

Irrigation techniques — Automatic turf irrigation systems —

Part 2: Design and definition of typical technical templates

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National foreword

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Summary of pages

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Definition von typischen technischen Darstellungen

This European Standard was approved by CEN on 13 April 2000.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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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of an identical text or by endorsement, at the latest by November 2000, and conflicting national standards shall be withdrawn at the latest by November 2000.

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.

Within the framework of its work programme, the CEN/TC 334 has entrusted the preparation of this standard to CEN/TC 334/WG 4, Automatic turf irrigation systems, working group to prepare the present draft:

EN 12484-2, *Irrigation techniques - Automatic turf irrigation systems - Part 2: Design and definition of typical technical templates.*

The other parts of this standard are:

EN 12484-1, *Irrigation techniques - Automatic turf irrigation systems - Part 1: Definition of the programme of equipment by the owner.*

EN 12484-3, *Irrigation techniques - Automatic turf irrigation systems - Part 3: Automatic control and system management.*

prEN 12484-4, *Irrigation techniques - Automatic turf irrigation systems - Part 4: Installation, acceptance and safety.*

prEN 12484-5, *Irrigation techniques - Automatic turf irrigation systems - Part 5: Testing methods of systems.*

Annex A is normative.

1 Scope

This part of this European Standard EN 12484 is intended to:

- set forth the information and requirements taken into account by the project manager for designing an automatic irrigation system and justify the technical decisions made;
- quantify and define the equipment and methods used as a basis for carrying out the installation of an automatic irrigation system.

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 736-1:1995, *Valves - Terminology - Part 1: Definition of types of valves*.

EN 50086-2-4, *Conduits systems for electrical installations - Part 2.4: Particular requirements for conduits systems buried underground*.

HD 21.1 S3, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1: General requirements*.

HD 21.2 S3, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 2: Test methods*.

HD 21.3 S3, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 3: Non-sheathed cables for fixed wiring*. (IEC 60227-3:1993, modified).

HD 21.4 S2, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 4: Sheathed cables for fixed wiring*.

HD 21.5 S3, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 5: Flexible cables (cords)*. (IEC 60227-5:1979, modified).

HD 21.7 S2, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 7: Single core non-sheathed cables for internal wiring for a conductor temperature of 90 "Grad" C*.

HD 21.9 S2, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 9: Single core non-sheathed cable for installation at low temperatures*.

HD 21.10 S1, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 10: Extensible leads*.

HD 21.12 S1, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 12: Heat-resistant flexible cables (cords)*.

HD 21.13 S1, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 13: Oil resistant PVC sheathed cables with two or more conductors*.

EN 1452-1, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: General*.

EN 1452-2, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 2: Pipes*.

EN 1452-3, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 3: Fittings.*

EN 1452-4, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 4: Valves and ancillary equipment.*

EN 1452-5, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 5: Fitness for purpose of the system.*

prENV 1452-6:1999, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 6: Guidance for installation.*

prENV 1452-7:1999, *Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 7: Guidance for the assessment of conformity.*

prEN 1717:1999, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow.*

prEN 12201-1:1995, *Plastics piping systems for water supply - Polyethylene (PE) - Part 1: General.*

prEN 12201-2:1995, *Plastics piping systems for water supply - Polyethylene (PE) - Part 2: Pipes.*

prEN 12201-3:1995, *Plastics piping systems for water supply - Polyethylene (PE) - Part 3: Fittings.*

prEN 12201-4:1997, *Plastics piping systems for water supply - Polyethylene (PE) - Part 4: Valves.*

prEN 12201-5:1995, *Plastics piping systems for water supply - Polyethylene (PE) - Part 5: Fitness for purpose of the system.*

prEN 12201-7:1997, *Plastics piping systems for water supply - Polyethylene (PE) - Part 7: Assessment of conformity.*

ISO 161-1, *Thermoplastics pipes for the conveyance of fluids - Nominal outside diameters and nominal pressures - Part 1: Metric series.*

ISO 3458, *Assembled joints between fittings and polyethylene (PE) pressure pipes - Test of leakproofness under internal pressure.*

ISO 3459, *Polyethylene (PE) pressure pipes - Joints assembled with mechanical fittings - Internal under pressure test method and requirement.*

ISO 3501, *Assembled joints between fittings and polyethylene (PE) pressure pipes - Test of resistance to pull out.*

ISO 3503, *Assembled joints between fittings and polyethylene (PE) pressure pipes - Test of leakproofness under internal pressure when subjected to bending.*

ISO 11922-1, *Thermoplastics pipes for the conveyance of fluids - Dimensions and tolerances - Part 1: Metric series.*

IEC/TR3 61201, *Extra-low voltage (ELV) - Limit values.*

3 Definitions and graphic symbols

3.1 Definitions

For the purposes of this European Standard, the following definitions apply.

3.1.1

flow meter

device designed to measure the volumes of water used in time units

3.1.2

water meter

device designed to measure the amount of water used in volumetric units

3.1.3

pump station

installation comprising one or more pumps, including all necessary equipment and accessories

3.1.4

booster pump

installation comprising one or more pumps, and intended for increasing the pressure within the distribution network

3.1.5

water source

point of supply of pressurized water supplying the irrigation system

3.1.6

injection pump

device designed to inject fertilizer and treatment products into irrigation water

3.1.7

flow limiter

device which limits the supply flow rate per unit of time to a given maximum value

3.1.8

inline vacuum breaker

device designed to allow air to enter pipe network to prevent any depression

3.1.9

pressure regulator

device to maintain a pre-defined downstream pressure lower or equal to the upstream pressure

3.1.10

check valve

valve which automatically opens by fluid flow in a defined direction and which automatically closes to prevent fluid flow in the reverse direction

[EN 736-1:1995]

3.1.11

double action air vent

device designed to vent out air during system fill-up and admit air into the pipeline when system is drained. The device is usually installed at the highest point in the system

3.1.12

valve

pipng component which influences the fluid flow by opening, closing or partially obstructing the passage of the fluid flow or by diverting or mixing the fluid flow

[EN 736-1:1995]