

Water application intensity — Calculation principles and measurement methods

The European Standard EN 14049:2003, with the incorporation of amendment A1:2005, has the status of a British Standard

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National foreword

This British Standard is the official English language version of EN 14049:2003, including amendment A1:2005.

The start and finish of text introduced or altered by CEN amendment is indicated in the text by tags **A1** **A1**. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by **A1** **A1**.

The UK participation in its preparation was entrusted to Technical Committee AGE/30, Irrigation and drainage equipment, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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English version

**Water application intensity - Calculation principles and
measurement methods**
(includes amendment A1:2005)

Techniques d'irrigation - Intensité d'apport d'eau - Principes
de calcul et méthodes de mesure
(inclut l'amendement A1:2005)

Bewässerungsverfahren - Bewässerungsintensität -
Berechnungsgrundlagen und Messverfahren
(enthält Änderung A1:2005)

This European Standard was approved by CEN on 18 September 2003; amendment A1:2005 was approved by CEN on 8 August 2005..

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Foreword

This document (EN 14049:2003) has been prepared by Technical Committee CEN/TC 334 “Irrigation techniques”, the secretariat of which is held by AENOR.

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of an identical text or by endorsement, at the latest by May 2004, and conflicting national standards shall be withdrawn at the latest by May 2004.

According to its working program, Sub Committee CEN/TC 334 charged working group CEN/TC 334/WG 8 with drafting this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Foreword to amendment A1

This European Standard (EN 14049:2003/A1:2005) has been prepared by Technical Committee CEN/TC 334 “Irrigation techniques”, the secretariat of which is held by AENOR.

This Amendment to the European Standard EN 14049:2003 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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

1 Scope

This standard provides:

- principles and formulas for calculating water application intensity under sprinkler irrigation systems (fixed and moving);
- test methods and guidelines for measuring water application intensity under the different systems in laboratory and in field conditions.

It applies to stationary sprinkling systems: solid set sprinkler systems, automatic turf irrigation systems, sprinklers and sprayer for microirrigation systems, and to moving sprinkling systems: reel machine systems, centre pivot and moving laterals systems.

2 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12324-1:1998, *Irrigation techniques – Reel machine systems – Part 1: Size series*

EN 12324-2:1999, *Irrigation techniques – Reel machine systems – Part 2: Specifications of polyethylene tubes for reel machines*

EN 12324-3:1999, *Irrigation techniques – Reel machine systems – Part 3: Presentation of technical characteristics*

EN 12324-4:1999, *Irrigation techniques – Reel machine systems – Part 4: Check list of users' requirements*

EN 12325-3:1999, *Irrigation techniques – Centre pivots and moving lateral systems – Part 3: Terminology and classification*

EN ISO 11545, *Agricultural irrigation equipment – Centre-pivot and moving lateral irrigation machines with sprayer or sprinkler nozzles – Determination of uniformity of water distribution (ISO 11545:2001)*

ISO 7749-1, *Agricultural irrigation equipment – Rotating sprinklers – Part 1: Design and operational requirements*

ISO 7749-2, *Irrigation equipment – Rotating sprinklers – Part 2: Uniformity of distribution and test methods*

ISO 8026, *Agricultural irrigation equipment – Sprayers – General requirements and test methods*