SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus Standard developed under the auspices of ASHRAE. Consensus is defined by the American National Standards Institute (ANSI), of which ASHRAE is a member and which has approved this Standard as an ANS, as "substantial agreement reached by directly and materially affected interest categories. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution."

Compliance with this Standard is voluntary until and unless a legal jurisdiction makes compliance mandatory through legislation.

ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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The Senior Manager of Standards of ASHRAE should be contacted for
a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
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FOREWORD

Addendum e adds a new Informative Appendix E that describes the different types of exhaust fans used to ventilate commercial kitchen hoods.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes.

INFORMATIVE APPENDIX E
EXAMPLES OF FAN TYPES USED IN TYPE 1 EXHAUST APPLICATIONS

E1. POWER ROOF VENTILATOR

Also known as “upblast fans,” power roof ventilators (PRVs) are designed for mounting at the exhaust duct outlet (Figure E-1) and discharge upward or outward from the roof or building. Aluminum upblast fans must be listed for the commercial kitchen exhaust application in compliance with UL 762, Outline of Investigation for Power Roof Ventilators for Restaurant Exhaust Appliances, and must include a grease drain, grease collection device, and integral hinge kit to permit access for duct cleaning.

E2. TUBULAR CENTRIFUGAL

Also known as “inline fans,” tubular centrifugal fans have the impeller mounted in a cylindrical housing discharging the gas in an axial direction (Figure E-2). Where approved, these fans can be located in the duct inside a building if exterior fan mounting is not practical for wall or roof exhaust. They are always constructed of steel. The gasketed flange mounting must be grease-tight yet removable for service. The lowest part of the fan must drain to an approved container. When listed in accordance with UL Standard 762, a grease drain, grease collection device, and fan housing access panel are required.

E3. CENTRIFUGAL FAN

Also known as a “utility set,” this is an AMCA Arrangement 10 centrifugal fan, including a field-rotatable fan housing, impeller with motor, drive, and often a motor/drive weather cover (Figure E-3). These fans are typically constructed of steel and are roof mounted. Where approved, centrifugal fans can be mounted indoors and ducted to discharge outside. The inlet and outlet are at 90 degrees to each other (single width, single inlet), and the outlet can usually be rotated to discharge at different angles around a vertical circle. The lowest part of the fan must drain to an approved container. These exhaust fans will be provided with access panels for inspection and cleaning. When listed in accordance with UL Standard 762, a grease drain, grease collection device, and blower housing access panel are required.

E4. HIGH-PLUME FAN

These fans are suitable for kitchen applications if high exhaust plumes are required (Figure E-4). Such a fan generates a high nozzle exit velocity, which forces any discharged smoke and grease-laden vapors to higher elevations of the atmosphere. This prevents reentrainment of the smoke.
Figure E-1 (a) Power roof ventilator (upblast fan) and (b) hinged power roof ventilator (upblast fan).
and grease-laden kitchen exhaust into the building make-up air system and discharges it over neighboring buildings or structures. When listed in accordance with UL Standard 762, a grease drain, grease collection device, and fan housing access panel are required. Due to the size and weight of these fans, the installation should be verified for structural integrity by a structural engineer. Items to be evaluated may include roof load, wind load, and seismic conditions.
Figure E-4 High-plume fan.
ASHRAE is concerned with the impact of its members’ activities on both the indoor and outdoor environment. ASHRAE’s members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE’s short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its Handbook, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system’s intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE’s primary concern for environmental impact will be at the site where equipment within ASHRAE’s scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.
About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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