



UL 378

STANDARD FOR SAFETY

Draft Equipment

UL Standard for Safety for Draft Equipment, UL 378

Fourth Edition, Dated October 27, 2006

Summary of Topics

This revision to UL 378 is being issued to remove the reference to the withdrawal date of UL 873 and to address universal upkeep of UL Standards for Safety. These revisions are considered to be non-substantive and not subject to UL's STP process.

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UL 378

Standard for Draft Equipment

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Fourth Edition

October 27, 2006

This UL Standard for Safety consists of the Fourth Edition including revisions through September 17, 2013.

The Department of Defense (DoD) has adopted UL 378 on June 20, 1994. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 These requirements apply to the design and construction of draft equipment intended to assist in maintaining the desired combustion chamber draft in heating appliances. Draft equipment classifications include draft regulators, automatic damper controls, and draft fans for inducing draft.

1.2 Draft regulators are intended for installation in the breeching or flue pipe of heating appliances where a constant draft is desired, but function to regulate draft only when the draft in the chimney is greater than the draft for which the automatic damper is adjusted.

1.3 Draft regulators intended for use with liquid, combination gas-liquid, or solid fuel-burning equipment, which provide means for the relief of positive pressures in the flue pipe into the adjoining space, provide arrangements for the installer to interlock the assembly with automatic fuel-burning equipment in a manner which will prevent the continued operation of the fuel-burning equipment for more than a brief period of time under conditions of sustained positive draft.

1.4 Draft regulators which provide means for the relief of positive pressures in the flue pipe into the adjoining space and which do not provide means for interlock as described above are intended for use only with commercial-industrial gas-burning equipment not ordinarily equipped with a draft hood.

1.5 Automatic damper controls are designed to automatically regulate the position of dampers installed in the flue pipe or combustion air intake of heating appliances to regulate available draft or combustion air supply to desired values.

1.6 Draft fans are intended for installation in the flue pipe or breeching adjacent to heating appliances or to chimneys to induce or create a draft to supplement the natural draft created by the chimney. Fan units may include automatic dampers or automatic damper controls.

1.7 Requirements for the installation and use of draft equipment are included in the Standards of the National Fire Protection Association for the Installation of Oil-Burning Equipment, NFPA No. 31, and for the National Fuel Gas Code, NFPA No. 54.

1.8 A product that contains features, characteristics, components, materials, or systems new or different from those in use when the standard was developed, and that involves a risk of fire, electric shock, or injury to persons, shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the level of safety for the user of the product as originally anticipated by the intent of this standard.

2 Components

2.1 Components of draft equipment, such as manual or electrically operated valves, etc, electrical components and materials such as attachment plugs, industrial control equipment, switches, transformers, wires, etc., shall comply with the requirements for such components, except that such requirements may be modified if appropriate for the particular application.

CONSTRUCTION

3 General

3.1 A draft regulator intended for use with liquid, combination gas-liquid, or solid fuel-burning appliances, shall provide means for the relief of positive pressures in the flue pipe into the adjoining space, shall be equipped with a switch or other interlocking arrangement which can be practically employed by the installer to prevent continued operation of the fuel-burning equipment under conditions of sustained positive draft in excess of 0.02 inch water column. Such switch or interlocking arrangement shall function to stop the fuel-burning equipment under the above condition in not less than 5 seconds and not more than 10 seconds under situations providing normal ambient room temperatures and normal voltages impressed on any electrical parts. The arrangement shall function in not less than 3 seconds and not more than 15 seconds when voltages of 110 percent and 85 percent of normal are impressed on electrical parts and when ambient temperatures are maintained at 57.5°C (135°F), simultaneously.

3.2 A draft regulator intended for use with liquid, combination gas-liquid, or solid fuel-burning equipment and not provided with means for interlock as described in 3.1, shall substantially prevent the relief of flue gases from the flue pipe when under positive pressure into an adjoining space.

3.3 A draft regulator providing means for the relief of positive pressures in the flue pipe into the adjoining space and not equipped with a switch or other interlocking arrangement as described in 3.1 and 3.2 shall be for use only with gas-fired commercial-industrial fuel-burning equipment and be so marked on its assembly.

3.4 Automatic damper controls intended to regulate the position of dampers installed in the flue pipe shall provide adjustable means for connection to such dampers.

3.5 An automatic damper control shall be designed to maintain a safe damper opening at all times and be arranged to prevent starting of the heating equipment until such damper is opened to a safe position.

3.6 Interlocks provided for compliance with 3.1 and 3.5 shall be considered as a safety control.