

STN	Potrubia diaľkového chladenia Spájané jednorúrkové bezkanálové systémy rozvodu studenej vody uložené v zemi Časť 3: Priemyselne vyrobené zostavy oceľových ventilov pre oceľové alebo plastové potrubia s polyuretánovou tepelnou izoláciou a plášťom z polyetylénu	STN EN 17415-3 38 3381
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District cooling pipes - Bonded single pipe systems for directly buried cold water networks - Part 3: Factory made steel valve assembly for steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

District cooling pipes - Bonded single pipe systems for directly buried cold water networks - Part 3: Factory made steel valve assembly for steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene

Réseaux d'eau glacée - Systèmes bloqués de tuyaux pour les réseaux d'eau glacée enterrés directement - Partie 3 : Assemblages d'appareils de robinetterie manufacturés pour tubes de service en acier ou en plastique, isolation thermique en polyuréthane et tube de protection en polyéthylène

Fernkälterohre - Einzelrohr-Verbundsysteme für direkt erdverlegte Fernkältenetze - Teil 3: Werkmäßig gefertigte Stahl-Absperrarmaturen für Stahl- oder Kunststoff-Mediumrohre, einer Wärmedämmung aus Polyurethan und einer Ummantelung aus Polyethylen

This European Standard was approved by CEN on 18 July 2021.

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

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EN 17415-3:2021

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European foreword

This document (EN 17415-3:2021) has been prepared by Technical Committee CEN/TC 107 “Prefabricated district heating and district cooling pipe system”, the secretariat of which is held by DS.

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of an identical text or by endorsement, at the latest by March 2022, and conflicting national standards shall be withdrawn at the latest by March 2022.

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.

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EN 17415-3:2021**Introduction**

Factory made bonded single pipe systems for directly buried district cooling networks are of common technical usage. In order to ensure quality including product-related service life, to ensure safety in use, economical energy usage and to facilitate comparability in the market, CEN/TC 107 decided to set up standards for these products.

This document is one of a series of standards which form several parts of EN 17415, *District cooling pipes – Bonded single pipe systems for directly buried cold water networks*:

- Part 1: *Factory made pipe assembly of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene*;
- Part 2: *Factory made fitting assemblies of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene*;
- Part 3: *Factory made steel valve assembly for steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene* (this document).

The other standards from CEN/TC 107 covering this subject are:

- EN 17414-1, *District cooling pipes — Factory made flexible pipe systems — Part 1: Classification, general requirements and test methods*;
- EN 17414-2, *District cooling pipes — Factory made flexible pipe systems — Part 2: Bonded system with plastic service pipes; requirements and test methods*;
- EN 17414-3, *District cooling pipes — Factory made flexible pipe systems — Part 3: Non bonded system with plastic service pipes; requirements and test methods*;
- EN XXXXX-1,¹ *District cooling pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried cold water networks — Part 1: Design*;
- EN XXXXX-2,¹ *District cooling pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried cold water networks — Part 2: Installation*;
- EN 489-1, *District heating pipes — Bonded single and twin pipe systems for buried hot water networks — Part 1: Joint casing assemblies and thermal insulation for hot water networks in accordance with EN 13941-1*;
- EN 14419, *District heating pipes — Bonded single and twin pipe systems for directly buried hot water networks — Surveillance systems*.

Waste management and recycling of materials is dealt with in Annex D.

¹ Under development.

1 Scope

This document specifies requirements, design and test methods for factory made thermally insulated bonded valve assemblies for directly buried district cooling distribution systems, comprising a steel valve from DN 15 to DN 1 200, rigid polyurethane foam insulation and a casing of polyethylene.

The valve assembly can also include the following additional elements: measuring wires, spacers and diffusion barriers.

This document applies only to insulated valve assemblies, for continuous operation with water at various temperatures (1 to 30) °C and a maximum operation pressure of 25 bar.

The design is based on an expected service life with continuous operation of a minimum 50 years.

NOTE An expected service life of 50 years presupposes that treated water is used.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 19, *Industrial valves - Marking of metallic valves*

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

EN 1092-1, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges*

EN 10088-1, *Stainless steels - Part 1: List of stainless steels*

EN 10204, *Metallic products - Types of inspection documents*

EN 12201-2:2011+A1:2013, *Plastics piping systems for water supply, and for drainage and sewerage under pressure - Polyethylene (PE) - Part 2: Pipes*

EN 12266-1, *Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements*

EN 13941-1, *District heating pipes - Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks - Part 1: Design*

EN 14419, *District heating pipes - Bonded single and twin pipe systems for buried hot water networks - Surveillance systems*

EN 17248, *District heating and district cooling pipe systems - Terms and definitions*

EN 17415-1, *District cooling pipes - Bonded single pipe systems for directly buried cold water networks - Part 1: Factory made pipe assembly of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene*

EN 17415-2:2021, *District cooling pipes - Bonded single pipe systems for directly buried cold water networks - Part 2: Factory made fitting assemblies of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylenen*

EN ISO 12944-2, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 2: Classification of environments (ISO 12944-2)*

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