Responsibility and recognition

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

This test is recognized by the ENTAM members:

- BLT - Francisco Josephinum, Wieselburg (Austria)
  010/09

- Cemagref - Institut de recherche pour l'Ingénierie de l'agriculture et de l'environnement (France)
  CEMAGREF/ENT/09/005

- HI AE Hungarian Institute of Agricultural Engineering (Hungary)
  D-5/2009

- ENAMA Ente Nazionale per la Meccanizzazione Agricola (Italy)
  ENTAM „Rapporto di prova prestazionale” 02/2009

- PI MR - Przemyslowy Instytut Maszyn Rolniczych Industrial Institute of Agricultural Engineering (Poland)
  PIMR - 26/ENTAM/09

- CMA Generalitat de Catalunya Centre de Mecanització Agrària (CMA) (Spain)
  EB 002/09

- ART - Agroscope Reckenholz-Taenikon (Switzerland)
  D-05.09

Manufacturer:
Lechler GmbH
Ulmer Strasse 128
72555 Metzingen
Germany
Feb 2009

Trade mark:
Lechler

Model:
IDK 90-02 ceramic

Equipment type:
hydraulic nozzle, flat spray

Field of application:
Wine / orchard spraying

Pressure range:
2 - 15 bar tested

Test report: D - 1835
This nozzle has been tested without accessories. This nozzle is appropriate for the use of spraying in wine, orchards, tree nursery, special crops and ornamental plants with a liquid pressure of 2.0 - 20 bar.

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

- The deviation between the measured single nozzle flow rate and the flow rate table is between -2.55 % (at 15 bar) and 3.08 % (at 2 bar). The maximum allowed deviation is 5 %.

- The max. deviation of the single nozzle flow rates from the mean flow rate is between -2.2 % and 2.3 %.

- A spray angle of 87 ° (at 5.0 bar) was determined.
  Note for hydraulic nozzles: the spray angle is varying depending of liquid pressure.

- The nozzle fulfills the discharge rate requirement of the color code according ISO 10625 (color code: Zinc yellow, 0.8 l/min at 3 bar). See tab.1.

### Test results

<table>
<thead>
<tr>
<th>Pressure (bar)</th>
<th>Discharge rate without accessories (l/min)</th>
<th>droplet size 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>0.66</td>
<td>very coarse</td>
</tr>
<tr>
<td>5.0</td>
<td>1.04</td>
<td>coarse</td>
</tr>
<tr>
<td>8.0</td>
<td>1.30</td>
<td>coarse</td>
</tr>
<tr>
<td>10.0</td>
<td>1.46</td>
<td>coarse</td>
</tr>
<tr>
<td>15.0</td>
<td>1.78</td>
<td>coarse</td>
</tr>
</tbody>
</table>

1) according BCPC scheme (additional information)

### Additional information

At the time of publishing this report the nozzle is listed in the drift reduction classes 50 % and 75 % of the German drift reduction system, depending on the regulations of use. For more information about the assessment of this nozzle relating to the German drift reduction system see: www.jki.bund.de

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 Sprayer 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 - Environmental 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.

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