Overview
Power Roof Ventilators and Curb Mounted Fans cover a wide variety of products and applications. Whether the unit is a gravity unit with no moving parts to 72-inch propeller upblast unit, the basic unit may require additional components to meet the installation requirements.

At minimum, a curb mounted fan will require… a… curb!

Specialized applications and systems like Restaurant Exhaust, High Temperature Exhaust, and Spark Resistant Construction will require more.

This document provides an overview of the available accessories. Refer to accessories’ submittals for dimensional information, and the unit’s product guide for more information.

AMCA Spark Resistant Construction
Several Cook products are selectable with some level of AMCA Spark Resistant Construction. When selecting a product with spark resistant construction, Compute-A-Fan will pre-select the needed accessories and materials in order to comply with AMCA 99 Spark Resistant Construction Guidelines. The following are generalized requirements for each level.

AMCA Type A Construction (most stringent)
All parts of the fan in contact with the air or gas being handled shall be made of a nonferrous material.

AMCA Type B Construction
The fan shall have a nonferrous impeller and nonferrous ring about the opening through which the shaft passes.

AMCA Type C Construction (least stringent)
The fan shall be so constructed that a shift of the impeller or shaft will not permit two ferrous parts of the fan to rub or strike.

Associated Products
ACE, ACRU

High Temperature
Specific processes require exhausting air well above ambient temperatures. Additional construction features and accessories are needed to meet these requirements. Accessories like shaft cooler, vented bearing cover, or high temperature bearings and high temperature coatings are some of the accessories that may be required. Compute-A-Fan will pre-select the needed features to achieve the desired temperature rating.

Associated Products
ACRU, LP, QMXE, QMXU, TCNU, VCR
**Feature and Benefits**
- 18 gauge galvanized or 0.080 aluminum
- Continuously welded corners
- Wood nailer
- 3 lb density acoustical/thermal insulation
- Standard 9 1/2” height (with 1-1/2” nailer)

**Options**
- Heavy duty construction* (RCGH)
- Drop in damper tray
- Without wood nailer
- Special heights (up to 25.5”)

*Required on specific products or sizes

**Associated Products**
ACE, ACRU, ACSC, AQ, ASP, ASP-T, AU, CFS*, CVR, CVR-S, Economizer, ETE, ETS, EU, FCE, FCRU, GI/GR, HEE, HEF, HER, HES, HLC, HXE, HXF, HXS, KSP, LEU, LEUMO, LP*, LTU, LTUMO, LXU, LXUMO, PR, QMXE*, QMXS*, QMXU*, REBE, REBS, SEP, SRSH, TCNU*, TLC, TR, TRE, TU, UCV, VCR

**RCG - ROOF CURB GALVANIZED**

**RCA - ROOF CURB ALUMINUM**

**FLAT CURB**

**CANTED CURB**

**SLOPED CURB**

**PEAKED CURB**
Feature and Benefits
• Curb - 18 gauge galvanized or 0.080 aluminum
• Insert – 20 gauge galvanized or 0.080 aluminum
• Continuously welded corners
• Wood nailer
• 3 lb density, 1-1/2” acoustical/thermal insulation
• Standard 9 1/2” height (with 1-1/2” nailer)

Options
• Drop in damper tray –
  • Backdraft damper installation requires min 24” tall curb
  • Center pivot damper requires min 30” tall curb
• Without wood nailer
• Heavy duty construction*
• Insert only

Associated Products
ACE, ACRU, ACSC, AQ, ASP, ASP-T, AU, CFS*, CVR, CVR-S, Economist, ETE, ETS, EU, FCE, FCRU, GI/GR, HEE, HEF, HER, HES, HLC, HXE, HXF, HXS, KSP, LEU, LEUMO, LP*, LTU, LTUMO, LXU, LXUMO, PR, QMXE*, QMXS*, QMXU*, REBE, REBS, SEP, SRSH, TCNU*, TLC, TR, TRE, TU, UCV, VCR
Features and Benefits
• Factory-welded subbase
• Provide easy access for cleaning and inspection
• Includes hinge, locking hasp, galvanized aircraft cable
• Weight limitation apply.

Associated Products
ACE, ACRU, AQ, HLC, PR, REBE, REBS, SEP, SRSH, TLC, TR, VCR

Features and Benefits
• Field installed option
• Provides easy access for cleaning and inspection
• Includes two hinge plates, two latch plates, hinge bolts, galvanized aircraft cable, and clamps

Associated Products
ACE, ACRU, AQ, HLC, PR, REBE, REBS, SEP, SRSH, TLC, TR, VCR
**Feature and Benefits**

- Provides additional security to prevent unauthorized access to motor compartment.
- Stainless latch and keeper fastened to unit with stainless steel rivets*

*Topcap lid is riveted to topcap cylinder

**Associated Products**
ACE, ACRU, ACW, VCR

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**Feature and Benefits**

- Provides accessibility to damper and ductwork via removable panel
- Recommended for units unsuitable for hinged base option
- Aluminum construction for XB
- Galvanized construction for HXB*
- Sized to fit standard Cook curbs

* Required on specific products or sizes

**Associated Products**
ACE, ACRU, AQ, ASP, ASP-T, AU, CVR, CVR-S, ETE, ETS, EU, GI/GR, HEE, HEF, HER, HES, HLC, HXE, HXF, HXS, KSP, LP, PR, REBE, REBS, SEP, SRSH, TLC, TR, TRE

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**Hurricane / High Wind**

- Units were tested per Miami-Dade County's Testing Application Standards:
  - TAS-201
  - TAS-202
  - TAS-203
- Products received the following approvals:
  - NOA (Miami-Dade Notice of Acceptance)
  - Florida Building Commission

More detailed information is available in the *High Wind and Hurricane Fans Brochure*

**Associated Products**
ACE, ACRU, ASP, GI/GR, HEE, HEF, HER, HES, HXE, HXF, HXS, VCR
SG - SQUARE INLET GRILLE

Feature and Benefits
- Extruded aluminum frame
- Fixed aluminum blade affixed to frame at 40° angle
- White powder coated finish

Associated Products
ACW

G - ROUND INLET GRILLE

Feature and Benefits
- Step-down diffuser design
- Steel construction
- White powder coated finish

Associated Products
ACW
DISCHARGE GUARD

Features and Benefits
• Protects and prevents debris from entering discharge of the unit
• Standard construction plated steel
• Optional construction aluminum

Associated Products
AU, EU, LEU, LEUMO, LTU, LTUMO, LUG, LXU, LXUMO, QMXU, TU, UCV

INLET GUARD

Features and Benefits
• Protects and prevents debris from entering intake the unit
• Inlet Guard standard construction plated steel
• Inlet Basket Guard standard construction Lorenized steel
• Optional construction aluminum

Associated Products
AU, EU, LEU*, LEUMO, LTU*, LTUMO, LUG, LXU*, LXUMO, TU

*Requires Inlet Basket Guard design
### Features and Benefits

- **Maintains constant tension on the drive belt**
- **Belt runs 15-20°F cooler increasing belt life approximately 50%**
- **Reduces start up and maintenance costs**
- **Simplifies and speeds belt replacement**
- **Requires no skill and no tools**

### Associated Products

- ACE, ACRU, ASP, ASP-T, ETE, ETS, HEE, HEF, HES, HLC, HXE, HXS, KSP, LEU, LP, LTU, LXU, SRSH, TLC, VCR

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### Features and Benefits

- **Provides quick and convenient way to lubricate bearings while the fan is operating**
- **No need to shut fan down**
- **More convenient access**

### Associated Products


*Standard feature on these belt driven units.

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### Features and Benefits

- **Factory supplied replacement belts**
- **Reduces down-time sourcing replacement**
- **Belts are the same type and size as originally specified and as installed on the unit**

### Associated Products

- All Cook belt driven products
Bearing life is a statistical calculation based on a percentage of failures that occurred in laboratory conditions. In these laboratory conditions, controlled loads, specific speeds and proper lubrication were applied to sets of bearings. These bearings were run and timed until fatigue failure occurred. All bearings require lubrication and re-lubrication during their life until the bearing will eventually fail.

- **L-10** life means that 10% of a given set of bearings at a calculated speed and load will fail.
- **L-50** life is a statistical estimate of when 50% of a given set of bearings at a calculated speed and load will fail.
- **L-10** hours x 5 = **L-50** hours.
- Cook standard design is for a minimum of L-10, 40,000 or L-50, 200,000 hours at maximum catalog RPM.
- At a specific point of operation (RPM / Motor Hp) the actual bearing life may greatly exceed this advertised life.

<table>
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<th>Time Period</th>
<th>24 hr / Day</th>
<th>24 hr / Day</th>
<th>16 hr / Day</th>
<th>16 hr / Day</th>
<th>12 hr / Day</th>
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<td>7 Days / Week</td>
<td>5 Days / Week</td>
<td>5 Days / Week</td>
<td>5 Days / Week</td>
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<tr>
<td>L-10</td>
<td>40,000 Hours</td>
<td>4.6 Years</td>
<td>6.4 Years</td>
<td>6.9 Years</td>
<td>9.6 Years</td>
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<tr>
<td>L-50</td>
<td>200,000 Hours</td>
<td>22.8 Years</td>
<td>32 Years</td>
<td>34 Years</td>
<td>48 Years</td>
<td>64 Years</td>
</tr>
</tbody>
</table>

**Associated Products**
- CFS, CVR, CVR-S, QMXE*, QMXS*, QMXU*, TCNU, UCV
  - *Standard bearing on these products

**Features and Benefits**
- **Standard bearing**
- **Set screws** attach the bearing to the fan shaft via fastener points embedding into the fan shaft material
- Cook’s Standard Bearing Life L-10 40,000 hours
- Cast housing resists flexing during installation and under operational loads
- Re-lubrication extends the life of the bearing

**Associated Products**
- All Cook belt driven products
Mounting and Protection

PRV & CURB MOUNTED FAN ACCESSORIES

TIE DOWNS

Features and Benefits
- Provide location for field attachment of fan to roof fan or supporting structure
- Helps protect against high windloads

Associated Products
ACE, ACRU, ACW, ASP, ASP-T, HEE, HES, HXE, HXS, KSP, VCR

CURB CAP ADAPTER (SPECIAL T-SQUARE)

Features and Benefits
- Factory welded to the unit’s base to either increase or decrease the unit’s curb cap dimension
- Used to match fan curb cap to an existing roof curb

Associated Products
ACE, ACRU, AQ, CVR, CVR-S, HLC, PR, REBE, REBS, SEP, TLC, TR, UCV, VCR

BIRDSCREEN

Features and Benefits
- Prevent debris and birds from entering the unit.
- Galvanized coating
- Optional material aluminum, stainless steel or PVC coated
- Option to deduct birdscreen based on the application*

*Units Listed for UL Restaurant Exhaust are not provided with birdscreen

Associated Products
ACE, ACRU, AQ, CVR, CVR-S, Economizer, ETE, FCE, FCRU, GI/GR, HEE, HER, HES, HLC, HXE, HXS, PR, QMXE, QMXS, REBE, REBS, SEP, SRS, TLC, TR, TRE

Dampers & Shutters
- Cook offers a wide variety of gravity backdraft, motorized backdraft, control style and low leakage dampers
- More detailed information is available in the Damper & Shutter Accessories Product Guide
Features and Benefits
• Extend the fresh air intake away from exhaust fan discharge
• Required by some codes for restaurant installation
• See page (17) for more details
• Galvanized steel construction
• Standard with washable aluminum filter

Associated Products
KSP, VCR

Features and Benefits
• Enhances the architectural look of louvered penthouse units

Associated Products
ASP-T, CFS, ETE, ETS, TLC*, TRE
*Units is standard with box corners

Features and Benefits
• Convert side discharge unit to upblast unit
• Required for UL Restaurant Exhaust Listing and UL Smoke Control Listing

Associated Products
LP

Features and Benefits
• Common side-by-side for exhaust and supply installation
• Continuously welded steel construction
• Typical installation for restaurant
• See page (17) for more details

Features and Benefits
• Extend the fresh air intake away from exhaust fan discharge
• Required by some codes for restaurant installation
• See page (17) for more details
• Galvanized steel construction
• Standard with washable aluminum filter

Associated Products
KSP
**PRV & CURB MOUNTED FAN ACCESSORIES**

### Miscellaneous Accessories

**Features and Benefits**
- Provide location and method to install ductwork
  - Ductwork is installed before fan is placed on roof curb

**Associated Products**
- ASP, ASP-T, CFS, KSP

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**Features and Benefits**
- Cast aluminum construction
- Provides temperature protection for bearings
- Use in conjunction with vented bearing cover

**Associated Products**
- TU

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**Features and Benefits**
- Standard galvanized hood is replaced with aluminum
- Reduces unit's overall weight
- Provides additional level of protection against corrosion

**Associated Products**
- Economizer, HEE, HEF, HER, HES, HXE, HXF, HXS

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**Features and Benefits**
- Installed below the fan to collect condensation or rainwater during severe weather conditions
- Lorenized steel construction

**Associated Products**
- AU, EU, LEU, LEUMO, LTU, LTUMO, LXU, LXUMO, TU

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**ALUMINUM HOOD**

**Features and Benefits**
- Standard galvanized hood is replaced with aluminum
- Reduces unit's overall weight
- Provides additional level of protection against corrosion

**Associated Products**
- Economizer, HEE, HEF, HER, HES, HXE, HXF, HXS

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**SHAFT COOLER**

**DRIP PAN**

**Features and Benefits**
- Cast aluminum construction
- Provides temperature protection for bearings
- Use in conjunction with vented bearing cover

**Associated Products**
- TU

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**Features and Benefits**
- Installed below the fan to collect condensation or rainwater during severe weather conditions
- Lorenized steel construction

**Associated Products**
- AU, EU, LEU, LEUMO, LTU, LTUMO, LXU, LXUMO, TU
Features and Benefits
• Field installed on the bottom of unit’s plenum and provides improved air distribution
• Lorenized steel construction

Associated Products
Economizer

Coatings
• Lorenized
• Epoxy powder
• The list goes on!
• What is right for your applications?
• More detailed information is available in the Coating Brochure

Features and Benefits
• Adjust for roof curb and ceiling heights
• Available in 12- or 24-inch extension

Associated Products
Economizer
**FILTERS**

**Features and Benefits**
- Washable aluminum filters provide basic filtration on fresh air supply units
- Filters are either 1" or 2"
- Optional media of fiberglass or polyester are available

**Associated Products**
ASP, ASP-T, CFS, Economizer, ETS, GI, HEF, HXF, KSP, TRE

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**DRAIN TUBE**

**Features and Benefits**
- Extends the drain away from unit
- PVC provided with threaded connection to grease collection container
- Aluminum tube is fully welded

**Associated Products**
ACRU, VCR

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**VE / VEH / NVE - VENTED EXTENSION (HEAVY DUTY)**

**Features and Benefits**
- Extends the curb height
- Vents in VE/VEH extension for dissipation of heat.
- Galvanized steel construction

**Associated Products**
ACRU, LP*, VCR

*Require heavy duty construction

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**CLEAN-OUT PORT**

**Features and Benefits**
- Provides access for spray or steam cleaning. Recommended used with hinged base option. (See page 5)
- Includes removable sealing plug

**Associated Products**
ACRU, ACW, VCR
**Grease Collection**

**Features and Benefits**
- Provides for collection of grease
- Canister made from high impact plastic.
- Canister is clear for monitoring grease amounts
- Fill fibers formulated to absorbed grease while repelling water
- Shipped loose for field mounting

**Associated Products**
ACRU, LP*, VCR  
*Requires 2

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**GREASE TERMINATOR**

**Features and Benefits**
- Provides for collection of grease
- Removable lid for cleaning
- Maximum capacity 1 liter per NFPA 96 code requirements.
- Welded aluminum construction
- Internal water baffle
- Shipped loose for field mounting

**Associated Products**
ACRU, LP*, VCR  
*Requires 2

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**GREASE TROUGH – KEYWAY & HANGING**

**Features and Benefits**
- Provides for collection of grease
- Removable lid for cleaning
- Maximum capacity 1 liter per NFPA 96 code requirements.
- Welded aluminum construction
- Internal water baffle
- Shipped loose for field mounting

**Associated Products**
ACRU, VCR

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**WELDED DRAIN COUPLING**

**Features and Benefits**
- Provides for a threaded connection for field installed piping
- ¾ inch NPT aluminum pipe coupling fully welded to lowest point on the unit.

**Associated Products**
ACRU, VCR
Typical NFPA 96 Installation

- In addition to grease collection accessories, Cook provide a complete solution for restaurant ventilation installations.
- Provide the minimum dimensions to meet NFPA 96 requirements.
- Exhaust fan must be installed so that the outlet of the fan is a minimum of 40" of roof surface.
- Welded duct must terminate a minimum of 18" from roof surface.
- Discharge of exhaust fan must be 10’ horizontally or where space prohibits, 3’ above the supply fan intake.
NEMA Enclosures Types*

**NEMA 1**
Indoor use only. Provides protection against personnel access and against ingress of foreign objects like falling dirt.

**NEMA 3**
For either indoor or outdoor use. Provides protection against personnel access and against ingress of water (rain, sleet, and snow), windblown dust and will not be damaged by external formation of ice.

**NEMA 3R**
For either indoor or outdoor use. Provides protection against personnel access and against ingress of water (rain, sleet, snow), and will not be damaged by external formation of ice. Windblown dust protect is not part of the rating.

**NEMA 4**
For either indoor or outdoor use. Provides protection against personnel access and against ingress of water (rain, sleet, snow, splashing water, and hose directed water), windblown dust and will not be damaged by external formation of ice.

**NEMA 4X**
For either indoor or outdoor use. Provides protection against personnel access and against ingress of water (rain, sleet, snow, splashing water, and hose directed water), windblown dust and will not be damaged by external formation of ice. Also provide an additional level of protection against corrosion.

**NEMA 7†**
Enclosures constructed for indoor hazardous classified locations as Class I, Division 1, Groups A, B, C, or D.

**NEMA 9†**
Enclosures constructed for indoor hazardous classified locations as Class II, Division 1, Groups E, F, or G.

Additional features and terms:
- **Lockable** – Provided with means of locking the device to prevent from being energized.
- **Heavy duty** – As known as ‘knife blade’. Visible bars or blades that operate to close the switch circuit.

*Adapted from National Electrical Manufactures Association, NEMA Standards Publication 205 (Current)
† NEMA enclosure rating types can be combine to achieve the required rating for the environment. Example NEMA 3R, 7/9 for outdoor hazardous locations.
Features and Benefits

- Used to manually vary or set direct drive fan speed
- Available for 115 and 230V shaded pole and PSC motors (except 1140 or 1725 RPM)

Associated Products

ACE, ACRU, AQ, HLC, KSP, LP, REBE, REBS, TLC, VCR

Vari-Flow Motors & Controls

- Vari-Flow motors and controls are ideal when simple, demand-based control is required.
- Energy savings and controllability have never been easier
- Includes pressure, temperature, humidity, CO2, VOC and 2-speed control
- SimpliDrive – Cook’s pre-installed, pre-wired, pre-programmed VFD is compatible with the entire line of Vari-Flow controls
- More detailed information is available on the Vari-Flow product pages and in the Vari-Flow Product Guide

Features and Benefits

- Optional control panel provide single point control
- Industrial enamel coated enclosure
- Includes motor starters and protectors

Associated Products

Economizer