Responsability and recognition

Performing competent authority :

National Research Institute of Science and Technology for Agriculture and the Environment.

Rue Pierre Gilles de Genes F-92 Antony (France)

This test is recognized by the ENTAM members :

	Austria - FJ-BLT HBLFA Francisco Josephinum Wieselburg – Biomass, Logistics, Technology	**006/15**
	France – IRSTEA – Institut National de Recherche en Sciences et Technologies de l'Environnement et de l'Agriculture	**IRSTEA/CEMAGREF/ ENTAM/14/017**
	Germany - JKI - Julius Kühn-Institut	**ENT-F-06/15**
	Hungary - MGI Mezogazdasági Gépesítési Intézet	**FR-100/2015**
	Italy - ENAMA Ente Nazionale per la Meccanizzazione Agricola	**ENTAM "Rapporto di prova prestazionale" 06/2015**
	Poland - PIMR Przemyslowy Instytut Maszyn Rolniczych	**PIMR120/ENTAM/15**
	Spain - Administració de la Generalitat de Catalunya, Centre de Mecanització Agrària (CMA)	**EB006/15**

National Research Institute
of Science and Technologies
for Agriculture and the Environment

European Network
for Testing of
Agricultural
Machinery

ENTAM – Test Report

Trade mark :	ASJ
Model	CFA (Compact Fan Air) 110 04
Equipment type :	Air induction hydraulic nozzle, flat spray
Field of application :	Boom sprayers
Pressure range :	2 to 6 bar tested
Standard working height :	50 cm (40 – 60 and 70 cm tested)

Manufacturer :
ASJ ARAG
Via Busca 101

Test report :
13_ITAP_310

Centallo (CN)12044 Italy

Test results

This nozzle was tested without accessories.
This nozzle is appropriate for the use of spraying field crops, grassland, vegetable and ornamental plants with a liquid pressure range of 1.5 – 6.0 bar.

The front page image of this report shows the assembled nozzle.

- The cross distribution CV[1)] is between 2.14% (6 bar) and 6.44% (1.5 bar) for the tested pressure range of 1.5 to 6.0 bar at a standard working height of 60 cm. For a pressure of 3.0 bar, the CV varies from 2.01% (60 cm) to 8.29% (40 cm). The maximum allowed CV for one working height and one pressure (specified by the manufacturer) is 7 %, for all heights and pressure ranges is 9%.

- The deviation between measured single nozzle flow rate and the flow rate table is between -2.84% (at 3 bar) and 3.19% (at 5 bar). The maximum allowed deviation is ±5%.

- The max. deviation of the single nozzle flow rates from the average flow rate is between -2.84% (3 bar) and 3.35% (6bar).

- A spray angle between 85° (at 1.5 bar) and 102° (at 6 bar) was determined.

- The nozzle fulfils the discharge rate requirement of the color code according to ISO 10625 (color code : Red; 1.6 l min-1 at 3 bar).
  See tab. 1

Test results

Pressure (bar)	Discharge rate without accessories (l min-1)
2.0	1.32
3.0	1.63
5.0	2.10
6.0	2.25

Tab.1 Discharge rate depending on liquid pressure

1) on a spray boom with 50 cm nozzle spacing.

Additional information

The tested nozzles were randomly selected in a batch of 200 units. Testing was in conformity with ENTAM Technical Instructions - Test 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 16 119 standard: "Agricultural and Forestry Machinery – Environmental requirements for sprayers ; part 2 : Horizontal boom sprayers ". 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 behavior of different appurtenances cannot be derived from these results.