

# DIN EN ISO 16122-4:2018-09 (E)

## Agricultural and forestry machines - Inspection of sprayers in use - Part 4: Fixed and semi-mobile sprayers (ISO 16122-4:2015)

---

### Contents

	Page
<b>Foreword</b>	<b>4</b>
<b>Introduction</b>	<b>5</b>
<b>1 Scope</b>	<b>6</b>
<b>2 Normative references</b>	<b>6</b>
<b>3 Terms and definitions</b>	<b>6</b>
<b>4 Requirements and method of verification</b>	<b>7</b>
4.1 Leaks and dripping	7
4.1.1 Static leaks	7
4.1.2 Dynamic leaks	7
4.1.3 Spraying and dripping on parts	7
4.2 Pump(s)	7
4.2.1 Capacity	7
4.2.2 Pulsations	8
4.2.3 Air chamber	8
4.3 Spray mix agitation	8
4.3.1 Hydraulic	8
4.3.2 Mechanical	8
4.4 Spray liquid tank(s)	9
4.4.1 Lid	9
4.4.2 Filling hole(s)	9
4.4.3 Induction hopper	9
4.4.4 Pressure compensation	9
4.4.5 Tank content indicator(s)	9
4.4.6 Tank emptying	9
4.4.7 Tank filling	9
4.4.8 Cleaning device for plant protection product containers	10
4.4.9 Cleaning equipment	10
4.5 Measuring systems, controls and regulation systems	10
4.5.1 General	10
4.5.2 Pressure indicator	10
4.5.3 Other measuring devices	11
4.5.4 Pressure adjusting devices	11
4.5.5 Direct injection systems	11
4.6 Lines (pipes and hoses)	11
4.7 Filters	12
4.7.1 Filter presence	12
4.7.2 Isolating device	12
4.7.3 Filter insert changeability	12
4.8 Application unit	12
4.8.1 Dripping	12
4.8.2 Horizontal spray boom	12
4.8.3 Vertical spray boom	14
4.8.4 Spray guns and lances	15
4.9 Blower	15
4.9.1 Switching off	15
4.9.2 Adjustability	15

4.10	Distribution.....	15
4.10.1	Uniformity of spray jet.....	15
4.10.2	Nozzle output.....	15
4.10.3	Spray distribution measurement on a patternator (optional).....	16
4.10.4	Optional vertical distribution information.....	16
4.11	Autonomous application units.....	16
4.11.1	Drive system.....	16
4.11.2	Travel speed spray robots.....	16
4.12	Cleaning equipment.....	17
<b>5</b>	<b>Test methods.....</b>	<b>17</b>
5.1	Test facilities.....	17
5.2	Spray and agitation pump(s).....	17
5.2.1	Pump capacity test.....	17
5.2.2	Pump pulsations.....	19
5.3	Sprayer pressure indicators .....	19
5.3.1	Specifications of pressure indicators used for verification.....	19
5.3.2	Verification method of the sprayer pressure indicator .....	20
5.4	Flow meters for controlling the volume/hectare rate.....	20
5.4.1	General.....	20
5.4.2	Operating procedure No.1: Verification by nozzle flow rate measurement .....	20
5.4.3	Operating procedure No.2: Verification by installing a standard flow meter on the circuit of the sprayer.....	20
5.5	System for controlling forward speed.....	20
5.6	Uniformity of the transverse volume distribution with a horizontal patternator.....	20
5.6.1	Specification of horizontal patternators used for verification.....	20
5.6.2	Calculation of the coefficient of variation (CV).....	21
5.6.3	Verification method of the uniformity of the transverse distribution.....	21
5.7	Flow rate of the spray nozzles.....	22
5.7.1	General.....	22
5.7.2	Measurement with nozzles fitted on the sprayer .....	22
5.7.3	Measurement with nozzles removed from the sprayer.....	22
5.8	Pressure drop.....	22
5.9	Pressure variation when the sections are closed.....	22
5.10	Pressure variation when the spray is switched off.....	22
5.11	Accuracy of direct injection systems.....	23
5.12	Pressure distribution.....	23
	<b>Bibliography.....</b>	<b>24</b>