SLOVENSKI STANDARD
SIST EN 12514:2020

01-oktober-2020

Nadomešča:
SIST EN 12514-1:2003
SIST EN 12514-2:2003

Sestavni deli sistemov za oskrbo uporabnikov s tekočimi gorivi

Components for supply systems for consuming units with liquid fuels

Komponenten für Versorgungsanlagen für Verbrauchsstellen mit flüssigen Brennstoffen

Composants destinés aux systèmes d'alimentation pour unités de consommation à combustible liquide

Ta slovenski standard je istoveten z: **EN 12514:2020**

ICS:

27.060.10	Gorilniki na tekoče in trdo gorivo	Liquid and solid fuel burners
75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment

SIST EN 12514:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12514

August 2020

ICS 27.060.10; 75.200

Supersedes EN 12514-1:2000, EN 12514-2:2000

English Version

Components for supply systems for consuming units with liquid fuels

Composants destinés aux systèmes d'alimentation pour unités de consommation à combustible liquide

Komponenten für Versorgungsanlagen für Verbrauchsstellen mit flüssigen Brennstoffen

This European Standard was approved by CEN on 15 June 2020.

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.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 12514:2020 E

Contents

Page

European foreword

This document (EN 12514:2020) has been prepared by Technical Committee CEN/TC 47 “Atomizing oil burners and their components - Function - Safety - Testing”, the secretariat of which is held by DIN.

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 January 2021, and conflicting national standards shall be withdrawn at the latest by April 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.

This document supersedes EN 12514-1:2000 and EN 12514-2:2000.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential characteristics of EU Directives.

In comparison to EN 12514-1:2000 and EN 12514-2:2000, the following fundamental changes are given:

— standard new structured;

— new components for supply systems included;

— technical characteristics and requirements revised;

— updating of the terms and definitions;

— merging of components to type series;

— fuels categorized and new fuels added;

— nominal lifetime defined;

— essential characteristic for flood proof components included;

— selections of materials;

— marking, packing and instructions revised;

— inclusion of Annex ZA giving the correspondance to the Measuring Instruments Directive (MID) 2014/32/EU.

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, Turkey and the United Kingdom.

Introduction

Pressure values given in this standard are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise. Vacuum (negative pressure) is therefore designated by a negative value.

1 Scope

This document specifies the safety and performance essential characteristics and tests methods for the components for supply systems. Their intended use is the supply with liquid fuel for one or more consuming units from one or more tanks.

This document applies to components for pressurised, negative pressurised, (vacuum), non-pressurised, underground, above ground, inside and/or outside systems to supply liquid fuels.

The components for supply systems covered by this document are piping kits/systems with the following components:

a) feed pump;

b) control and safety device for feed pumps;

c) service tank;

d) service vessel;

e) safety shut-off device;

f) isolating valve;

g) quick acting valve;

h) switch-over valve;

i) forced switch-over valve;

j) check valve;

k) pressure compensating device;

l) discharge valve;

m) pressure reducer;

n) filter;

o) meter;

p) de-aerator;

q) anti-siphon safety device;

r) insulating device;

s) pressure gauge;

t) vapour/air separator;

u) pressure control path;

v) pressure retaining device;

w) remote acting fire safety valve;

x) pipe;

y) pipeline connections;

z) component within pipes;

aa) combined component;

bb) withdrawal device.

Not covered by this document are items belonging to the consuming unit (e.g.: heating/cooling appliances in buildings) and items used for the mounting and support of components.

Not covered by this document are items with the intended use of gas for building heating/cooling systems and any items of heating networks.

Not covered are items used for drainage (including highways) and disposal of other liquids and gaseous waste, supply of oil and other liquids, supply of gases, pressure and vacuum systems, communications, sanitary and cleaning fixtures and storage fixtures.

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 573-3:2019, Aluminium and aluminium alloys - Chemical composition and form of wrought products - Part 3: Chemical composition and form of products

EN 682:2002+A1:2005, *Elastomeric Seals - Materials requirements for seals used in pipes and fittings carrying gas and hydrocarbon fluids*

EN 754:2016 (All parts), *Aluminium and aluminium alloys - Cold drawn rod/bar and tube*

EN 755:2016 (All Parts), *Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 1: Technical conditions for inspection and delivery*

EN 806-4:2010, *Specifications for installations inside buildings conveying water for human consumption — Part 4: Installation*

EN 809:1998+A1:2009 + AC:2010, *Pumps and pump units for liquids - Common safety requirements*

EN 837-1:1996, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 837-2:1997, *Pressure gauges - Part 2: Selection and installation recommendations for pressure gauges*

EN 837-3:1996, *Pressure gauges - Part 3: Diaphragm and capsule pressure gauges - Dimensions, metrology, requirements and testing*

EN 1057:2006+A1:2010, C*opper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092 (All parts), *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated*

EN 1127-1:2019, *Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology*

EN 1254 (*All parts except part 6*), *Copper and copper alloys - Plumbing fittings*

EN 1267:2012, *Industrial valves - Test of flow resistance using water as test fluid*

EN 1363-1:2018, *Fire resistance tests - Part 1: General requirements*

EN 10151:2002, *Stainless steel strip for springs - Technical delivery conditions*

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 10226-1:2004, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10226-2:2005, *Pipe threads where pressure tight joints are made on the threads - Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designation*

EN 10241:2000, *Steel threaded pipe*

EN 10242:1994, *Threaded pipe fittings in malleable cast iron*

EN 10270-3:2011, *Steel wire for mechanical springs - Part 3: Stainless spring steel wire*

EN 10284:2000, *Malleable cast iron fittings with compression ends for polyethylene (PE) piping systems*

EN 10305:2016 (*All parts, except part 5*), *Steel tubes for precision applications - Technical delivery conditions*

prEN 10344:2006, M*alleable cast iron fittings with compression ends for steel pipes*

prEN 10352:2010, *Stainless steel plumbing fittings - Fittings with press ends for metallic tubes*

prEN 10358:2012, *Unalloyed steel plumbing fittings - Fittings with press ends for unalloyed steel tubes*

EN 12170:2002, *Heating systems in buildings - Procedure for the preparation of documents for operation, maintenance and use - Heating systems requiring a trained operator*

EN 12171:2002, *Heating systems in buildings - Procedure for the preparation of documents for operation, maintenance and use - Heating systems not requiring a trained operator*

EN 12266-1:2012, *Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements*

EN 12266-2:2012, *Industrial valves - Testing of metallic valves - Part 2: Tests, test procedures and acceptance criteria - Supplementary requirements*

EN 12449:2016, *Copper and copper alloys - Seamless, round tubes for general purposes*

EN 12627:2017, *Industrial valves - Butt welding ends for steel valves*

EN 13160-1:2003, *Leak detection systems — Part 1: General principles*

EN 13341:2018, *Static thermoplastic tanks for above ground storage of domestic heating oils, kerosene and diesel fuels — Blow moulded and rotationally moulded polyethylene tanks and rotationally moulded tanks made of anionically polymerized polyamide 6 — Requirements and test methods*

EN 13349:2002, *Copper and copper alloys - Pre-insulated copper tubes with solid covering*

EN 13480-1:2017, *Metallic industrial piping - Part 1: General*

EN 13480-3:2017, *Metallic industrial piping - Part 3: Design and calculation*

EN 13480-8:2017, *Metallic industrial piping - Part 8: Additional requirements for aluminium and aluminium alloy piping*

EN 13501-1:2018, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 13616-2:2016, *Overfill prevention devices for static tanks for liquid fuels - Part 2: Overfill prevention devices without a closure device*

EN 13906-1:2013, *Cylindrical helical springs made from round wire and bar - Calculation and design - Part 1 : Compression springs*

EN 13906-2:2013, *Cylindrical helical springs made from round wire and bar - Calculation and design - Part 2: Extension springs*

EN 14125:2013, *Thermoplastic and flexible metal pipework for underground installation at petrol filling stations*

EN 14214:2012+A2:2019, *Automotive fuels — Fatty acid methyl esters (FAME) for diesel engines and heating applications — Requirements and test methods*

EN 14291:2004, *Foam producing solutions for leak detection on gas installations*

EN 14585-1:2006, *Corrugated metal hose assemblies for pressure applications - Part 1: Requirements*

EN 14879-4:2007, *Organic coating systems and linings for protection of industrial apparatus and plants against corrosion caused by aggressive media - Part 4: Linings on metallic components*

EN 14597:2012, *Temperature control devices and temperature limiters for heat generating systems*

EN 15014:2007, *Plastics piping systems - Buried and above ground systems for water and other fluids under pressure - Performance characteristics for pipes, fittings and their joints;*

EN 16668:2016+A1:2018, *Industrial valves - Requirements and testing for metallic valves as pressure accessories*;

EN 60529:2014, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:2014)*

EN 60534-2-3:2015, *Industrial-process control valves - Part 2-3: Flow capacity - Test procedures (IEC 60534-2-3:2015)*

EN 60730-1:2016, *Automatic electrical controls - Part 1: General requirements (IEC 60730-1)*

EN 61672-1:2013, *Electroacoustics - Sound level meters - Part 1: Specifications (IEC 61672-1:2013)*

EN 82079-1:2019, *Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements*

EN ISO 175:2010, *Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:2010)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 527-1:2012, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:2012)*

EN ISO 9227:2017, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2017)*

EN ISO 1179 (*all parts*):2013, *Connections for general use and fluid power - Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing*

EN ISO 3183:2012+A1:2017, *Petroleum and natural gas industries - Steel pipe for pipeline transportation systems (ISO 3183:2012 + Amd 1:2017)*

EN ISO 8434 (All parts except part 5):2018 *Metallic tube connections for fluid power and general use (ISO 8434:2018)*

EN ISO 2719:2016, *Determination of flash point - Pensky-Martens closed cup method (ISO 2719:2016)*

EN ISO 6508-1:2015, *Metallic materials — Rockwell hardness test — Part 1: Test method (ISO 6508-1:2015)*

EN ISO 6806:2017, *Rubber hoses and hose assemblies for use in oil burners - Specification (ISO 6806:2017)*

EN ISO 9606-2:2004, *Qualification test of welders - Fusion welding - Part 2: Aluminium and aluminium alloys (ISO 9606-2:2004)*

EN ISO 9606-3:1999, *Approval testing of welders - Fusion welding - Part 3: Copper and copper alloys (ISO 9606-3:1999)*

EN ISO 9606-4:1999, *Approval testing of welders - Fusion welding - Part 4: Nickel and nickel alloys (ISO 9606-4:1999)*

EN ISO 9606-5:2000, *Approval testing of welders - Fusion welding - Part 5: Titanium and titanium alloys, zirconium and zirconium alloys (ISO 9606-5:2000)*

EN ISO 9974-1:2000, *Connections for general use and fluid power - Ports and studs ends with ISO 261 threads with elastomeric or metal-to-metal sealing - Part 1: Threaded ports (ISO 9974-1:1996)*

EN ISO 9974-3:2000, *Connections for general use and fluid power - Ports and studs ends with ISO 261 threads with elastomeric or metal-to-metal sealing - Part 3: Stud ends with metal-to-metal sealing (type B) (ISO 9974-3:1996)*

EN ISO 10380:2012, *Pipework - Corrugated metal hoses and hose assemblies (ISO 10380:2012)*

EN ISO 10497:2010, *Testing of valves - Fire type-testing requirements (ISO 10497:2010)*

EN ISO 11357-6:2018, *Plastics - Differential scanning calorimetry (DSC) - Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) (ISO 11357-6:2018);*

EN ISO 11925-2:2011, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2:2010)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010);*