



ADDENDA

**ANSI/ASHRAE Addendum e to
ANSI/ASHRAE Standard 154-2016**

Ventilation for Commercial Cooking Operations

Approved by ASHRAE and the American National Standards Institute on September 1, 2020.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (<https://www.ashrae.org/continuous-maintenance>).

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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 ~~strike through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum e to Standard 154-2016

Add new Informative Appendix E.

(This appendix is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

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*¹⁶ and must include a grease drain, grease collection device, and integral hinge kit to permit access for duct cleaning.

E2. TUBULAR CENTRIFUGAL

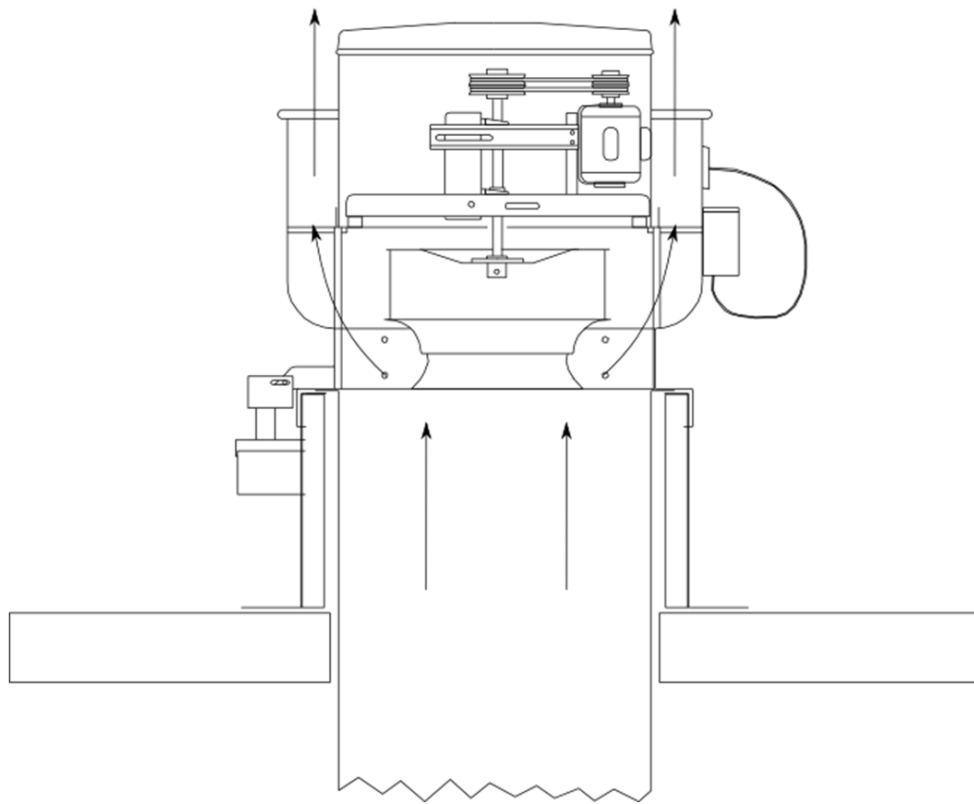
Also known as “inline fans,” tubular centrifugal fans have the impeller mounted in a cylindrical housing discharging the gas in an axial direction (Figure E-2). Where approved, these fans can be located in the duct inside a building if exterior fan mounting is not practical for wall or roof exhaust. 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

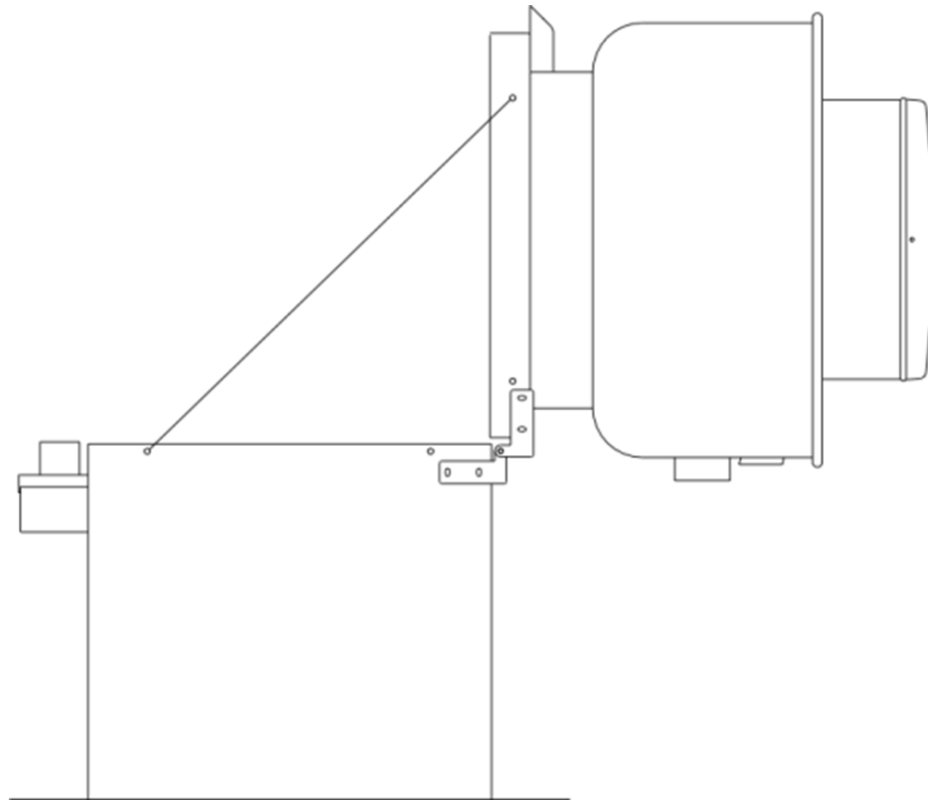
Also known as a “utility set,” this is an AMCA Arrangement 10 centrifugal fan, including a field-rotatable fan housing, impeller with motor, drive, and often a motor/drive weather cover (Figure E-3). These fans are typically constructed of steel and are roof mounted. Where approved, centrifugal fans 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



(a)



(b)

Figure E-1 (a) Power roof ventilator (upblast fan) and (b) hinged power roof ventilator (upblast fan).

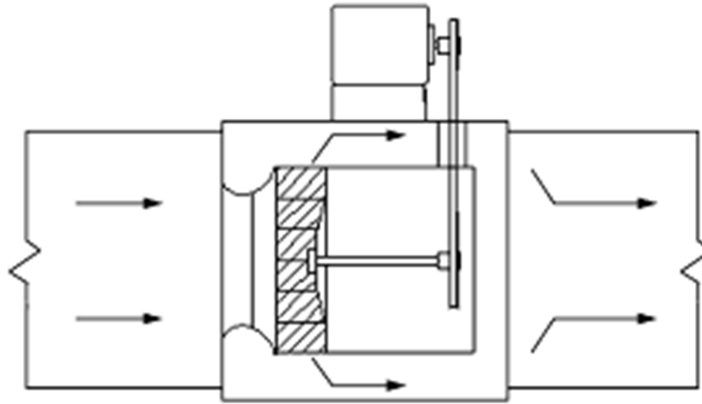


Figure E-2 Tubular centrifugal (inline) fan.

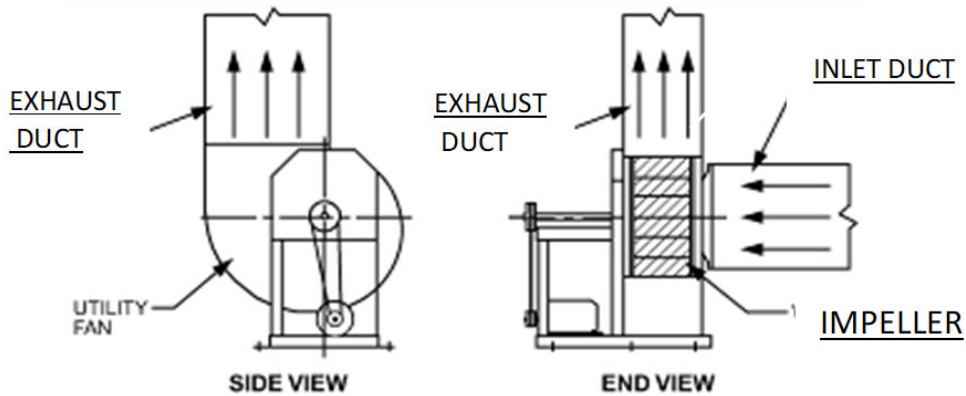


Figure E-3 Centrifugal fan (utility set).

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.

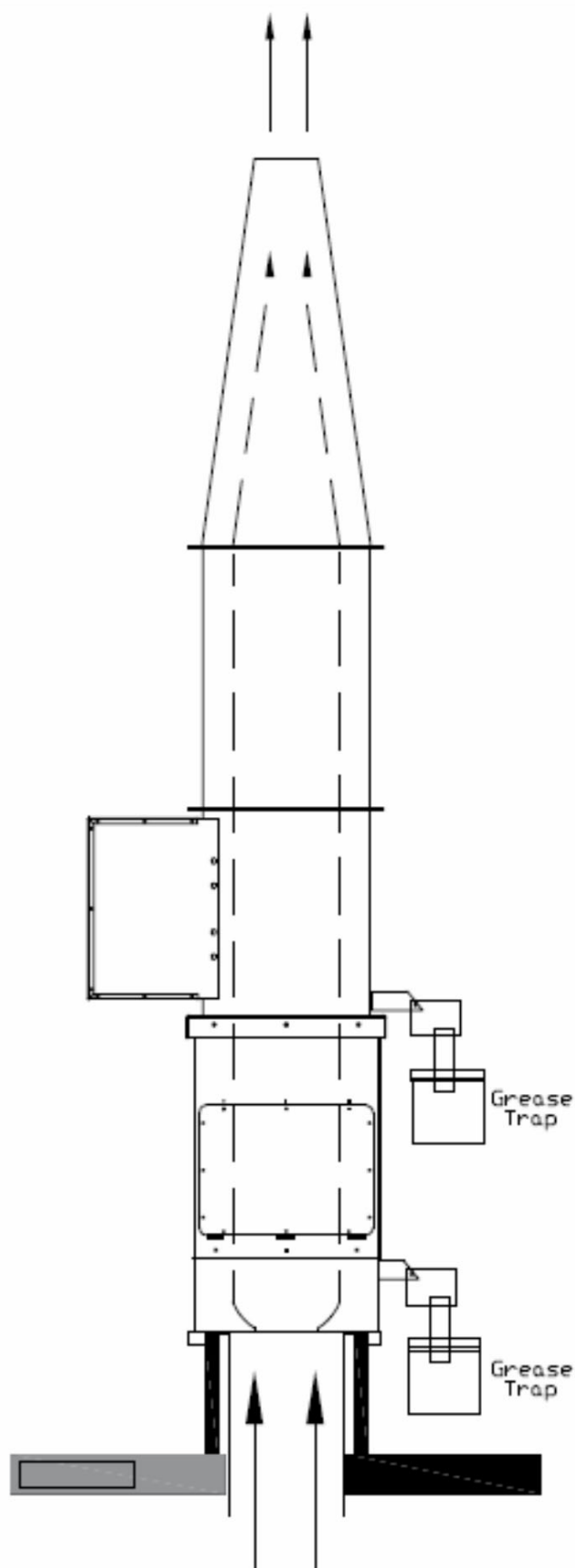


Figure E-4 High-plume fan.

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