ICS 23.040.01, 23.060.01 SLOVENSKÁ TECHNICKÁ NORMA August 2025

STN	**Potrubia diaľkového (teplovodného) vykurovania Združené jednoduché potrubné systémy pre predizolované bezkanálové rozvody teplej vody Časť 1: Priemyselne vyrábané zostavy uzavieracích oceľových armatúr pre oceľové potrubia s polyuretánovou tepelnou izoláciou a s vonkajším plášťom z polyetylénu**	**STN EN 488-1** 38 3373

District heating pipes - Bonded single pipe systems for directly buried hot water networks - Part 1: Factory made steel shut-off valve assembly for steel service pipes, 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.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/25

Obsahuje: EN 488-1:2025

Oznámením tejto normy sa ruší
STN EN 488 (38 3373) z apríla 2020

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 488-1

March 2025

ICS 23.060.01; 23.040.07 Supersedes EN 488:2019

English Version

District heating pipes - Bonded single pipe systems for directly buried hot water networks - Part 1: Factory made steel shut-off valve assembly for steel service pipes, polyurethane thermal insulation and a casing of polyethylene

Tuyaux de chauffage urbain - Systèmes bloqués monotubes pour les réseaux d'eau chaude enterrés directement - Partie 1 : Assemblage d'appareils de robinetterie d'arrêt en acier manufacturés pour tubes de service en acier, isolation thermique en polyuréthane et enveloppe en polyéthylène

Fernwärmerohre - Einrohr-Verbundsysteme für direkt erdverlegte Fernwärmenetze - Teil 1: Werkmäßig gefertigte Stahlabsperrarmaturenbaueinheit für Stahl-Mediumrohre, Wärmedämmung aus Polyurethan und einer Ummantelung aus Polyethylen

This European Standard was approved by CEN on 27 January 2025.

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.

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

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EN 488-1:2025 (E)

Contents

Page

European foreword

This document (EN 488-1:2025) has been prepared by Technical Committee CEN/TC 107 “District heating and cooling systems”, 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 September 2025, and conflicting national standards shall be withdrawn at the latest by September 2025.

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 supersedes EN 488:2019.

EN 488-1:2025 includes the following significant technical changes with respect to EN 488:2019:

— alignment with the structure of EN 253;

— the valves shall be designed for an operating pressure of 2,5 MPa in accordance with 4.2.1;

— the requirements for the valve extension pipes are specified in 4.4.3;

— for the leak-tightness of the seat of the unloaded steel valves up to DN 400, a distinction is no longer made between different leakage rates, see 5.3.1.3;

— added requirement: Before measuring the torque, the valve shall be closed for 24 h, see 5.3.1.4;

— when marking the valve assemblies, information about the diffusion barrier is also to be provided, see 6.5.

The EN 488 series is currently composed of the following parts:

— EN 488-1, *District heating pipes – Bonded single pipe systems for directly buried hot water networks – Part 1: Factory made steel shut-off valve assembly for steel service pipes, polyurethane thermal insulation and a casing of polyethylene* (this document);

— EN 488-2, *District heating and district cooling pipes – Bonded pipe systems for directly buried hot and cold water networks – Part 2: Factory made steel service valve assembly for steel service pipes, polyurethane thermal insulation and a casing of polyethylene*.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

Introduction

Other standards from CEN/TC 107 are:

— EN 253, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made pipe assembly of steel service pipe, polyurethane thermal insulation and a casing of polyethylene*

— EN 448, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made fitting assemblies of steel service pipes, polyurethane thermal insulation and a casing of polyethylene*

— EN 488-2, *District heating and district cooling pipes — Bonded pipe systems for directly buried hot and cold water networks — Part 2: Factory made steel valve assembly for draining and venting, polyurethane thermal insulation and a casing of polyethylene*

— 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 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 13941-2, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks — Part 2: Installation*

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

— EN 15632 (all parts), *District heating pipes — Factory made flexible pipe systems*

— EN 15698-1, *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 1: Factory made twin pipe assembly of steel service pipes, polyurethane thermal insulation and one casing of polyethylene*

— EN 15698-2, *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 2: Factory made fitting and valve assemblies of steel service pipes, polyurethane thermal insulation and one casing of polyethylene*

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

— EN 17414 (all parts), *District cooling pipes — Factory made flexible pipe systems*

— EN 17415 (all parts), *District cooling pipes — Bonded single pipe systems for directly buried cold water networks*

— EN 17878 (all parts), *District heating pipes — Factory made flexible pipe systems with a lower temperature profile*

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

1 Scope

This document specifies requirements and test methods for factory made thermally insulated bonded steel shut-off valve assemblies for hot water networks in accordance with EN 13941-1, comprising a steel valve, valve extension pipes, polyurethane (PUR) foam thermal insulation and a casing of polyethylene.

This document applies to steel valve assemblies with an internal pressure of maximum 2,5 MPa.

The principles of this document can be applied to thermal insulated bonded steel valve assemblies with internal pressures higher than 2,5 MPa, provided that special attention is paid to the effects of pressure.

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

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 253, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made pipe assembly of steel service pipe, polyurethane thermal insulation and a casing of polyethylene*

EN 448, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made fitting assemblies of steel service pipes, polyurethane thermal insulation and a casing of polyethylene*

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

EN 736-3, *Valves — Terminology — Part 3: Definition of terms*

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

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*