SLOVENSKI STANDARD
oSIST prEN ISO 19932-3:2017

01-junij-2017

Oprema za zaščito poljščin - Nahrbtni škropilniki - 3. del: Preverjanje delovanja nahrbtnih škropilnikov (ISO/DIS 19932-3:2017)

Equipment for crop protection - Knapsack sprayers - Part 3: Inspection of knapsack sprayers in use (ISO/DIS 19932-3:2017)

Pflanzenschutzgeräte - Tragbare Geräte - Teil 3: Kontrolle von in Gebrauch befindlichen Geräten (ISO/DIS 19932-3:2017)

Matériel de protection des cultures - Pulvérisateurs à dos - Partie 3: Contrôle des pulvérisateurs portables à dos en service (ISO/DIS 19932-3:2017)

Ta slovenski standard je istoveten z: **prEN ISO 19932-3**

ICS:

65.060.40 Oprema za nego rastlin Plant care equipment

oSIST prEN ISO 19932-3:2017 **en,fr,de**

DRAFT INTERNATIONAL STANDARD

ISO/DIS 19932-3

ISO/TC **23**/SC **6**

Secretariat: **AFNOR**

Voting begins on:
2017-03-30

Voting terminates on:
2017-06-21

Equipment for crop protection — Knapsack sprayers —

Part 3:
Inspection of knapsack sprayers in use

Matériel de protection des cultures — Pulvérisateurs à dos —

Partie 3: Contrôle des pulvérisateurs portables à dos en service

ICS: 65.060.40

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 19932-3:2017(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Requirements and method of verification ... **2**
4.1 General requirements ... 2
4.2 Harness ... 2
4.3 Spray tank ... 2
4.4 Dynamic leak test ... 3
4.4.1 Leak test when not spraying ... 3
4.4.2 Leak test while spraying ... 3
4.5 Controls ... 3
4.6 Hoses ... 3
4.7 Filters ... 3
4.8 Spray lance and nozzles ... 4

5 Specific requirements for lever-operated knapsack sprayers ... **4**
5.1 Spray tank ... 4

6 Specific requirements for engine – or electric motor-driven knapsack sprayers ... **4**
6.1 Spray tank ... 4
6.2 Controls ... 4
6.3 Power driven components ... 5
6.4 Fuel tank ... 5
6.5 Exhaust system ... 5
6.6 Parts under high voltage ... 5

7 Specific requirements for compression sprayers ... **5**
7.1 Spray tank ... 5

8 Information for use ... **5**

Annex ZA (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC amended by Directive 2009/127/EC aimed to be covered** ... **6**

Bibliography ... **7**

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 19932-3 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 6, *Equipment for crop protection*.

Introduction

There are three main reasons for inspection in use of knapsack sprayers which are the most widely used means worldwide of applying Plant Protection Products (PPPs):

— less potential risk to the operator;

— less potential risk of environmental contamination by PPPs; and

— good control of pests with the minimum possible input of PPPs.

In order to use PPPs in agricultural production safely, it is necessary to define the requirements and test methods for knapsack sprayers in use. This is a relevant step after having standardized minimum requirements for new knapsack sprayers, in respect of safety hazards and potential risks of environmental contamination (see ISO 19932-1 and –2).

Standardising the requirements and methods for inspection of sprayers in use takes into consideration not only the original performance of the sprayer, but also its use, care and maintenance. This is the logical link to ensure the continued benefit arising from the supply of new sprayers of good quality.

The inspection of sprayers in use can be a mandatory requirement or adopted on a voluntary basis. In both cases further requirements, outside the scope of this standard, are necessary for the management of inspections. These include, for example, requirements for the competence of persons carrying out inspections and the frequency of inspections.

NOTE National or regional regulations may also apply concerning the qualifications and competence of inspectors.

Equipment for crop protection — Knapsack sprayers —

Part 3: Inspection of knapsack sprayers in use

1 Scope

This part of ISO 19932 specifies the requirements and test methods for the inspection in use of Knapsack sprayers carried on the back or shoulder of the operator for use with Plant Protection Products (PPPs).

It is applicable to lever-operated knapsack sprayers, knapsack compression sprayers and knapsack sprayers driven by an engine or electric motor using hydraulic pressure atomisation of the spray liquid, intended for use primarily in agriculture, forestry and horticulture, with a nominal volume of more than 6.0 l.

The requirements relate mainly to the condition of the sprayer with respect to its potential risk to the operator and the environment and its performance to achieve good application.

It does not apply to knapsack combustion engine-driven air-blast sprayers according to ISO/DIS 28139, Controlled Droplet Application equipment utilising rotary atomisers, or portable application equipment for spatial application (e.g. foggers).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5681[1)], *Equipment for crop protection — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5681 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
knapsack sprayer
self-contained sprayer carried on the operator's back or shoulder by means of straps or a strap

1)) Under revision.

4 Requirements and method of verification

4.1 General requirements

4.1.1 A calibrated pressure indicator, measuring jug/cylinder (at least 1 l capacity – scale graduations at least every 20 ml), and measuring tape (or similar) of at least 100 mm length and accurate to ± 0,5 mm shall be used for the tests.

4.1.2 The sprayer shall be depressurised, empty (no visible puddles in the spray tank) and internally and externally clean to allow safe inspection.

Compliance shall be checked by inspection.

4.1.3 The sprayer shall have no obvious serious damage that would cause failure (e.g. holes or cracks in the tank, severely abraded hoses).

Compliance shall be checked by inspection.

4.1.4 The sprayer shall be equipped with a means for lifting and carrying the sprayer .

Compliance shall be checked by an inspection and function test.

4.2 Harness

4.2.1 A harness shall be provided for all sprayers so that it shall be possible for one person to pick up, to carry and to put down the sprayer.

Compliance shall be checked by an inspection and function test.

4.2.2 If a quick-release mechanism is provided it shall be possible to open it under load and release the machine using only one hand.

Compliance shall be checked by an inspection and function test.

4.2.4 Load bearing straps should not be damaged or frayed sufficient to compromise the function to provide comfort and safety to the operator.

Compliance shall be checked by inspection.

4.2.5 Any strap/harness fixing points should be secure.

Compliance shall be checked by inspection.

4.3 Spray tank

4.3.1 The nominal volume shall be marked in whole litres.

Compliance shall be checked by inspection.

4.3.2 With the sprayer filled with water to the nominal volume and the tank lid closed the sprayer shall remain upright when placed on a flat horizontal surface and not leak from any part – both in the vertical position and when held inclined at approximately 45° forwards and backwards – and shall not spill liquid when picked up (vertically) from this surface using the sprayer harness. Dripping from the lid valve is not considered leakage.

Compliance shall be checked by an inspection and function test.