## **Responsibility and recognition**



### Performing competent authority:

Julius Kühn-Institute (Germany) Institute for Application Techniques in Plant Protection Messeweg 11-12 D-38104 Braunschweig

017/2017

EB 11/17

#### This test is recognized by the ENTAM members:



HBLFA Francisco Josephinum BLT Wieselburg



**CMA** Generalitat de Catalunya Centre de Mecanització Agrària (CMA)





**HIAE** (MGI) Hungarian Institute of Agricultural D-142/2017 Engineering (Hungary)



IRSTEA - National Research Institute of Sience IRSTEA/CEMAGREF/ and Technology for Enviroment and Agriculture ENTAM/ 17/011 (France) (formerly CEMAGREF)



**PIMR** - Przemyslowy Instytut Maszyn Rolniczych Industrial Institute of Agricultural Engineering (Poland)

10.5073/AT.2016.D2065en

PIMR-157/ENTAM/17





# ENTAM - Test Report



Trade mark: Model:

Equipment type: Field of application: Pressure range: Standard working height:

Manufacturer:

Lechler GmbH Ulmer Strasse 128 72555 Metzingen Germany Lechler IDTA 120-02 C

hydraulic nozzle, double flat spray Field crop 2.0 - 8.0 bar tested 50 cm (40 cm - 60 cm tested)

Test report: D 2065

Januar 2016

## **Test results**

- This nozzle has been tested without accessories.

This nozzle is appropriate for the use of spraying in field crops with a liquid pressure of 2.0 - 8.0 bar and on booms with distances of 500 mm between the nozzles.

- The nozzle is designed for spraying with the (front) spray directed 30 ° in dri ving direction and the (rear) spray directed 50 ° against driving direction (in relation to a vertical spray direction).
- The front page image of this report shows the assembled and disassembled nozzle.
- The cross distribution  $CV^{1)}$  is between 2.3 % (8.0 bar) and 5.9 % (3.0 bar) for the tested pressure range 2.0—8.0 bar at a standard working height of 50 cm. For a pressure of 4.0 bar, the CV varies from 5.8 % (40 cm) to 3.2 % (60 cm). The maximum allowed CV for one working height and one pressure (specified by the manufacturer) is 7 %, for all heights and pressures is 9 %.
- The mean deviation between the measured single nozzle flow rate and the flow rate table is between 4.7 % (at 8.0 bar) and 5 % (at 2.0 bar).
- The max. deviation of the single nozzle flow rates from the mean flow rate is between 1.4 % and 2.2 %.

- The nozzle fullfils the discharge rate requirement of the color code according ISO 10625 (color code: Zinc yellow, 0.8 l/min at 3.0 bar). See tab.1.

or

## Free download of the test under:

www.ENTAM.net www.julius-kuehn.de

#### **Test results**

Pressure (bar)	Discharge rate without accessories (l/min)	Droplet size <sup>2)</sup>
2.0	0.62	very coarse
4.0	0.88	very coarse
6.0	1.08	coarse
8.0	1.25	coarse

Tab.1: Discharge rate and droplet size depending on liquid pressure.

1) For a distance of 50 cm between the nozzles.

2) According to BCPC scheme (additional information)

# **Additional information**

The tested nozzles (24) were picked out at random of a stock of 200 nozzles. Testing takes place according to the Technical Instructions for ENTAM-Tests of Spray nozzles, rel.1.

This procedure was developed by the competent testing authorities of the European countries participating in ENTAM and is based on the ISO 5682 standard: "Equipment for crop protection—Spraying equipment; Part 1 Test methods for sprayer nozzles" and on EN ISO 16119 standard. This test is only a technical performance test which takes place without an accompanying field test. The test results apply only to the tested appurtenances. Statements on the behaviour of differrent appurtenances cannot be derived from these results.