Responsibility and recognition

Performing competent authority:
Julius Kühn-Institute (Germany)
Institute for ApplicationTechniques in Plant Protection; Messeweg 11-12;
D-38104 Braunschweig

This test is recognized by the ENTAM members:

BLT- Francisco Josephinum, Wieselburg - Biomass, Logistics, Technology (Austria)	080/13
CMA Generalitat de Catalunya Centre de Mecanització Agrària (CMA) (Spain)	EB 002/13
ENAMA Ente Nazionale per la Meccanizzazione Agricola (Italy)	ENTAM „Rapporto di prova prestazionale" 04/2013
HIAE Hungarian Institute of Agricultural Engineering (Hungary)	D-82/2013
IRSTEA - National Research Institute of Sience and Technology for Enviroment and Agriculture (France) (formerly CEMAGREF)	IRSTEA/CEMAGREF/ENTAM/ 13/030
PIMR - Przemyslowy Instytut Maszyn Rolniczych Industrial Institute of Agricultural Engineering (Poland)	PIMR-104/ENTAM/13

ENTAM - Test Report

Trade mark:	Lechler
Model:	IDK 120-06 POM
Equipment type:	hydraulic nozzle, flat spray
Field of application:	Field crop
Pressure range:	1 - 6 bar tested
Standard working height:	50 cm (40 cm - 60 cm tested)

Manufacturer:
Lechler GmbH
Ulmer Strasse 128
72555 Metzingen
Germany

Test report: D - 1936

Aug. 2013

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 1.0 - 6.0 bar and on booms with distances of 500 mm between the nozzles.

The front page image of this report shows the demountable nozzle parts (left side) and the assembled nozzle in a 90° twisted position (right side).

- The cross distribution CV[1)] is between 3.2 % (6 bar) and 5.1 % (3 bar) for the tested pressure range 1.0 - 6.0 bar at a standard working height of 50 cm. For a pressure of 3.0 bar, the CV varies from 3.5 % (60 cm) to 6.3 % (40 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 deviation between the measured single nozzle flow rate and the flow rate table is between 0.4 % (at 6 bar) and 3.7 % (at 1 bar). The maximum allowed deviation is 5 %.

- The max. deviation of the single nozzle flow rates from the mean flow rate is between 1.7 % and 4.0 %.

- The nozzle fullfils the discharge rate requirement of the color code according ISO 10625 (color code: signal grey, 2.4 l/min at 3 bar). See tab.1.

Free download of the test report under: www.ENTAM.net
or: www.jki.bund.de

Test results

Pressure (bar)	Discharge rate without accessories (l/min)	droplet size [2)]
1.0	1.4	very coarse
3.0	2.39	very coarse
4.0	2.75	coarse
6.0	3.35	coarse

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

1) on a spray boom with 50 cm nozzle distance
2) according BCPC scheme (additional information)

Additional information

With a view to avoiding spraying one's own sprayer, a nozzle mix comprising Lechler IDKT120-06 POM and Lechler IDK 120-06 POM was tested at the JKI. For this the mixed nozzles were officially approved (certification number G1937). The mixed nozzles consist of 6 IDK120-06 POM nozzles in the central nozzle positions (behind the boom lift). All other nozzle positions are equipped with IDKT120-06 POM nozzles.

At the time of publishing this report the nozzle is listed in the drift reduction classes 75 % and 90 % of the German drift reduction system, depending on the regulations of use.

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 12761 standard: „Agricultural and forestry machinery - Sprayers and liquid fertilizer distributors - Enviromental protection; Part 2". 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 of the sprayer. Statements on the behaviour of different appurtenances cannot be derived from these results.