



SLOVENSKI STANDARD
SIST EN 12325-1:1999

01-december-1999

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Irrigation techniques - Centre pivot and moving lateral systems - Part 1: Presentation of the technical characteristics

Bewässerungsverfahren - Kreis- und Linearberegnungsmaschinen - Teil 1: Angabe technischer Kennwerte

Techniques d'irrigation - Installations avec pivots et rampes frontales - Partie 1: Présentation des caractéristiques techniques

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Ta slovenski standard je istoveten z: EN 12325-1:1998

ICS:

65.060.35	Namakalna in drenažna oprema	Irrigation and drainage equipment
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EUROPEAN STANDARD

EN 12325-1

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EUROPÄISCHE NORM

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ICS 65.060.35

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English version

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Kennwerte

This European Standard was approved by CEN on 28 November 1998.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 334 "Irrigation techniques", 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 1999, and conflicting national standards shall be withdrawn at the latest by June 1999.

Within its work programme, the CEN/TC 334 requested the CEN/TC 334/WG 2 "Centre pivot and moving laterals" Working Group to prepare the following standard :

prEN 12325-1 Irrigation techniques - Centre pivot and moving lateral systems -
Part 1 : Presentation of the technical characteristics

The other parts of this standard are :

prEN 12325-2 Irrigation techniques - Centre pivot and moving lateral systems -
Part 2 : Minimum performances and technical characteristics

prEN 12325-3 Irrigation techniques - Centre pivot and moving lateral systems -
Part 3 : Terminology and classification

prEN ISO 11545 Agricultural irrigation equipment - Centre-pivot and moving lateral
irrigation machines with sprayer or sprinkler nozzles -
Determination of uniformity of water distribution

SIST EN 12325-1:1999

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of prEN 12325 gives the technical characteristics of the different components elements of fixed or movable pivot and moving lateral systems to be specified by the supplier : general characteristics (structures, advancing, electrical equipment), hydraulic characteristics and sprinkler characteristics.

This standard can be used as a presentation guideline for machine characteristics when replying to a call for tenders or when making delivery to the customer.

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.

EN 909	1998	Agricultural and forestry machinery - Center pivot and moving lateral types irrigation machines - Safety
prEN 12325-3		Irrigation techniques - Centre pivot and moving lateral systems - Part 3: Terminology and classification
EN 60034-5	1987	Rotating electrical machines - Classification of degrees of protection provided by enclosures for rotating machinery
EN 60439-5	1996	Low-voltage switchgear and controlgear assemblies - Part 5 : Particular requirements for assemblies intended to be installed outdoors in public places - Cable distribution cabinets (CDCs) for power distribution in networks
EN 60529	1992	Degrees of protection provided by enclosures (IP Code)
EN 60811-4-1	1996	Insulating and sheathing materials of electric cables - Common test methods - Part 4 : Methods specific to polyethylene and polypropylene compounds - Section 1 : Resistance to environmental stress cracking - Wrapping test after thermal ageing in air - Measurement of the melt flow index - Carbon black and/or mineral content measurement in PE
CENELEC HD 384-7-705 S1		Electrical installations of buildings - Part 7 : Requirements for special installations or locations - Section 705 : Electrical installations of agricultural and horticultural premises (IEC 364-7-705:1984, modified)

3 Definitions and units

For the purpose of this standard the definitions and units of prEN 12325-3 apply.

4 General characteristics

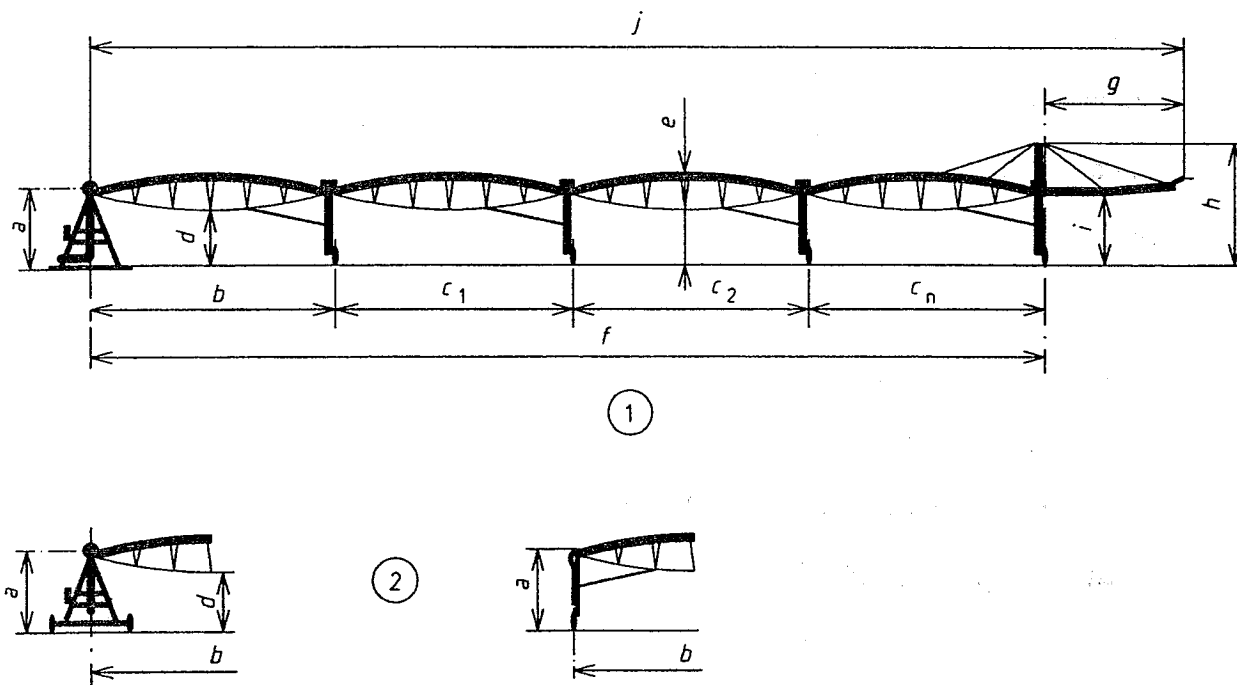
It is a question of specifying at least :

- a) trade mark ;
- b) model ;
- c) type :
 - 1). centre pivot (fixed) ;
 - 2) moving lateral ;
 - 3) movable pivot (self propelled, towable) ;
 - 4) mixed pivot-lateral.

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- ① Schem of a centre pivot
 ② Different karts or control tower of a moving lateral
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- a Height of the connection of the first span taken at the elbow axis, in metres
 b Length of the first span, in metres
 c₁ Length of the second spans, in metres
 c₂ Length of the third spans, in metres
 c_n Length of n th spans, in metres
 d Free height under structure, in metres
 e Maximum height of the spans, in metres
 f Distance from central point of pivot or kart to the last wheel's axis, in metres
 g Extra length added by the overhang including all the equipments, in metres
 h Maximum height of the overhang and its support, in metres
 i Free height under overhang, in metres
 j Total length of the machine, in metres

Figure 1 : Principle diagram and dimensions of a centre pivot or moving lateral structures

5 Characteristics of the structure

5.1 Joints dimensional and construction characteristics

5.1.1 Towers and spans

All the dimensional characteristics of towers and spans shall be presented in a table as the one shown in table 1. Each line corresponding to a span.

The following technical characteristics shall be precised :

- a) pipe material ;

5.2 Particularities of the different pivot types

5.2.1 General

It is to precise the specifies of each machine type.

5.2.2 Central unit

- a) plan and dimensions of flagstone and foundations in metres and in cubic metres ;
- b) nature and dimensions of anchorage ;
- c) water inlet :
 - 1) type of coupler and dimensions in millimetres ;
 - 2) height from the soil in metres ;
- d) height of the first span *a* connection to elbow axis in metres [figure 1 *a*] ;
- e) pivot elbow connection : articulated or not ;
- f) vertical pipe :
 - 1) outside diameter in millimetres ;
 - 2) thickness in millimetres ;
 - 3) water tightness : gasket flexible or rigid coupling-sleeve ;
- g) presence of a collector ring : yes/no ;
- h) presence, position and diameter in millimetres :
 - 1) of an injection port : yes/no ;
 - 2) of a pressure port : yes/no ;
 - 3) of a head valve : yes/no, linked to the control panel : yes/no ;
 - 4) of a counting device : yes/no, working principle.

5.2.3 Particularities of movable pivots

- a) fixation of the central point of pivot : nature of anchorage ;
- b) displacement :
 - 1) self propelled : automation yes/no, guiding type ;

- 2) towable : direction and direction of movements ;
- c) coupling system to water supply, semi-automatic or manual ;
- d) energy supply system.

5.3 Particularities of moving laterals

a) types of possible runs : back and forth, pivoting ;

b) type of water supply :

1) flexible pipe :

- material ;
- dimensions : length in metres, thickness in millimetres ;
- resistance to abrasion and pulling ;
- type of coupler ;
- radius of curvature in metres ;
- minimum and maximum pressure in kilopascals ;
- linear mass when full of water in kilograms ;

2) canal :

- pumping system :
 - direct ;
 - with floater ;
 - with movable lock ;
 - other ;

c) filtration device ;

d) type of energy supply :

1) electrical generator :

- steady state power in kilowatts ;
- autonomy in hours ;

2) cable :

- section in square millimetres ;