CAN/ULC 604:2022 (R2026)

Standard for Factory-Built Type A Chimneys

ULC Standards
Normes ULC

SCC CCN

Underwriters Laboratories of Canada (ULC) was established in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories and certification services for the examination, testing and certification of appliances, equipment, materials, constructions and systems to determine their relation to life, fire and property hazards as well as providing inspection services.

ULC Standards develops and publishes standards and other related publications for building construction, security and burglar protection, environmental safety, electrical equipment, fire protection equipment, gas and oil equipment, thermal insulation products, materials and systems, energy use in the built environment and electrical utility safety.

ULC Standards is a not-for-profit organization and is accredited by the Standards Council of Canada as a Standards Development Organization.

National Standards of Canada developed by ULC Standards conform to the criteria and procedures established by the Standards Council of Canada. Such standards are prepared using the consensus principle by individuals who provide a balanced representation of interests relevant to the subject area on a national basis.

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

For further information on ULC standards, please contact:

ULC STANDARDS
Telephone: 1-888-853-3503
E-mail: ClientService@shopULStandards.com

To purchase ULC Standards, visit: https://www.shopulstandards.com

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 the particular application.

Copies of this National Standard of Canada may be ordered from ULC Standards.

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

Standard for Factory-Built Type A Chimneys, CAN/ULC 604

Fifth Edition, Dated April 7, 2022

Summary of Topics

This reaffirmation of CAN/ULC 604 dated July 27, 2026 is being issued to update the title page to reflect the reaffirmation of this Fifth Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated May 22, 2026.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CAN/ULC 604:2022 (R2026)

Standard for Factory-Built Type A Chimneys

ICS 91.060.40

First Edition . . . . . December 1978
Second Edition . . . . . October 1982
Third Edition . . . . . November 1991
Fourth Edition . . . . . December 2016
FIFTH EDITION . . . . . APRIL 7, 2022
REAFFIRMED . . . . . JULY 27, 2026

© 2026

ULC Standards

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CONTENTS

ULC STANDARDS COMMITTEE ON FACTORY-BUILT FIREPLACES, CHIMNEYS AND VENTS.....7

PREFACE 9

INTRODUCTION

1 Scope 11
2 Referenced Publications 11

CONSTRUCTION

3 Materials 11
4 Assembly 13
5 Joints 15
6 Firestop-Spacers 15
7 Supports 18
8 Radiation Shields 18
9 Attic Insulation Shields 19
10 Caps 19
11 Roof Assemblies 19
12 Draft 20

PERFORMANCE

13 General 20
14 Test Installation 20
15 Temperature Measurement 36
16 Test No. 1 – Thermal Shock 42
17 Test No. 2 – Temperature – 540 °C Flue Gases 42
18 Test No. 3 – Temperature – 760 °C Flue Gases 43
19 Test No. 4 – Temperature – 925 °C Flue Gases 43
20 Test No. 5 – Draft 44
21 Test No. 6 – Support 44
22 Test No. 7 – Strength 45
22.1 General 45
22.2 Impact test 45
22.3 Longitudinal force test 47
22.4 Chimney joint load test 47
22.5 Chimney tee extension test 49
23 Test No. 8 – Wind Load 49
24 Test No. 9 – Rain 53
25 Test No. 10 – Crushing of Nonmetallic Liners 56
26 Test No. 11 – Resistance to Action of Acids of Nonmetallic Liners 57
27 Test No. 12 – Freezing and Thawing of Nonmetallic Materials Absorbing Water 57
28 Test No. 13 – Cemented Joints of Flue-Gas Conduit 58
29 Test No. 14 – Sulphuric Acid Extraction for Porcelain-Enamelled Steel Used for Liners 58
30 Test No. 15 – Condensing Sulphur Dioxide 59
31 Test No. 16 – Vibration (Loose Fill Insulated Chimneys) 61
32 Test No. 17 – Accelerated Corrosion 61
33 Test No. 18 – Attic Insulation Shield Ventilation Opening 62

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

MARKING

34 General 62

INSTALLATION INSTRUCTIONS

35 General 63
36 Use and Maintenance Instructions 65

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

ULC STANDARDS COMMITTEE ON FACTORY-BUILT FIREPLACES, CHIMNEYS AND VENTS

NAME	AFFILIATION	CATEGORY	REGION
E. Adair	Hearth Patio & Barbecue Association	Producer	USA
I. Brodzinski	UL Standards & Engagement	TC Project Manager – Non-Voting Member	USA
M. Brunt	Z-FLEX INC	Producer	Canada
Q. Choudry	Office Of The Ontario Fire Marshal And Emergency Management	Authorities Having Jurisdiction	USA
L. Cleroux	Industrial Chimney CO INC	Non-Voting Member	Canada
M. Evans	CSA Group	Testing & Stds Org.	Canada
Z. Gadomski	WETBC	Commercial / Industrial Users	Canada
N. Gagnon	Stove Builder International	Producer	Canada
L. Gill	IPEX Management Inc.	Producer	Canada
A. Guo	Yuji America Corp.	General Interest	USA
M. Kulik	Technical Standards & Safety Authority (TSSA)	Authorities Having Jurisdiction	USA
E. Lamy	Industrial Chimney Company (ICC)	Producer	Canada
A. Marcakis	Association des Professionnels du Chauffage (APC)	Commercial / Industrial Users	Canada
H. Nagtegaal	Winnipeg Chimney Service Inc.	Commercial / Industrial Users	Canada
P. Nast	Regulatory – Technical Safety Authority of Saskatchewan	Authorities Having Jurisdiction	Canada
S. Scott	NORTH AMERICAN PIPE, A WESTLAKE CHEMICAL CO, DIV OF ROYAL PIPE & FITTINGS	Non-Voting Member	Canada
J. Wade	Standards Individuals	Consumer	Canada
L. Werner	UL Standards & Engagement	TC Chair – Non-Voting Member	Canada
B. Ziegler	Intertek Testing Services	Testing & Stds Org.	USA

This list represents the membership at the time the Committee balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

PREFACE

This is the Fifth Edition of the Standard for Factory-Built Type A Chimneys, CAN/ULC 604.

This Edition of the Standard has been formally approved by the ULC Standards Committee on Factory-Built Fireplaces, Chimneys and Vents.

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

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

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 Fifth Edition National Standard of Canada is based on, and now supersedes, the Fourth Edition.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. ULC Standards shall not be held responsible for identifying any or all such patent rights.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

This CAN/ULC 604 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of 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.

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.

This Standard is intended to be used for conformity assessment.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

INTRODUCTION

1 Scope

1.1 These requirements apply to Factory-Built Type A Chimneys, which do not require field fabrication. The chimneys are typically intended for use with gas and liquid fuel-fired residential appliances and building heating equipment, where the appliance or equipment flue-gas temperatures do not exceed 540 °C.

1.2 The chimneys are typically intended for use in accordance with regulatory Codes, such as:

a) The National Building Code of Canada;

b) CSA B139 Series, Installation Code for Oil Burning Equipment; and

c) CSA B149 Series, Natural Gas and Propane Installation Code.

1.3 The chimneys are typically intended for installation inside or outside of buildings to provide an essentially vertical conduit or passageway for conveying flue gases to the outer air from the above-described class of appliances.

2 Referenced Publications

2.1 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.

CSA B139.2, *Installation Code for Oil Burning Equipment for Residential and Small Commercial Buildings*

CSA B149.1, *Natural Gas and Propane Installation Code*

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

National Building Code of Canada

UL 969, *Marking and Labelling Systems*

CONSTRUCTION

3 Materials

3.1 A chimney assembly shall be made of non-combustible corrosion-resistant materials. Materials employed in the construction shall be of such quality and shall possess properties and characteristics, which may be expected to provide the almost unlimited service life expected of a permanent portion of a building. Metals shall not be used in combinations such as to cause detrimental galvanic action, which will adversely affect any part of the assembly.

3.2 The thickness of sheet metal employed for a factory-built chimney component or subassembly shall be not less than that indicated in Table 3.1; except that the sheet metal of lesser thickness may be employed if, upon investigation (consideration being given to the shape, size, and function of the component or subassembly), it is found to have adequate mechanical strength and to be otherwise suitable for the purpose; but in no case shall the thickness of a component or subassembly for any size of chimney be less than that shown in row 1 of Table 3.1.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.