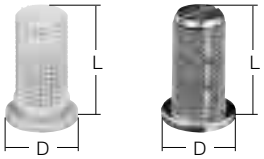
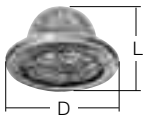
4-way nozzle body V4



Main dimensions of 4-way nozzle body 1/2“



Ball check valves
Nozzle strainers

Ball check valves, Nozzle strainers	Opening Pressure	Mesh size	L mm	D mm	Material	Filter area (without gasket)	Order. no.
Ball check valves* 	0.5 bar	25 M ■ red	21.5	14.8	POM	628 mm²	065.266.56.00
	0.5 bar	60 M ■ blue	21.5	14.8	POM	628 mm²	065.265.56.00
	0.5 bar	25 M	21	14.8	Brass	430 mm²	065.261.30.00
	0.5 bar	60 M	21	14.8	Brass	430 mm²	065.260.30.00
	2.5 bar	25 M ■ red	21.5	14.8	POM	628 mm²	065.266.56.02
	2.5 bar	60 M ■ blue	21.5	14.8	POM	628 mm²	065.265.56.02
Ball check valve (excl. strainers) 	0.5 bar	-	18.5	14.8	POM	–	065.266.56.01
Nozzle strainer* 	-	25 M ■ red	21.5	14.8	POM	628 mm²	065.256.56.00
	-	60 M ■ blue	21.5	14.8	POM	628 mm²	065.257.56.00
	-	80 M ■ yellow	21.5	14.8	POM	430 mm²	A.424.310.5
Slotted strainer 	-	25 M ■ red	21.0	14.8	POM	430 mm²	095.009.56.13.43
Cup strainer 	-	25 M	8.5	14.8	Cu/Monel	184 mm²	065.252.26.00
	-	25 M ■ red	8.5	14.8	PA, Monel	184 mm²	200.029.26.00.03
	-	60 M ■ blue	8.5	14.8	PA,stainless steel	184 mm²	200.029.1C.01.03
Nozzle strainer with integrated seal for TWISTLOC and MULTIJET 	-	25 M ■ red	19.2	18.0	POM, Santoprene	628 mm²	065.269.7J
	-	60 M ■ blue	19.2	18.0	POM, Santoprene	628 mm²	065.268.7J
Nozzle strainer with integrated seal for MULTIJET 	-	60 M ■ blue	19.2	18.8	POM, Santoprene	628 mm²	065.268.7J.10

* Please note: If applicable we deliver the strainers and ball check valves in the colour coding according to ISO 19732:2007 (see page 6)

Spray frame

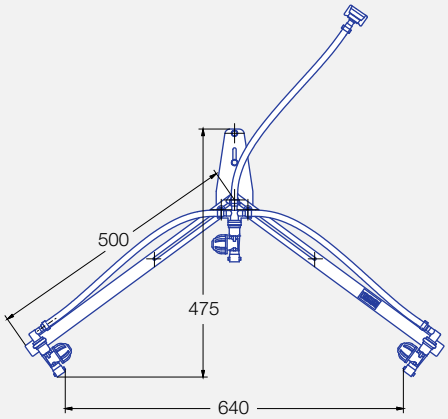
3 nozzle fork for uniform spraying and penetration of row crops.

Advantages

- Variable nozzle equipment, e.g. with twin (IDKT at top) and flat spray nozzles (IDK at sides)
- Uniform wetting and crop penetration at the sides and from above
- Flexible adaptation to individual crop by adjustable spray arms
- Robust, wear-resistant spray arm design in stainless steel
- Easy assembly on every spray boom

Nozzle equipping:
ID (90°/120°), IDK (90/120°), IDKN, IDKT, IS, IDKS, LU (90°/120°), ST (60°), DF, E, TR, OC





Opening angle
Spraying arms: 55°-107°

Material
Stainless steel, PA

Pressure range
Max. 8 bar

Application areas

Plant protection products

Strawberries

Order. no. 092.165.00
Delivery contents: Spray frame without nozzles, nozzle strainer, gaskets and bayonet caps

Dropleg^{UL}

2017 European Bee Award

ELO CEMA

Underleaf spraying system for broadcast and row applications.

Advantages

- Fits all booms
- Gentle on plants because of lateral free swinging tube
- Less weather-dependent use due to low-drift application on crop
- Optimum plant protection product deposition at the sides and from below on the leaf undersides and stalks
- Variable nozzle equipment with plant protection and liquid fertilizer nozzles
- Robust, light and flexible – only approx. 400 g

JKI Julius Kühn-Institut – Amtlich geprüft und anerkannt

G 1994



Template
Order. no. 092.163.42.10.30

Nozzle equipping:
FT, IDKT, DF, TwinSprayCap
- ID3
- IDK/IDKN
- LU
- FT



Material
POM fibre glass reinforced, PE, PA, stainless steel

Pressure range
Max. 8 bar

Application areas

- Plant protection products and growth regulators
- Vegetable growing
- Liquid fertilizer (AHL UAN)

Order. no. 092.171.56.00
Delivery contents: Preassembled without nozzles, nozzle strainer, gasket and bayonet cap

Designation	Photo	Order no.
TwinSprayCap, System MULTIJET, for flood nozzles		092.163.56.10
Nozzle strainer 60M		065.257.56.00
Y-MULTIJET-Connector 45° forward angling of nozzle		A.402.916.01
MULTIJET-bayonet cap 1/4“ NTP female Double nipple 1/4“ male		A.402.910.01 095.019.30.00.42
Double swivel nozzle holder 1/4“ female* Free adjustable forward angling of nozzle		A.404.172

* For combined application of standard / spray boom + Dropleg^{UL}





Dropleg^{UL} calculator

Dropleg^{UL} Flyer

MULTIJET, MultiCap
Quick release system – wet booms
(Max. pressure 20 bar)

Nozzle holder	Description	Material	Order. no.
	**5-way nozzle holder, compact version with diaphragm check valve** with eyelet connector		
	for 1/2“ pipes	Polyamide (PA)	A.406.494.7
	for 3/4“ pipes	Polyamide (PA)	A.406.495.7
	for 1“ pipes	Polyamide (PA)	A.406.496.7
	**4-way nozzle holder, compact version with diaphragm check valve** with eyelet connector		
	for 20 mm pipes	Polyamide (PA)	A.406.472.71
	for 1/2“ pipes	Polyamide (PA)	A.406.474.7
	for 3/4“ pipes	Polyamide (PA)	A.406.475.7
	for 1“ pipes	Polyamide (PA)	A.406.476.7
	**3-way nozzle holder, compact version, with diaphragm check valve** with eyelet connector		
	for 20 mm pipes	Polyamide (PA)	A.406.422.71
	for 1/2“ pipes	Polyamide (PA)	A.406.424.7
	for 3/4“ pipes	Polyamide (PA)	A.406.425.7
	for 1“ pipes	Polyamide (PA)	A.406.426.7
	**3-way nozzle holder with diaphragm check valve** with eyelet connector		
	for 1/2“ pipes	Polyamide (PA)	A.401.274.7
	for 3/4“ pipes	Polyamide (PA)	A.401.275.7
	for 1“ pipes	Polyamide (PA)	A.401.276.7
	**Single nozzle body with diaphragm check valve** with eyelet connector		
	for 20 mm pipes	Polyamide (PA)	A.402.725
	for 1/2“ pipes	Polyamide (PA)	A.402.745
	for 25 mm pipes	Polyamide (PA)	A.402.75A.5
	for 3/4“ pipes	Polyamide (PA)	A.402.755
	for 1“ pipes	Polyamide (PA)	A.402.765

MultiCap fibre glass reinforced	Description	Color code	Bestell-Nr.
On request completely assembled with IDK/IDKN/IDKT	**Bayonet cap** - incl. gasket (A.402.200.04) - POM fibre glass reinforced - Long side walls fix IDK/IDKN/IDKS/IDKT nozzles best - Best protection of the nozzle - Less exposure of nozzle flats to damage - Optimal fit and offset of nozzle - Fits MULTIJET Bayonet system		
		yellow	092.164.56.10.00
		lavender	092.164.56.20.00
		blue	092.164.56.30.00
		red	092.164.56.40.00
		brown	092.164.56.50.00
		black	092.164.56.60.00



MultiCap with IDK-Nozzle



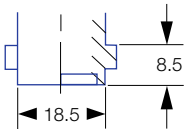
Standard-Bayonet cap with IDK-nozzle

Code for pipe diameter:

1/2“	21 mm
3/4“	27 mm
1“	34 mm

Material
PA, stainless steel, EPDM

Bayonet caps for Multijet and non-Lechler origin
Intermediate and extension adaptor

MULTIJET	Description		Color code	Order. no.
  Labeling on request	**Bayonet cap** incl. gasket (A.402.200.04) for combination with System MULTIJET, for example:  	**Combi cap** for nozzles with 8 and 10 mm AF AD, DF, E, FL, ID, IDK, IDKN, IDKT, IDKS, IS, LU, OC, ST	red	Y.825.3C0.00.00.00.0
			blue	Y.825.3C0.00.30.00.0
			yellow	Y.825.3C0.00.10.00.0
			lavender	Y.825.3C0.00.80.00.0
			green	Y.825.3C0.00.20.00.0
			brown	Y.825.3C0.00.70.00.0
			black	Y.825.3C0.00.40.00.0
			grey	Y.825.3C0.00.90.00.0
			white	Y.825.3C0.00.50.00.0
		Fibre-glass reinforced for nozzles with		
		AF 8	black	A.402.900.01.A
		AF 10	black	A.402.902.01.A
		for hollow cone nozzles TR, ITR, FT hose shanks	black	A.402.904.10
		for flood nozzles FT	blue	A.402.908.4
		Bayonet cap	black	A.402.910.01
		1/4“ NPT female		
		Shut off cap	black	A.402.909

Non-Lechler origin	Description		Color code	Order. no.
Bayonet cap Type H 	System: **– Hardi** incl. gasket (8 and 10 mm AF: 095.015.73.06.36)	**Combi cap** for nozzles with 8 and 10 mm AF AD, DF, E, FL, ID, IDK, IDKN, IDKT, IDKS, IS, LU, OC, ST	black	090.078.56.00.40.1
	Gasket with special shape (in combination with nozzle strainer 065.256.56 or 065.257.56, see page 103)			095.015.7J.04.34
Bayonet cap Type R 	System: **– RAU** incl. gasket (095.015.73.04.61) since 2000 see Bayonet cap MULTIJET above	for nozzles with 8 mm AF AD, E, IDK, IDKN, IDKT, IDKS, LU, OC, ST	red	095.016.56.05.90
		for nozzles with 10 mm AF DF, ID3, IS, FL	lavender	095.016.56.05.97

Intermediate and extension adaptor



Intermediate adaptor* Sys. Lechler Twistloc (092.163.56.00.22.1)
Extension: 22 mm

*incl. gasket



Intermediate adaptor* Sys. Rau (092.163.56.00.21.0)
Extension: 20 mm

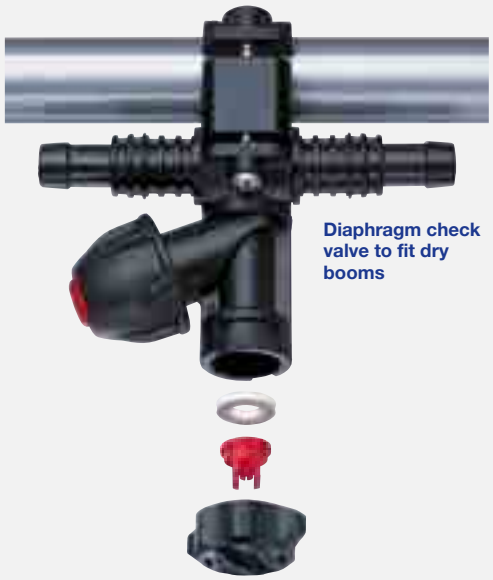


Intermediate adaptor* Sys. Hardi (092.163.56.00.20.1)
Extension: 17 mm

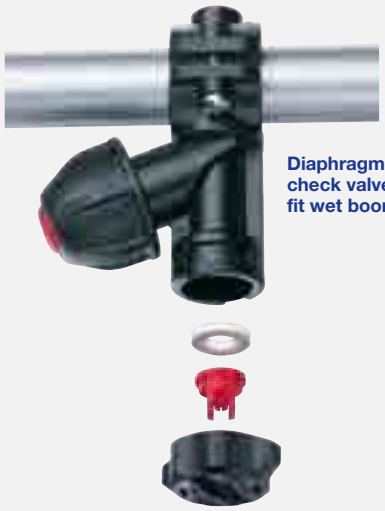


Extension adaptor* System Multijet (092.163.56.00.23.1)
Extension: 32 mm

TWISTLOC
Quick release system
(Max. pressure 20.0 bar)



Diaphragm check valve to fit dry booms



Diaphragm check valve to fit wet booms



Diaphragm check valve with eyelet connector
for 3/4“ pipes
065.272.56.KL
for 1/2“ pipes
065.272.56.KH



Diaphragm check valve for threaded connection
M 18 x 1.5
065.272.56.HB



Single-hose connector
for 3/4“ boom tubings
(25-28 mm O.D.)
065.274.56.KL
for 1/2“ boom tubings
(20-22 mm O.D.)
065.274.56.KH



Two-hose connector
for 3/4“ boom tubings
(25-28 mm O.D.)
065.275.56.KL
for 1/2“ boom tubings
(20-22 mm O.D.)
065.275.56. KH

Strainer (with integrated seal)
60 M
065.268.7J
see page 103
25 M
065.269.7J
see page 103



Eyelet connector
for 1“ pipes
090.023.51.KA
for 3/4“ pipes
090.013.51.KA
for 1/2“ pipes
090.003.51.KA





Bayonet adapter with female thread
M 18 x 1.5
Order. no. 095.009.00.07.98

Ball check valve
60 M
065.265.56.00
25 M
065.266.56.00



Bayonet cap
Range Page 109



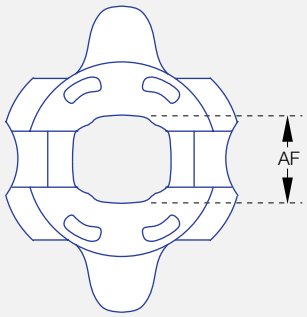


Gasket
065.242.73

TWISTLOC
Bayonet caps
Solenoid valve

- Simple handling
- Ergonomic shape



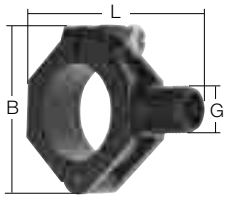


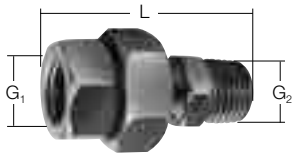
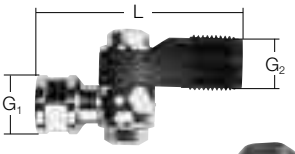
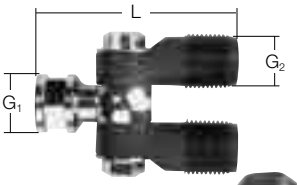
TWISTLOC	Description	Color code	Order. no.
incl. gasket (065.242.73.00) combines with following systems*: - Lechler - Holder - Amazone - Schmotzer - Brendecke - Vogel & Noot	for nozzles with 8 mm AF (IDK, IDKN, IDKS, IDKT, LU, AD, E, OC, ST)	white	065.204.56.05
		brown	065.204.56.06
	for nozzles with 8 and 10 mm AF (ID3, ID, IDN, IS, DF, FL)	red	065.202.56.00
		black	065.202.56.01
		yellow	065.202.56.02
		green	065.202.56.03
		blue	065.202.56.04
		grey	065.202.53.00
Round-hole bayonet caps incl. gasket (065.242.73.00)	for TR, ITR, FT, hose shank	black	065.202.56.11
	for FT	d-grey	065.202.56.50
Shut-off cap incl. gasket (095.015.73.62.51)		beige	065.202.56.40

* Depending on series/type

Solenoid valve	Description	Max. pressure	Order. no.
	**Fitting to TWISTLOC and MULTIJET nozzle holders**		
	3-pin plug connection GDM according to DIN 43650 Power consumption: 0.8 A Tightening torque at nozzle holder 2,5 Nm	8.0 bar	065.277.56.00.00.0
	**Solenoid valve to fit dry booms. Power consumption: 0.5 A**		**Z-Endvalve**
	Hose-Ø 11.0 mm	10.0 bar	Z-Endvalve 11
	Hose-Ø 13.0 mm	10.0 bar	Z-Endvalve 00
	Spare part piston		Z-E06011.00

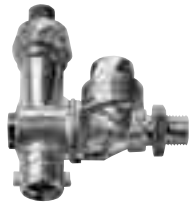
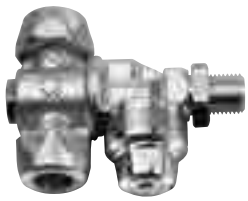
Eyelet connectors
Ball joint thread connectors / Swivel nozzle holders

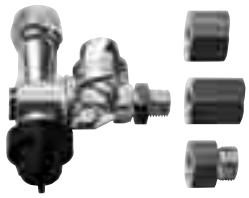
Eyelet connectors*	for pipe-Ø	Male thread G	L mm	B mm	Material	Order. no.
Split eyelet connector, max. 10 bar, with stainless-steel screw 	3/8“	G 3/8“	49	41	Polyamide	090.053.51
	1/2“	G 3/8“	53	45	Polyamide	090.003.51
	3/4“	G 3/8“	57	51	Polyamide	090.013.51
	1“	G 3/8“	65	61	Polyamide	090.023.51

Ball joint thread connector, swivel nozzle holder*	G_1	G_2 mm	L	Material	Order. no.
Ball joint thread connector, max. 25 bar, full-swiveltype max. 30° 	3/8“ female	3/8“ female	56	Messing	092.022.30 AF
	1/2“ female	1/2“ female	71	Messing	092.040.30 AH
	3/4“ female	3/4“ female	80	Messing	092.050.30 AL
Single swivel nozzle holder, max. 20 bar 	1/4“ male	3/8“ male	35	Polyamide	095.016.56.07.22
	NPT 1/4“ female	3/8“ male	35	Polyamide	095.016.56.07.21
incl. threaded cap G 3/8“ 				POM	065.200.56
and gasket 				POM	065.240.73.00
Double swivel nozzle holder, max. 20 bar 	NPT 1/4“ female	3/8“ male	35	Polyamide	095.016.56.07.20
incl. threaded cap G 3/8“ 				POM	065.200.56
and gasket 				POM	065.240.73.00

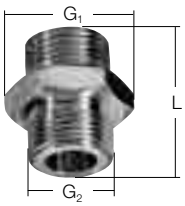
* For combination with ball valves 065.26X.XX and threaded caps 065.200.XX

Diaphragm nozzle holder for air assisted sprayer
Assembly accessories

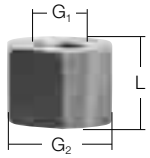
Diaphragm Nozzle Holder	Description	Material	Order. no.
	Bayonet diaphragm nozzle holder incl. threaded cap and bayonet cap Opening pressure: 0.7 bar Closing pressure: 0.7 bar Max. working pressure: 25 bar		
	1/4“ male	Brass	Z.TRA.EGE.RK.OM.B
	Diaphragm nozzle holder incl. 2 threaded caps opening pressure: 1.1 bar closing pressure: 0.9 bar max. working pressure: 40 bar		
	G 1/4" male	Brass	095.016.30.09.61.0
	G 1/4" female	Brass	095.016.30.09.62.0

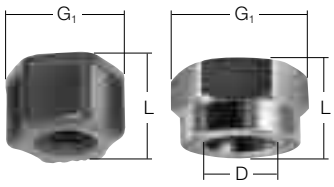
Assembly accessories	Description	Material	Order. no.
	Reduction socket M 18 x 1,5 female/1/4” female	Brass	095.016.30.12.80.0
	Reduction socket 3/8” female/1/4” female	Brass	095.019.30.00.23
	Reduction coupling 3/8” male/1/4” female	Brass	065.221.30

Reducing Coupling
Nipples
Threaded caps

Reducing coupling, nipples	G_1	G_2	L mm	Material	Order. no.
Coupler 	G 1/8	G 3/8 A	20	Brass	040.211.30
	G 1/4	G 3/8 A	23	Brass	065.221.30
	G 1/4	G 3/8 A	36*	Brass	065.228.30.00.00.1
	G 3/8	G 3/8 A	28	Brass	065.220.30
	M 11 x 1	G 3/8 A	36*	Brass	065.222.30
	G 3/4	G 3/4 A	35	Brass	065.620.30
	G 3/8	M 18 x 1,5	28	Galv. steel	095.016.02.03.43
Nipple 	G 1/4 A	G 1/4 A	27	Brass	095.019.30.00.42
	G 1/4 A	G 3/8 A	25	Brass	065.215.30
	G 1/4 A	G 3/8 A	35*	Brass	065.215.30.02
	G 3/8 A	G 3/8 A	25	Brass	065.211.30
	M 11 x 1 A	G 3/8 A	36*	Brass	065.213.30
	G 3/4 A	G 3/4 A	35	Brass	065.611.30

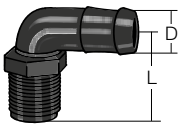
* Assembly of nozzle strainer and ball check valve possible (see page 111) A = male thread

Reduction socket	G_1 female	G_2 female	L mm	Material	Order. no.
	M 18 x 1.5	G 1/4	21	Brass	095.016.30.12.80
	G 3/8”	G 1/4	26	Brass	095.019.30.00.23

Threaded caps	G_1 female	L mm	D mm	AF mm	Material	Order. no.
	M 18 x 1.5	18	13.0	*	Polyamide	095.011.51.00.21
	G 3/8	13	12.8	22	Stainless steel	065.200.16
	G 3/8	13	12.8	22	Brass	065.200.30
	G 3/8	13	12.8	22	POM	065.200.56
	G 3/4	16	20.1	32	Brass	065.600.30
	Gasket for threaded version	M 18 x 1.5	16 x 10 x 2.5		Rubber	090.020.73.00.03
	Gasket for threaded version	3/8"	11 x 15 x 1.6		Rubber	065.240.73
	Gasket for threaded version	3/4"	18 x 24 x 1.0		EWP	065.640.72

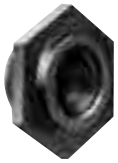
* Wing nut

Hose connectors

Hose connector	Threads	Max. pressure bar	Hose-Ø D mm	L mm	Material	Order. no.
Hose shank to match threaded cap 065.200.XX. (page 112) or round-hole TWISTLOC cap 065.202.56.11 (page 109). A.402.904 (page 107) 		10.0	12	34	PA	095.016.56.07.49
Hose shank connector male 	G 3/8"	25.0	11	35	Brass	095.016.30.07.67
	G 1/2"	25.0	11	40	Brass	095.016.30.07.68
	NPT 1/4"	10.0	10	54	PP	BHB025038
	NPT 3/8"	10.0	13	66	PP	BHB038050
	NPT 1/2"	10.0	13	68	PP	BHB050
	NPT 3/4"	10.0	19	74	PP	BHB075
	NPT 3/4"	10.0	25	76	PP	BHB075100
	NPT 1"	10.0	25	80	PP	BHB100
	NPT 1"	10.0	32	90	PP	BHB100125
	NPT 1 1/4"	10.0	30	90	PP	BHB125
	NPT 1 1/4"	10.0	25	81	PP	BHB125100
	NPT 1 1/2"	10.0	37	104	PP	BHB150
	NPT 2"	10.0	36	107	PP	BHB200150
	NPT 2"	10.0	49	115	PP	BHB200
	G 2"	6.0	60	134	PVC	095.016.50.05.73
	NPT 3"	10.0	75	160	PP	BHB300
Hose shank connector 90° 	NPT 1/4"	10.0	6	35	PP	BHB02590
	NPT 3/8"	10.0	10	36	PP	BHB03890
	NPT 1/2"	10.0	10	36	PP	BHB05003890
	NPT 1/2"	10.0	12	38	PP	BHB05090
	NPT 1/2"	10.0	20	41	PP	BHB05007590
	NPT 3/4"	10.0	12	42	PP	BHB07505090
	NPT 3/4"	10.0	20	45	PP	BHB07590
	NPT 3/4"	10.0	25	48	PP	BHB07510090
	NPT 1"	10.0	20	50	PP	BHB10007590
	NPT 1"	10.0	25	53	PP	BHB10090
	NPT 1"	10.0	32	56	PP	BHB10012590
	NPT 1 1/4"	10.0	25	53	PP	BHB12510090
	NPT 1 1/4"	10.0	32	56	PP	BHB12590
	NPT 1 1/2"	10.0	40	63	PP	BHB15090
	NPT 2"	10.0	50	64	PP	BHB20090
	NPT 3"	10.0	75	113	PP	BHB30090
Hose shank connector female 	G 1/2"	25.0	11	42	Brass	095.016.30.06.41
	G 1/2"	25.0	13	42	Brass	095.016.30.06.42
	G 1 1/4"	10.0	30	77	PP	095.016.53.07.47
	G 1 1/2"	10.0	40	67	PP	095.016.53.07.48
	G 2"	6.0	50	70	PP	A.100.750

Thread table see page 12

Pipe fittings (Polypropylene/NPT threads) Max. 10 bar

Description	Threads	Order. no.
Double nipple 	1/2" male	BNIP050-SH
	3/4" male	BNIP075-SH
	1" male	BNIP100-SH
	1 1/4" male	BNIP125-SH
	1 1/2" male	BNIP150-SH
	1 1/2" male, lenght: 4"	BNIP150-4
	2" male	BNIP200-SH
	2" male, lenght: 4"	BNIP200-4
	3" male	BNIP300-SH
Reducing coupler 	1/2" male x 3/8" female	BRB050-038
	3/4" male x 1/4" female	BRB075-025
	3/4" male x 1/2" female	BRB075-050
	1" male x 3/4" female	BRB100-075
	1 1/4" male x 3/4" female	BRB125-075
	1 1/4" male x 1" female	BRB125-100
	1 1/2" male x 3/4" female	BRB150-075
	1 1/2" male x 1" female	BRB150-100
	1 1/2" male x 1 1/4" female	BRB150-125
	2" male x 3/4" female	BRB200-075
	2" male x 1" female	BRB200-100
	2" male x 1 1/4" female	BRB200-125
	2" male x 1 1/2" female	BRB200-150
	3" male x 1 1/2" female	BRB300-150
	3" male x 2" female	BRB300-200
Reducer 	1" female x 3/4" female	BRC100-075
	1 1/2" female x 1" female	BRC150-100
	1 1/2" female x 1 1/4" female	BRC150-125
	2" female x 1" female	BRC200-100
	2" female x 1 1/4" female	BRC200-125
	2" female x 1 1/2" female	BRC200-150
	3" female x 2" female	BRC300-200
Taper nipple 	1/2" male x 3/4" male	BRN075-050
	1/2" male x 1" male	BRN100-050
	3/4" male x 1" male	BRN100-075
	3/4" male x 1 1/4" male	BRN125-075
	1" male x 1 1/4" male	BRN125-100
	1" male x 1 1/2" male	BRN150-100
	1 1/4" male x 1 1/2" male	BRN150-125
	1 1/4" male x 2" male	BRN200-125
	1 1/2" male x 2" male	BRN200-150
	2" male x 2" male	BRN300-200
Blanking plug 	3/4" male	BPlug075
	1" male	BPLUG100
	1 1/2" male	BPLUG150
	2" male	BPLUG200

Description	Threads	Order. no.
Coupler 	1/2" female	BCPLG050
	3/4" female	BCPLG075
	1" female	BCPLG100
	1 1/4" female	BCPLG125
	1 1/2" female	BCPLG150
	2" female	BCPLG200
	3" female	BCPLG300
Tee 	3/8" female	BTEE038
	1/2" female	BTEE050
	3/4" female	BTEE075
	1" female	BTEE100
	1 1/4" female	BTEE125
	1 1/2" female	BTEE150
	2" female	BTEE200
	3" female	BTEE300
45° elbow 	3/4" female x 3/4" male	BSL075-45
	1" female x 1" male	BSL100-45
	1 1/4" female x 1 1/4" male	BSL125-45
	1 1/2" female x 1 1/2" male	BSL150-45
	2" female x 2" male	BSL200-45
	3" female x 3" male	BSL300-45
90° elbow 	3/8" female x 3/8" female	BEL038-90
	1/2" female x 1/2" female	BEL050-90
	3/4" female x 3/4" female	BEL075-90
	1" female x 1" female	BEL100-90
	1 1/4" female x 1 1/4" female	BEL125-90
	1 1/2" female x 1 1/2" female	BEL150-90
	2" female x 2" female	BEL200-90
	3" female x 3" female	BEL300-90
	3/8" female x 3/8" male	BSL038-90
	1/2" female x 1/2" male	BSL050-90
	3/4" female x 3/4" male	BSL075-90
	1" female x 1" male	BSL100-90
	1 1/4" female x 1 1/4" male	BSL125-90
	1 1/2" female x 1 1/2" male	BSL150-90
	2" female x 2" male	BSL200-90
	3" female x 3" male	BSL300-90
Cross 	3/4" female	BCR075
	1" female	BCR100
	1 1/4" female	BCR125
	1 1/2" female	BCR150
	2" female	BCR200

Thread table see page 12.
Other thread sizes on request.

Manifold flange system

Description	Connection	Order. no.
Check valve 	1“	BMCV100
	2“, full port	BMCV220
	3“, full port	BMCV 300
Straight flange 	1“ x 1“ flange	BM100CPG
	2“ x 2“ full port Flansch	BM220CPG
	3“ x 3“ full port flange x 4“ lang	BM300CPG
	2“ x 2“ full port flange x 6“ lang	BM220CPG6
	3“ x 3“ full port flange x 7“ lang	BM300CPG7
45° flange coupling 	1“ x 1“ 45° flange	BM100CPG45
	2“ x 2“ 45° full port flange	BM220CPG45
	3“ x 3“ 45° full port flange	BM300CPG45
90° flange coupling 	1“ x 1“ 90° flange	BM100CPG90
	2“ x 2“ 90° full port flange	BM220CPG90
	3“ x 3“ 90° full port flange	BM2300CPG90
90° flange, „Sweeps“, (10 % more flow) 	2“ 90° full port flange „Sweep“	BM220SWP90
	3“ 90° flange „Sweep“	BM300SWP90
Flange reducer coupling 	2“ flange x 1“ flange	BM200100CPG
	2“ full port flange x 1“ flange	BM220100CPG
	3“ flange x 2“ flange	BM300200CPG
	3“ Flansch x 2“ Ffull Port flange	BM300220CPG
Flange tee 	1“	BM100TEE
	2“	BM200TEE
	2“ full port flange tee x 2“	BM220200TEE
	2“ full port flange tee	BM220TEE
	3“	BM300TEE
U-bolt (stainless steel)	100 series	BUB100
	200 series	BUB202
	220 series	BUB220

Description	Connection	Order. no.
Adapter, flange - BSP Gewinde (AG) 	1“ flange x 1‘‘ BSP	BM100BSP
	2“ full port flange x 2“ BSP	BM220BSP
	3“ full port flange x 3“ BSP	BM300BSP
Adapter, flange - NPT Gewinde (AG) 	1“ flange x 1“ NPT (AG)	BM100MPT
	2“ flange x 1 1/2“ NPT (AG)	BM200150MPT
	2“ full port flange x 2“ NPT (AG)	BM220MPT
	3“ flange x 3“ NPT (AG)	BM300MPT
Full Port 	1“ flange x 1“ FIXLOC	BM100A
	2“ full port flange x 2“ FIXLOC	BM220A
	3“ full port flange x 3“ FIXLOC	BM300A
Flange - hose barb 	1“ flange x 3/4“ hose	BM100075BR
	1“ flange x 1“ hose	BM100BRB
	2“ flange x 1 1/2“ hose	BM200150BRB
	2“ full port flange x 1“ hose	BM220100BR
	2“ full port flange x 1 1/4“ hose	BM220125BR
	2“ full port flange x 1 1/2“ hose	BM220150BR
	2“ full port flange x 2“ hose	BM220BRB
	3“ flange x 2“ hose	BM300220BR
	3“ flange x 3“ hose	BM300BRB
Flange - 90° hose barb 	1“ flange x 3/4“ hose	BM100075BRB90
	1“ flange x 1“ hose	BM100BRB90
	2“ full port flange x 1 1/2“ hose	BM220150BRB90
	2“ full port flange x 2“ hose	BM220BRB90
	3“ flange x 2“ hose	BM300220BRB90
	3“ flange x 3“ hose	BM300BRB90

Manifold flange system

Description	Connection	Order. no.
Flange - 45° hose barb elbow 	1“ Flange x 1“ hose	BM100BRB45
	2“ Full Port Flange x 2“ hose	BM220BRB45
	3“ Flange x 3“ hose	BM300BRB45
Flange cross 	1“ Flange	BM100CR
	2“ Full Port Flange	BM220CR
	3“ Flange	BM300CR

Description	Connection	Order. no.
Flange clamp (stainless steel) 	100er series	BFC100
	200er series	BFC 200
	220er series (for Full Port)	BFC220
	300er Serie (for Full Port)	BFC300
Flange gaskets (EPDM) 	1‘‘ with rib	BM101G
	1 1/2“	B150G
	2‘‘ with rib	BM201G
	2‘‘ full port with rib	BM221G
	3‘‘ with rib	BM301G

Description	Connection	Pressure max. (bar)	Opening	Order. no.
2-way valve (bolted, „full port“) 	1“	10	1“	BMV100CF
	2“	10	2“	BMV220CF
	3“	7	3“	BMV300CF
Compact „Stubby“ 2-way valves („full port“) 	2“ flange - FIXLOC male adapter	7	2“	BMVSF220FP
	2“ flange - flange	7	2“	BMVS220CF
	3“ flange - FIXLOC male adapter	7	3“	BMVSF300FP
	3“ flange - flange	7	3“	BMVS300CFFP
3-way valves („full port“) 	2‘‘ bottom load	7	2“	BMV220BL
	2‘‘ side load, (cannot be turned off)	7	2“	BMV220SL
	3‘‘ bottom load	7	3“	BMV300BL

FIXLOC Lever couplings with NPT- and BSP-threads (BS21 respectively DIN EN 10226)

Features:

- Chemically resistant to agricultural chemicals and liquid fertilizers
- Corrosion-resistant stainless steel
- Easy handling
- Pressure:
  ½“ – 2“ max. 9.0 bar
  3“ max. 5.0 bar

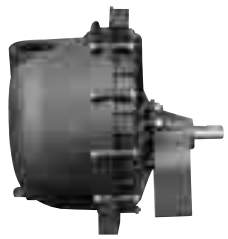
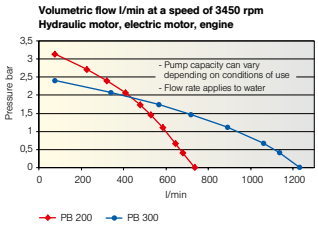


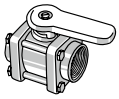
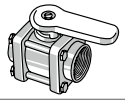
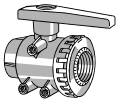
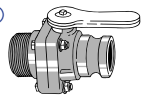
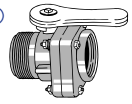
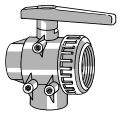
FIXLOC parts	Description	Connector	Order. no.
	**Male adapter with female threads** straight version	NPT 1/2"	B050-A-NPT
		NPT 3/4"	B075-A-NPT
		BSP 1"	B100-A-BSP
		NPT1 1/4"	B125-A-NPT
		BSP 1 1/2"	B150-A-BSP
		BSP 2"	B200-A-BSP
		BSP 3"	B300-A-BSP
	dito as 90° elbow	NPT 1 1/2"	B150-A 90°-NPT
		NPT 2"	B200-A 90°-NPT
	**VMale adapter with male threads** straight version	NPT 1/2"	B050-F-NPT
		NPT 3/4"	B075-F-NPT
		BSP 1"	B100-F-BSP
		NPT 1 1/4"	B125-F-NPT
		BSP 1 1/2"	B150-F-BSP
		BSP 2"	B200-F-BSP
		NPT 3"	B300-F-NPT
		BSP 3"	B300-F-BSP
	dito as 90° elbow	NPT 1 1/2"	B150-F 90°-NPT
		NPT 2"	B200-F 90°-NPT
	**Male adapter with hose shank**	1/2"	B050-E
		3/4"	B075-E
		1"	B100-E
		1 1/4"	B125-E
		1 1/2"	B150-E
		2"	B200-E
		3"	B300-E
	**Female coupler with female threads** straight version	NPT 1/2"	B050-D-NPT
		NPT 3/4"	B075-D-NPT
		BSP 1"	B100-D-BSP
		NPT 1 1/4"	B125-D-NPT
		BSP 1 1/2"	B150-D-BSP
		BSP 2"	B200-D-BSP
		NPT 3"	B300-D-NPT
		BSP 3"	B300-D-BSP
	dito as 90° elbow	NPT 1 1/2"	B150-D 90°-NPT
		NPT 2"	B200-D 90°-NPT

FIXLOC parts	Description	Connector	Order. no.
	**Female coupler with male threads**	NPT 1/2"	B050-B-NPT
		NPT 3/4"	B075-B-NPT
		BSP 1"	B100-B-BSP
		NPT 1 1/4"	B125-B-NPT
		BSP 1 1/2"	B150-B-BSP
		BSP 2"	B200-B-BSP
		NPT 3"	B300-B-NPT
		BSP 3"	B300-B-BSP
	**Female coupler with hose shank** straight version	1/2"	B050-C
		3/4"	B075-C
		1"	B100-c
		1 1/4"	B125-C
		1 1/2"	B150-C
		2"	B200-C
		3"	B300-C
	dito as 90° elbow	1 1/2"	B150-C 90°
		2"	B200-C 90°
	**Plug for female coupler**	1/2"	B050-PL
		3/4"	B075-PL
		1"	B100-PL
		1 1/4"	B125-PL
		1 1/2"	B150-PL
		2"	B200-PL
		3"	B300-PL
	**Plug for male coupler**	1/2"	B050-CAP
		3/4"	B075-CAP
		1"	B100-CAP
		1 1/4"	B125-CAP
		1 1/2"	B150-CAP
		2"	B200-CAP
		3"	B300-CAP
	**Spare gasket for FIXLOC lever couplings EPDM**	1/2"	B075-G
		3/4"	B075-G
		1"	B100-G
		1 1/4"	B100-G
		1 1/2"	B150-G
		2"	B200-G
		3"	B300-G

1/2” series couplings interchange with 3/4“ size couplings; Coupling ends are 3/4” · 1 1/4” series couplings interchange with 1“ size couplings; Coupling ends are 1”
Thread table see page 12

Pumps
Ball valves

Pumps*	Description	Order. no.
 	PB 200 pump with base (excl. motor) Connector: 2” female	095.016.00.07.82
	PB 200 pump with three-phase a.c. motor Connector: BSP 2” female	095.016.00.08.02
	PB 200 pump with hydraulic motor Connector: BSP 2” female	095.016.00.08.01
	PB 200 pump with gasoline engine Connector: 2” female	095.016.00.07.81
	PB 300 pump with base (excl. motor) Connector: BSP 3” female	095.009.00.12.21
	PB 300 pump with three-phase a.c. motor Connector: BSP 3” female	095.009.00.12.20
	PB 300 pump with hydraulic motor Connector: BSP 3” female	095.009.00.12.22

Ball valves		Type/Connector	Max. pressure	Order. no.
2-way valve (example) 	① 	① 2-way valve with NPT threads		
		NPT 1/2"	7.0	BUV050FP
		NPT 3/4"	7.0	BUV075FP
		NPT 1"	7.0	BUV100FP
		NPT 1 1/4"	7.0	BUV125FP
		NPT 1 1/2"	7.0	BUV150FP
		NPT 2"	7.0	BUV200FP
	② 	② 2-way valve with NPT threads		
		NPT 1/2"	10.0	BV050
		NPT 3/4"	10.0	BV075
		NPT 1"	10.0	BV100
		NPT 1 1/2"	10.0	BV150
		NPT 2"	10.0	BV200
	② 	② 2-way valve with BSP threads		
		BSP 3"	7.0	BV300-BSP
		BSP 3"	7.0	BV300FP-BSP
	③ 	③ 2-way valve with G threads		
		G 1/2"	16.0	A.454.132
		G 3/4"	16.0	A.454.133
		G 1"	16.0	A.454.134
		G 1 1/4"	10.0	A.454.135
		G 1 1/2"	10.0	A.454.136
		G 2"	10.0	A.454.137
	④ 	④ 2-way valve with 2” FIXLOC male adapter and 2” NPT female threads	7.0	BVSF200
	⑤ 	⑤ 2-way valve with 2” FIXLOC male adapter and 2” NPT male threads	7.0	BVSFMT200
	⑥ 	⑥ 2-way valve with 2” NPT male threads and 2” female threads	7.0	BVSMT200
3-way valve (example) 	⑦ 	⑦ 3-way valve with G threads		
		G 1"	16.0	A.454.234
		G 1 1/4"	10.0	A.454.235
		G 1 1/2"	10.0	A.454.236
		G 2"	10.0	A.454.237

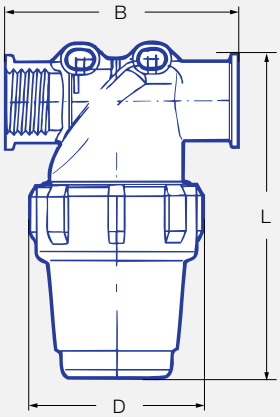
Thread table see page 12

Line strainers

Features:

- Line strainers up to max. 14 bar
- Large-area filter
- Strainer inserts color-coded in accordance with ISO 19732
- Mounting points on filter housing





Line strainer



SGI
female thread



SGA
male thread

③



SGI 6R
model with
cleanout
connector

④

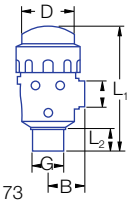


A.345.033
A.345.033.5
high-pressure
strainer,
max. 50 bar

Suction strainer

⑤

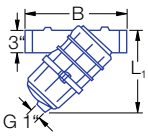




A.316.172/A.316.173

⑥





SGA2.300.53/
SGA3.300.53

max. 8 bar

Max. Flow rate l/min	Order. no.	Connector G	Dimensions D mm	L mm	B mm	Screen insert order no. Mesh size* Color code 30 M ■ red	50 M ■ blue	80 M ■ yellow	100 M ■ green
① SGI female (incl. Screen insert 50M. blue ■)									
100	SGI 2	1/2" female	74	136	99	012.06	012.03	012.08	012.02
100	SGI 3	3/4" female	74	136	99	012.06	012.03	012.08	012.02
160	SGI 4	1" female	86	165	107	100.06	100.03	100.08	100.02
280	SGI 5	1 1/4" female	116	279	146	114.06	114.03	114.08	114.02
280	SGI 6	1 1/2" female	116	279	146	114.06	114.03	114.08	114.02
② SGA male (incl. Screen insert 50M. blue ■)									
100	SGA 2	1/2" male	74	136	99	012.06	012.03	012.02	012.02
100	SGA 3	3/4" male	74	136	99	012.06	012.03	012.02	012.02
160	SGA 4	1" male	86	165	112	100.06	100.03	100.02	100.02
280	SGA 5	1 1/4" male	116	279	146	114.06	114.03	114.02	114.02
280	SGA 6	1 1/2" male	116	279	146	114.06	114.03	114.02	114.02
③ SGI 6R model with cleanout connector*									
280	SGI 6R	1 1/2" female	116	353	146	114.06	114.03	114.02	114.02

Max. Flow rate l/min	Order. no.	Connector G	Dimensions D mm	L mm	Screen insert (incl.)
④ High-pressure strainer, 50 bar, made of fiberglass reinforced nylon					
150	A.345.033	1/2" / 3/4"	104	259	50 M blue ■
150	A.345.033.5	1/2" / 3/4"	104	259	80 M yellow ■

Order. no.	Description
Accessory for High-pressure strainer 50 bar	
A.004.010.020	1/2" plug
A.403.000.060	Gasket for 1/2" plug
A.465.230.020	3/4" plug
A.465.005.140	Gasket for 3/4" plug

Max. Flow rate l/min	Order. no.	Connector G	Dimensions D mm	L_1 mm	L_2 mm	B mm	Screen insert Mesh* Color code
⑤ A316.172/A.316.173							
220	A. 316.172 incl. screen 30 M	2" male	170	292	42	98	30 M red ■ A.316.002.030
220	A. 316.173 incl. screen 50 M	2" male	170	292	42	98	50 M blue ■ A.316.003.030
⑥ SGA2.300.53 / SGA3.300.53							
800	SGA2.300.53 incl. screen 30 M SGA3.300.53 incl. screen 50 M	3" male	-	358	-	415	30 M red ■ 002.26 50 M blue ■ 003.26

* Please always specify desired mesh size on order.
Screen inserts are delivered in colour coding according to ISO 19732:2007

Pressure gauges

Features:

- With 63 mm and 100 mm housings
- Scaling corresponds to EN 12761
- Expanded colored scale range
- Robust against mechanical loads
- Externally adjustable pressure mark (63 mm housing)



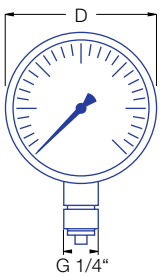
100-mm dial

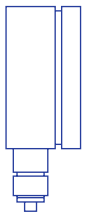
Range of display bar	Range of over-pressure up to ... bar	Connector	Scale-diameter D mm	Model/Order no. Standard	Model/Order no. Liquid fertilizer-proof	Scale-division bar
.0 - 10.0	60.0	bottom	63	-	095.009.00.11.36*	0.2
1.0 - 10.0	60.0	rear	63	-	095.009.00.11.35*	0.2
1.0 - 5.0	25.0	bottom	63	-	095.009.00.10.54*	0.1
1.0 - 5.0	25.0	rear	63	-	095.009.00.10.71*	0.1
1.0 - 10.0	25.0	bottom	100	-	095.009.00.12.90*	0.1
5.0 - 30.0	60.0	bottom	63	095.009.00.14.07.0*	-	1.0

* Clearance



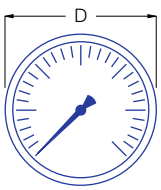


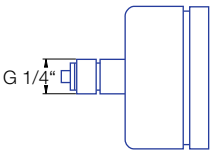




63-mm dial, bottom connector







63-mm dial, rear connector

Top Flow II
Electro magnetic flow meter with digital read out

Features:

- Display of overall volume and volume flow
- Temperature range -15 °C to +65 °C
- Measuring accuracy 99 %:
  1“: 8 – 400 l/min
  2“: 25 – 1.100 l/min
  3“: 60 – 2.500 l/min
- Max. pressure: 10 bar at 20 °C

Advantages:

- Self-calibrating
- Independent of density and viscosity
- Simple and fast assembly via manifold and Fixloc connection
- Suitable for UAN and PPP



Includes manifold fittings

- **1“, 2“ or 3“ FP manifold**
- **flange with FIXLOC male adapter**
- **FP worm screw clamp**
- **FP gasket EPDM**



Note: Please consider manual.

Order. no.
1“: B.MFM. 100.CO.M
2“: B.MFM. 220.CO.M
3“: B.MFM. 300.CO.M

AirPress HP –
pneumatic pressure regulator for boom sprayers

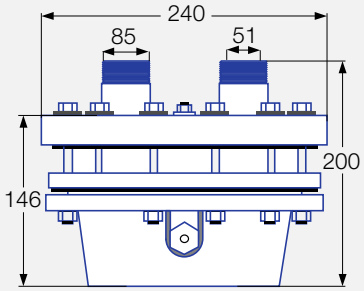
Pressure regulation via pressure chamber with air pressure.

Advantages:

- Large volume flow range
- Fast pressure regulation without delay
- Ideal in combination with automatic boom section and individual nozzle control
- NEW – up to 10 bar spray pressure

NEW





Order. no.
1 1/4“: RC90.011.40.00.00.0
2“: RC90.020.00.00.00.0

Specifications	AirPress HP 1 ¼“	AirPress HP 2“
Weight	5.4 kg	5.5 kg
Connections	G 1 1/4“ male for In- and Outlet ¼“ BSP for air connection	G 2“ male for In- and Outlet ¼“ BSP for air connection
Material	Nylon, Polyethylene, Stainless Steel, NBR (option Viton), CR	
Pressure Range - New	max. 10 bar	
Pressure Drop	Up to 100 lpm only 0.2 bar pressure drop, at 250 lpm ~ 0.5 bar	
Max. Flow	250 lpm	500 lpm

Farmer’s helpers
Anemometer

Pocketwind IV



Measuring functions
- Air humidity
  - Relative humidity
  - Dew point
  - ΔT
  - 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

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

Order. no.: Z.WIN.DME.SS.ER.010

Pocketwind III



* Clearance

Measuring functions
- Wind speed
  - Maximum
  - Average
  - Units m/s, km/h, fpm, mph, kn and bft, switchable
- Temperature / wind chill units °C and °F, switchable

Features
- Dual display
- One-button operation for holding data
- Waterproof and shockpro-of housing
- Lanyard
- Integrated hard cover for protection against damage and dirt
- Tripod thread

Advantages
- The hard cover protects the measuring sensors against damage
- One-hand operation

Order. no.: Z.WIN.DME.SS.ER.001*

Farmer’s helpers

Accessories



Droplet-size/ dosage calculator
Order no. 095.009.50.12.11.0

Apple Android

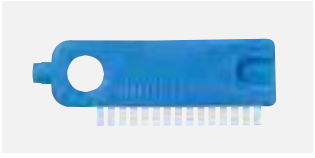
Online nozzle calculator



Water sensitive paper
Size: 76 x 26 mm
Order no. Z.WSP.76X.26.00.00.0



Nozzle aligner
Order no. 065.231.02



AD-nozzle cleaning brush and preorifice pick-up
Order no. 06A.D30.56.00
* Clearance



Cleaning brush
Order no. 095.009.50.10.89.0

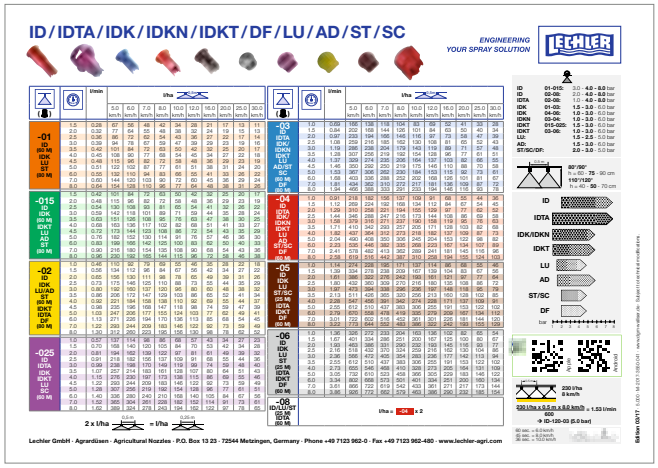


Nozzle assembly wrench
Order no. 092.164.40.00.99.0

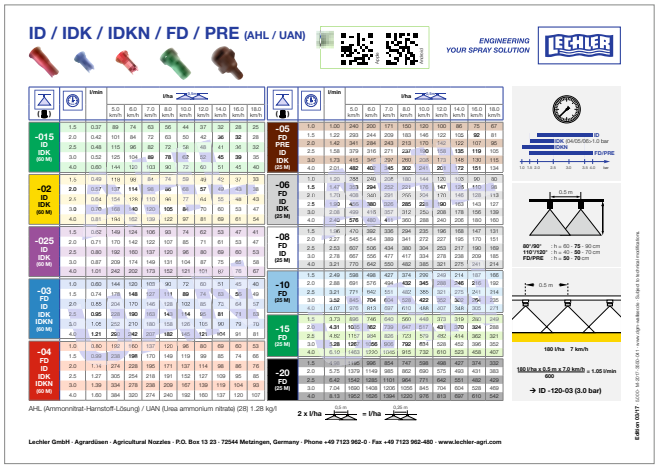


Template for Dropleg[UL]
Order no. 092.163.42.10.30

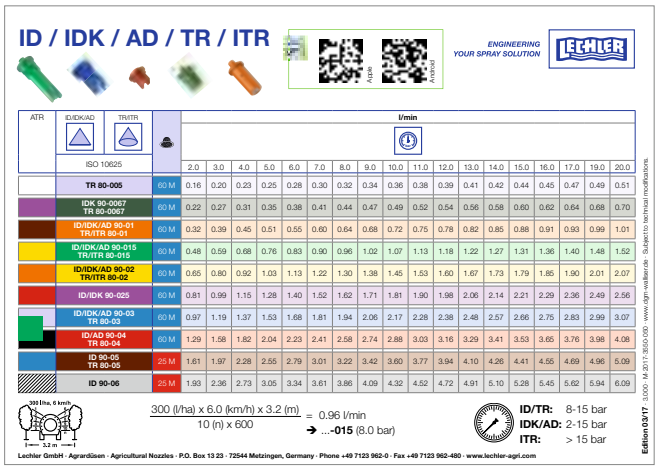
Spray tables (sticker)



Arable crops (A4)



UAN (A4)

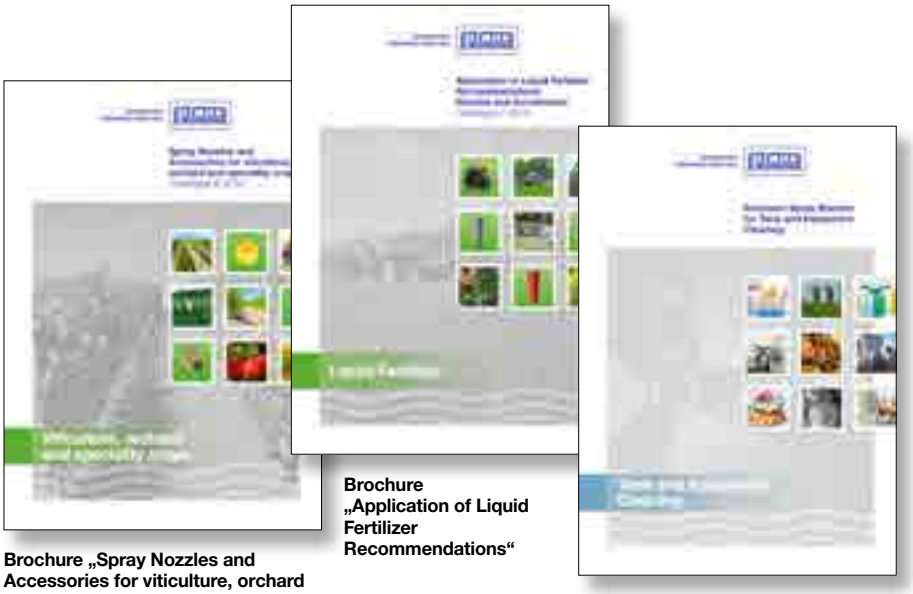


Fruit crops (e.g. orchards, vineyards and speciality crops) (A5)

YOU CAN FIND MORE INFORMATION IN OUR BROCHURES

Information is available for various applications in special brochures.

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



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

Brochure „Application of Liquid Fertilizer Recommendations“

Brochure „Precision Spray Nozzles for Tank and Equipment Cleaning“

FULL INFORMATION IN 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



FOR YOUR NOTES

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in nozzle technology
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