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STANDARD FOR FACTORY-BUILT GREASE DUCTS

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Approved by:



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STANDARD FOR FACTORY-BUILT GREASE DUCTS

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REFERENCE PUBLICATIONS

The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this ULC Standard.

Documents Published by the American Society for Testing and Materials (ASTM)
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- ASTM D412-06, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
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- National Building Code of Canada, 2005
- National Fire Code of Canada, 2006

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- CAN/ULC-S114-05, Standard Method of Test for Determination of Non-combustibility in Building Materials
 - CAN/ULC-S144-09, Standard Method of Fire Resistance Test - Grease Duct Assemblies
 - ULC-S650-01, Standard for the Installation and Performance of Ventilation and Fire Suppression Systems for Commercial and Institutional Cooking Equipment
-

STANDARD FOR FACTORY-BUILT GREASE DUCTS

PREFACE

This is the Reaffirmation of the First Edition of the Standard for Factory-Built Grease Ducts, CAN/ULC-S662.

This Edition of the Standard has been formally approved by the ULC Standards Committee on Kitchen Exhaust Equipment and Systems.

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.

Appendix A, identified as Informative, is for information purposes only.

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 First Edition National Standard of Canada has been reaffirmed.

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.

The review and action to revise or reaffirm this Standard will not exceed 5 years from the date of publication, unless the Standard is identified as fitting within a stabilized category, whereby the review will commence within the appropriate time frame set out by ULC Standards.

This Standard is intended to be used for conformity assessment.

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1. SCOPE

1.1 These requirements cover factory-built grease ducts and grease duct assemblies that are intended to be installed as alternatives to the grease ducts constructed of all welded 1.37 mm carbon steel or 1.09 mm stainless steel required by ULC-S650, Standard for the Installation and Performance of Ventilation and Fire Suppression Systems for Commercial and Institutional Cooking Equipment.

NOTE: ULC-S650 was withdrawn in February, 2016. Refer to the Authority Having Jurisdiction for requirements on installation of commercial cooking equipment.

1.2 Grease ducts covered by these requirements are intended to be installed in a fire rated enclosure when required by the provincial or territorial regulations or bylaws, or in the absence of those requirements by the National Building Code of Canada.

1.3 Grease duct assemblies that penetrate fire rated assemblies which do not require the protection of a fire rated enclosure are covered by the requirements contained in CAN/ULC-S144, Standard Method of Fire Resistance Test - Grease Duct Assemblies.

2. TERMINOLOGY

2.1 The term grease duct, as used in these requirements, refers to all grease ducts and grease duct assemblies and any part thereof covered by these requirements unless specifically noted otherwise.

3. GLOSSARY

NOTE: Terms used in this Standard that are in *italic* print are defined as follows:

ACCESS DOOR - A door or cover plate that when opened provides a means for cleaning the grease duct.

CAPPED TEES - A part of a grease duct shaped like a "T" that supports and/or connects the duct to the hood or vertical section. An access door or cap is provided to facilitate cleaning.

COMBUSTIBLE MATERIAL - A material that fails to meet the acceptance criteria of CAN/ULC-S114, Standard Method of Test for Determination of Non-Combustibility in Building Materials.

NOTE: See definition for Non-combustible Material.

FITTINGS - Accessories intended for specific purposes such as fire suppression piping, instrumentation conduit and the like.

GREASE TRAP - A cup-like or U-shaped part provided on a grease duct that is intended to accumulate grease for removal by personnel.

NON-COMBUSTIBLE MATERIAL - A material that meets the acceptance criteria of CAN/ULC-S114, Standard Method of Test for Determination of Non-Combustibility in Building Materials.

THIMBLE - The part of a grease duct that is intended to provide a means for routing the grease duct assembly through a combustible wall.

4. CONSTRUCTION

4.1 MATERIALS

4.1.1 A grease duct part shall be made of non-combustible corrosion-resistant materials. Metals shall not be used in combinations at any location within the assembly that are capable of causing galvanic action.

4.1.2 Thermal insulation material shall be non-combustible.

4.1.3 Thermal insulation shall not come into contact with the grease-laden vapors.

4.1.4 Thermal insulation that is not self-supporting shall be applied to solid surfaces so that the insulation does not sag. An adhesive or cement used to attach such material shall retain its adhesive qualities at any temperature the adhesive may attain when tested in accordance with these requirements and at minus 60°C.

4.1.5 A water-absorbing insulating material shall not be subject to wetting by condensation or rain when installed as intended.

4.2 ASSEMBLY

4.2.1 A grease duct shall consist of all the essential parts necessary for the intended installation of a complete grease duct assembly. Each part of the assembly shall be constructed for ready attachment of one to the other without requiring alteration by the installer, such as by cutting, threading, drilling, or similar tasks.

Exception: An assembly or component part intended to be cut to length or to be fitted by the installer may be provided if means are furnished for joining any altered part to a companion part or assembly. All fasteners required to complete the assembly shall be provided with the product by the manufacturer. Drilling is acceptable if:

- a) The drilling operation does not weaken the assembly or penetrate into the inner casing of the grease duct; and
- b) The size of the required drill bit is specified and the instructions clearly describe the locations to be drilled, such as by the use of drawings, descriptions, templates, or the like. Field welding of grease duct parts such as for connection to the exhaust hood is permitted.

4.2.2 Two or more parts or sub-assemblies that bear a definite relationship to each other in the intended application shall:

- A Be arranged and constructed so that they are capable of being incorporated into the complete assembly without need for alteration or alignment and only in the correct relationship with each other; or
- B Be assembled and shipped from the factory as one unit.

4.2.3 Each part, such as a grease duct section or length, tee, or support component, shall be completely assembled by the manufacturer at the factory.

4.2.4 Any access doors and penetrations shall employ a liquid-tight continuous weld.

4.3 JOINTS

4.3.1 Parts of a grease duct shall be joined and secured so that they do not disengage when tested in accordance with these requirements.

4.3.2 When screws are employed to join assemblies during installation, the assemblies to be joined shall provide holes for use without being punched or drilled, except as referenced in Clause 4.2.1. When a joint sealant material is employed for this purpose, the installation instructions shall specify the cure time for the joint sealant material. A screw shall not extend into an inner casing of the duct.

4.3.3 A joint shall not retain grease vapours nor permit grease-laden vapours to flow from the interior to the exterior of the inner casing of the grease duct.

4.3.4 A joint between sections of the inner casing of the grease duct, fabricated in accordance with the manufacturer's instructions, shall not permit passage of a 0.81 mm diameter rod.

4.3.5 A joint shall not reduce the capacity of the grease duct to the extent that it interferes with venting.

4.3.6 A grease duct joint shall be constructed to resist the entrance of rain such that moisture will not flow from the exterior of the grease duct section to the interior of a lower section.

4.4 ACCESS OPENING

4.4.1 An access opening shall be provided on each section of horizontal duct for duct cleaning.

4.4.2 The access opening in Clause 4.4.1 shall be minimum 505 mm by 505 mm.

4.4.3 Where the duct size is such that the opening in Clause 4.4.2 is not possible, openings large enough to permit thorough cleaning shall be provided at least every 3.7 m.