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NATIONAL STANDARD

ANSI/CAN/UL/ULC 1390:2024

STANDARD FOR SAFETY

Solid Fuel Fireplace Inserts and Hearth-Mounted Stoves for Installation into Masonry Fireplaces

Approved American National Standard
ANSI

ANSI/UL 1390-2024

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SCC FOREWORD

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UL Standard for Safety for Solid Fuel Fireplace Inserts and Hearth-Mounted Stoves for Installation into Masonry Fireplaces, ANSI/CAN/UL/ULC 1390

First Edition, Dated November 13, 2024

Summary of Topics

This new First Edition of ANSI/CAN/UL/ULC 1390 dated November 13, 2024 is being issued as a new joint US/Canada Standard reflecting the latest ANSI and SCC approval dates and incorporating the proposals dated May 5, 2023, February 16, 2024, and July 26, 2024.

The new requirements are substantially in accordance with Proposal(s) on this subject dated May 5, 2023, February 16, 2024, and July 26, 2024.

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ANSI/UL 1390-2024

NOVEMBER 13, 2024

ANSI/CAN/UL/ULC 1390:2024

Standard for Solid Fuel Fireplace Inserts and Hearth-Mounted Stoves for Installation into Masonry Fireplaces

First Edition

November 13, 2024

This ANSI/CAN/UL/ULC Safety Standard consists of the First Edition.

The most recent designation of ANSI/UL 1390 as an American National Standard (ANSI) occurred on November 13, 2024. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This Standard has been designated as a National Standard of Canada (NSC) on date November 13, 2024.

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Preface

This is the First Edition of ANSI/CAN/UL/ULC 1390, Standard for Solid Fuel Fireplace Inserts and Hearth-Mounted Stoves for Installation into Masonry Fireplaces.

ULSE is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO). ULC Standards is accredited by the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL/ULC 1390 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Annex A, identified as Normative, forms a mandatory part of this Standard.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This joint American National Standard and National Standard of Canada is based on, and now supersedes, the Fourth Edition of CAN/ULC 628:2022.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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This Edition of the Standard has been formally approved by the Technical Committee (TC) on Solid Fuel Appliances, TC 127.

This list represents the TC 127 membership when the final text in this Standard was balloted. Since that time, changes in the membership may have occurred.

TC 127 Membership

Name	Representing	Interest Category	Region
E. Adair	Hearth Patio & Barbecue Association	Producer	USA
J. Brania	UL Solutions	Testing & Standard Org	USA
I. Brodzinski	UL Standards & Engagement	TC Project Manager	USA
J. Buckley	Buckley Rumford CO	Supply Chain	USA
G. Bures	Bures Consultants, Inc.	General Interest	USA

TC 127 Membership Continued on Next Page

TC 127 Membership Continued

Name	Representing	Interest Category	Region
K. Bush	Office of the Maryland State Fire Marshal	Authorities Having Jurisdiction / Regulator	USA
L-P. Côté	SBI International	Producer	Canada
N. Dawe	County Of Cobb	Authorities Having Jurisdiction / Regulator	USA
R. Dimmitt	Chimney Safety Institute Of America	General Interest	USA
E. Dufour	Security Chimneys International LTD	Producer	Canada
D. Feb	Standards Individuals	General Interest	USA
D. Freeman	Freeman Fire Inspectors, Ltd.	Commercial / Industrial User	USA
Z. Gadomski	WETBC	Commercial / Industrial User	Canada
E. Grandy	Grandy & Associates	General Interest	USA
K. Kalakay	State of Michigan	Authorities Having Jurisdiction / Regulator	USA
T. Mcnulty	US Draft CO	Producer	USA
C. Neufeld	Blaze King Industries Inc	Producer	USA
K. Reasoner	Kozy Heat Fireplaces	Producer	USA
M. Romanow	Innovative Hearth Technologies	Producer	USA
M. Savage	Marion County, FL	Authorities Having Jurisdiction / Regulator	USA
B. Schwock	New Buck Corporation	Producer	USA
P. Stegmeir	P B S & Associates	Commercial / Industrial User	USA
J. Steinert	PFS TECO	Testing & Standard Org	USA
J. Voorhees	United States Stove Company	Producer	USA
L. Werner	UL Standards & Engagement	TC Chair	Canada
B. Ziegler	Intertek Testing Services	Testing & Standard Org	USA

International Classification for Standards (ICS): 91.060.40; 91.140.99; 97.100.30

This Standard is intended to be used for conformity assessment.

The intended primary application of this Standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

INTRODUCTION

1 Scope

1.1 These requirements cover solid-fuel burning fireplace inserts or hearth-mounted stoves intended to be vented through the throat or damper area of a masonry fireplace and masonry or factory-built chimney system. The appliances may be installed into new masonry fireplaces, or masonry fireplaces that have been operated for some time, i.e., in these cases the fireplace insert or hearth-mounted stove installations are retrofits.

1.2 Requirements for masonry fireplaces equipped with factory-built chimneys are provided in Annex A.

1.3 The requirements include testing with a continuous chimney liner from the appliance collar to the point of termination.

1.4 This standard addresses fireplace inserts or hearth-mounted stoves that may also incorporate catalytic combustors and/or secondary combustion systems.

1.5 Fireplace inserts or hearth-mounted stoves as covered by this standard are intended for installation in masonry fireplaces that comply with the requirements of applicable regulatory Codes.

1.6 Fireplace inserts and hearth-mounted stoves as covered by this standard are not intended for installation into factory-built fireplaces within the scope of:

a) In Canada, ULC 610, Standard for Factory-Built Fireplace Systems;

b) In the United States, UL 127, Standard for Factory-Built Fireplaces;

nor in steel liner assemblies within the scope of:

c) In Canada, ULC S639, Standard for Steel Liner Assemblies for Solid-Fuel Burning Masonry Fireplaces;

d) In the United States, UL 907, Standard for Fireplace Accessories;

nor in artificial fireplaces, or similar appliances (e.g., a tubular grate).

1.7 This Standard does not cover free-standing solid-fuel space heaters. Refer to:

a) In Canada, ULC S627, Standard for Space Heaters for Use with Solid Fuels;

b) In the United States, UL 1482, Standard for Solid-Fuel Type Room Heaters;

for the applicable requirements.

1.8 The appliances covered by this Standard are intended for installation and use in accordance with the applicable Codes and Regulations as determined by the Authority Having Jurisdiction (AHJ), such as:

a) In Canada:

1) The National Building Code of Canada; or

2) CSA B365 Series, Installation code for solid-fuel-burning appliances and equipment;

b) In the United States:

1) The series of International Building Codes;

2) The Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances, NFPA 211; or

3) Uniform Mechanical Code (IAPMO).

1.9 The requirements of this standard do not apply to appliances intended for installation into transportable buildings that are not designed to include a masonry fireplace.

1.10 This standard does not apply to the installation of fireplace inserts or hearth-mounted stoves into steel form fireplace units or steel firebox liners.

1.11 This standard does not apply to modular masonry fireplace systems.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this standard shall comply with the requirements for that component.

2.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard; or

b) Is superseded by a requirement in this standard.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3 Units of Measurements

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

4 Referenced Publications

4.1 The documents shown below are referenced in the text of this Standard. Any undated reference to a code or standard appearing in the requirements of this Standard shall be interpreted as referring to the latest edition of that code or standard.

ASTM A653/A653M, *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process*

ASTM C1057, *Standard Practice for Determination of Skin Contact Temperature from Heated Surfaces Using a Mathematical Model and Thermesthesiometer*

CSA B365, *Installation code for solid-fuel-burning appliances and equipment*

CSA C22.2 No. 0.15, *Adhesive Labels*

CSA C22.2 No. 113, *Fans and Ventilators*

CSA C22.2 No. 60335-2-102, *Household and Similar Electrical Appliances – Safety – Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections*

NFPA 97, *Standard Glossary of Terms Relating to Chimneys, Vents, and Heat-Producing Appliances*

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*

UL 103, *Factory-Built Chimneys for Residential Type*

UL 127, *Factory-Built Fireplaces*

UL 507, *Electric Fans*

UL 969, *Marking and Labelling Systems*

UL 1482, *Solid-Fuel Type Room Heaters*

UL 1618, *Wall Protectors, Floor Protectors, and Hearth Extensions*

UL 1777, *Chimney Liners*

ULC 610, *Factory-Built Fireplace Systems*

ULC S627, *Space Heaters for Use with Solid Fuels*

ULC 629, *650 °C Factory-Built Chimneys*

ULC S635, *Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents*

ULC S639, *Steel Liner Assemblies for Solid-Fuel Burning Masonry Fireplaces*

ULC S640, *Lining Systems for New Masonry Chimneys*

5 Glossary

5.1 For the purposes of this standard, the following definitions apply.

5.2 AIR CONTROL – a device to control the flow rate of inlet air into the fire chamber.

5.3 ALUMINUM-COATED STEEL – An aluminum-coated steel in which the bond between the steel and the aluminum is an iron-aluminum alloy.

5.4 APPLIANCE TEST ASSEMBLY – The combination of fireplace insert or hearth-mounted stove, chimney connector (as applicable), chimney liner, and chimney cap installed in the fireplace test structure.

5.5 AUTHORITY HAVING JURISDICTION (AHJ) – An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation or a procedure.

5.6 CHIMNEY LINER – A product conforming to:

a) In Canada:

1) The Class 3 requirements of ULC S635; or

2) The requirements of ULC S640;

b) In the United States, the requirements for a chimney liner intended for connection to a solid-fuel-fired appliance and rated for 1149 °C (2100 °F) operation in UL 1777.

NOTE: The Scopes of UL 1777 and ULC S640 cover liners for masonry chimneys only. The use of these products as part of the installation of fireplace inserts or hearth-mounted stoves into masonry fireplaces that are connected to factory-built chimneys is validated by testing in accordance with Annex A of this standard.

5.7 CHIMNEY TRANSITION – The point of transition between masonry and the factory-built chimney and may include existing masonry material, a bond-beam, and factory-built anchor or transition plate.

5.8 COMBUSTIBLE MATERIAL, NONCOMBUSTIBLE MATERIAL – These terms are defined in NFPA 97 and/or the National Building Code of Canada.

5.9 COMBUSTION AIR – Air that is supplied to combustion appliances to be used in the combustion of fuels and the process of venting combustion gases.

5.10 DAMPER – A valve or plate for regulating draft or flow of flue gases. May be either manually or automatically operated.

5.11 DAMPER AREA/THROAT – The transition opening between the firebox and smoke chamber of the masonry fireplace.

5.12 FIRE CHAMBER (FIREBOX) – The section of a masonry fireplace, a fireplace insert or a hearth-mounted stove in which fuel is burned, including the entire volume bounded by the hearth, the chamber walls and the chamber ceiling.

5.13 FIREPLACE INSERT – Any solid-fuel fired heat-producing appliance intended for installation within, or partially within the fuel burning space of a masonry fireplace and which substantially closes off the fireplace opening and is vented through the throat or damper area of the fireplace.

5.14 FIREPLACE TEST STRUCTURE – The combination of all floor, wall, ceiling, and structural support elements, and test enclosure, the masonry fireplace and masonry chimney, or factory-built chimney, as applicable, as well as air supply, heat management and exhaust systems, assembled prior to installation of the appliance test assembly.

5.15 FLOOR PROTECTION – Non-combustible surfacing applied to the floor area underneath and extending in front, to the sides and to the rear of a heat producing appliance.

NOTE 1: UL 1618 provides construction and testing requirements for Type 1 Ember Protector and Type 2 Thermal Floor Protector.

NOTE 2: UL 1618 has been processed and approved under ANSI accreditation in the United States only. The use of these products as part of the installation of fireplace inserts or hearth-mounted stoves into masonry fireplaces in both the United States and Canada is validated by the construction and testing requirements of this standard.

5.16 GLASS – Any transparent or translucent material employed in the construction of a heat producing appliance or intended as an accessory or component of an accessory for the appliance.

5.17 HEARTH – The floor area within the fire chamber of a masonry fireplace, fireplace insert, or hearth-mounted stove.