

PÕLLUMAJANDUS- JA METSATÖÖMASINAD. KASUTUSES
OLEVATE PRITSIDE ÜLEVAATUS. OSA 5: ÕHUST
PRITSIMISE SÜSTEEMID

Agricultural and forestry machines - Inspection of
sprayers in use - Part 5: Aerial spray systems (ISO
16122-5:2020)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 16122-5:2020 sisaldab Euroopa standardi EN ISO 16122-5:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 16122-5:2020 consists of the English text of the European standard EN ISO 16122-5:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.12.2020.	Date of Availability of the European standard is 23.12.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.020.99, 65.060.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Agricultural and forestry machines - Inspection of sprayers
in use - Part 5: Aerial spray systems (ISO 16122-5:2020)**

Matériel agricole et forestier - Contrôle des
pulvérisateurs en service - Partie 5: Systèmes aériens
de pulvérisation (ISO 16122-5:2020)

Land- und Forstmaschinen - Kontrolle von in Gebrauch
befindlichen Pflanzenschutzgeräten - Teil 5:
Pflanzenschutztechnik für Luftfahrzeuge -
Umweltschutz (ISO 16122-5:2020)

This European Standard was approved by CEN on 5 March 2020.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 16122-5:2020) has been prepared by Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry" in collaboration with Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 16122-5:2020 has been approved by CEN as EN ISO 16122-5:2020 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the essential requirements of Directive 2009/128/EC aimed to be covered

This European Standard has been prepared under Commission's standardization request "M/435 Mandate to CEN, CENELEC and ETSI for the development of standards on inspection of pesticide application equipment in use" to provide one voluntary means of conforming to essential requirements of the Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements, of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and annex II of EU Directive 2009/128/EC

Essential Requirements of EU Directive 2009/128/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex II		
- The pesticide application equipment must function reliably and be used properly for its intended purpose ensuring that pesticides can be accurately dosed and distributed.	4.2.5, 4.4, 4.5, 4.7, 4.8, 4.11	
- The equipment must be in such a condition as to be filled and emptied safely, easily and completely and prevent leakage of pesticides.	4.1, 4.2	
- It must permit easy and thorough cleaning.	4.2.4	
- It must ensure safe operations, and be controlled and capable of being immediately stopped from the operator's seat.	4.3, 4.5, 4.7, 4.8, 4.9, 4.10	
- Where necessary, adjustments must be simple, accurate and capable of being reproduced.	4.8.1, 4.8.2, 4.8.5	
2. Pump	4.5, 4.7.2, 5.2	No direct pump testing since most pumps on aircraft are

		air driven i.e. only operate when the aircraft is in flight. The specified tests should show whether the pump is adequate.
3. Agitation	4.2.7	
4. Spray liquid tank	4.2	
5. Measuring systems, control and regulation systems	4.2.5, 4.8	
6. Pipes and hoses	4.1.2, 4.3	
7. Filtering	4.2.2, 4.6	
8. Spray boom	4.4	
9. Nozzles	4.7	
10. Distribution	4.9	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	2
4.1 General requirements	2
4.1.1 Static leak test	2
4.1.2 Dynamic leak test	2
4.2 Sprayer tanks	2
4.2.1 General	2
4.2.2 Tank opening(s)	2
4.2.3 Strainers	3
4.2.4 Emptying	3
4.2.5 Tank emptying device	3
4.2.6 Tank contents indicator(s)	3
4.2.7 Tank agitation	3
4.3 Hoses and lines	3
4.3.1 General	3
4.3.2 Bending/abrasion	3
4.4 Spray boom	4
4.4.1 Spraying section	4
4.4.2 Nozzle orientation	4
4.5 Pressure drop	4
4.6 Filters	4
4.7 Nozzles	5
4.7.1 Mounting	5
4.7.2 Flow rate and spray quality	5
4.8 Measuring systems	5
4.8.1 General	5
4.8.2 Control	6
4.8.3 Pressure indicator (s)	6
4.8.4 Flow rate and other instruments	6
4.8.5 Pressure adjusting devices	7
4.9 Volume rate per area	7
4.10 Safety/Exposure	7
4.10.1 General	7
4.10.2 Inspector safety	7
4.11 Flow control	7
5 Test facility and methods	8
5.1 General	8
5.2 Validation pressure indicator(s)	8
5.3 Verification method of the sprayer pressure indicator	8
6 Inspection report	8
Annex A (informative) Nozzle drop size category websites and aerial deposition models	10

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

A list of all parts in the ISO 16122 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.