ON POINT
Spraying Solutions

ENGINEERING
YOUR SPRAY SOLUTION

LECHLER

NEW

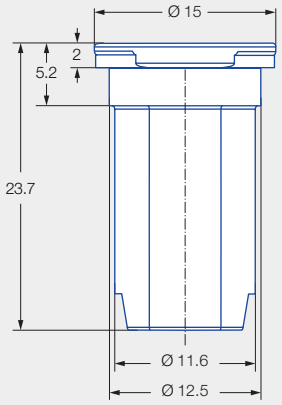
EVEN FLAT FAN NOZZLE ARE 30

AGRICULTURE

- Extremely low-drift flat spray nozzle with pre-atomizer

Advantages

- Non-venturi nozzle
- Extremely high drift reduction potential
  – Rectangular distribution
- Narrow spray angle of 30°
  – Band widths from 5–30 cm
  – Compact design
- Robust housing: nozzle tip protected against damage
- Pre-atomizer can be removed without tools
- Suitable for PWM



Series ARE 30

ARE
Antidrift Row Evenspray

Application:

Band spraying

Knapsack sprayer

Technical data:

Nozzle sizes
0067–03

Spray angle
30°

Materials
POM

Pressure ranges
1.5–6 bar

Recommended strainers
- 80 M 0067–01
- 60 M 015–03

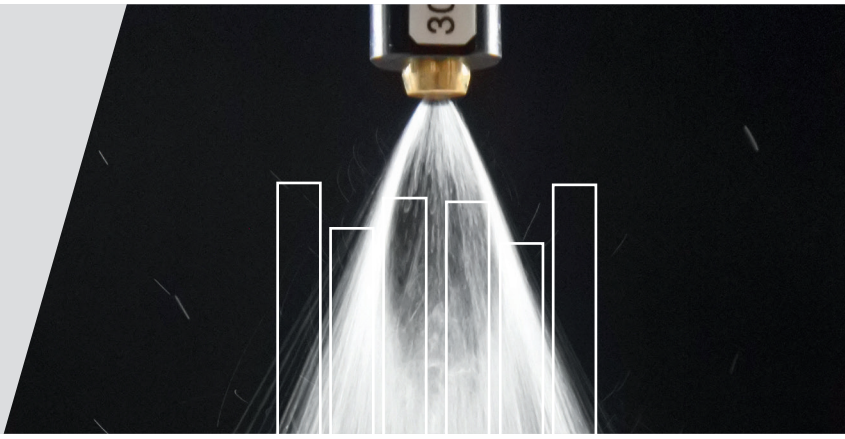
Droplet sizes
Medium-extremely coarse

Width across flats
10 mm

Spray pattern
Flat spray with even distribution

FLOW RATE AND CALCULATION EXAMPLE

Selecting the right nozzle size
for band spraying

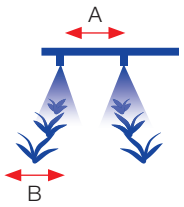


		Pressure (bar)	Flow rate [l/min]
ARE 30-0067 (80 M)	80 M	1.5	0.19
		2	0.22
		3	0.27
		4	0.31
		5	0.35
		6	0.38
ARE 30-01 (80 M)	80 M	1.5	0.28
		2	0.32
		3	0.39
		4	0.45
		5	0.51
		6	0.55
ARE 30-015 (60 M)	60 M	1.5	0.42
		2	0.48
		3	0.59
		4	0.68
		5	0.76
		6	0.83
ARE 30-02 (60 M)	60 M	1.5	0.56
		2	0.65
		3	0.80
		4	0.92
		5	1.03
		6	1.13
ARE 30-025 (60 M)	60 M	1.5	0.70
		2	0.81
		3	0.99
		4	1.15
		5	1.28
		6	1.40
ARE 30-03 (60 M)	60 M	1.5	0.84
		2	0.97
		3	1.19
		4	1.37
		5	1.53
		6	1.68

Band width [B] at spray height [H]

Band width B [cm]	Spray height H [cm]
5	10
10	20
15	28
20	38
25	47
30	55

Application parameters for band spraying and nozzle size determination



Band width B [m]
Lateral nozzle spacing or row spacing A [m]
Sprayer speed v_F [km/h]

Sugar beet, row spacing 45 cm
Sprayer speed 8 km/h
Total area requirement 200 l/ha
Band width 15 cm

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

Percentage of the treated area per hectare:

$= \frac{0.15}{0.45} \times 100 = 33\,\%$

> 33 % von 200 l/ha = 66 l/ha

Flow rate/nozzle V [l/min]

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

$\dot{V} = \frac{1}{600} \times 66 \times 0.45 \times 8$

$\dot{V} = 0.39$ l/min

> ARE 30-01 at 3 bar

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