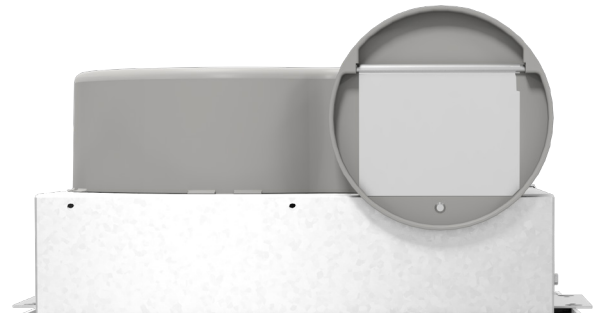
Gemini

Product Guide | LOREN COOK COMPANY

INTRODUCTION

Gemini fans provide maximum performance, durability, and ease of installation in a wide variety of ceiling (GC) and inline (GN) clean air exhaust applications.



EXTRA BENEFITS

- Integral backdraft dampers standard on all models
- Comes with a field wiring compartment
- Adjustable mounting brackets for easy installation and mount

UL 507
Standard on the 100 series making them suitable for use over a tub or shower enclosure

24 HOUR EXPRESS
Is available on all models.

PERFORMANCE RANGE
40-3,575 CFM

STATIC PRESSURE
Up to 1" w.g.

MULTIPLE VOLTAGES
Gemini's are available in an array voltages to suit your application

AMCA
Gemini fans are certified to bear the AMCA seal see page 16 for more information

VARI-FLOW®
Cook's offering of EC motors and compatible controls

CONVENIENT
Vari-flow® allows remote manual or automatic adjustability

VARI-FLOW®

The Vari-Flow® family of motors and controls is expanding to the Gemini product line to provide smart solutions required by today's energy-conscious designers.

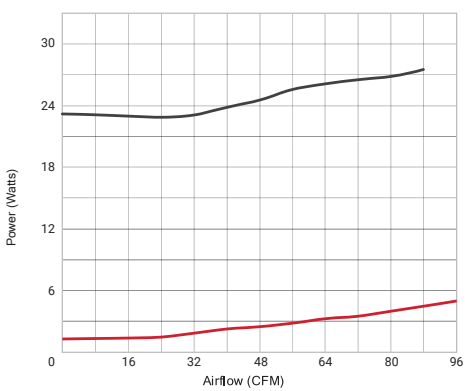
ENERGY EFFICIENCY

Vari-Flow blends ultra-efficient EC motors and application-specific controllers to meet the efficiency needs of demand-based ventilation systems. Vari-Flow motors, by themselves, are more efficient than PSC motors. When paired with Vari-Flow controls, it allows the fan to operate at precisely the correct speed for even greater energy savings.

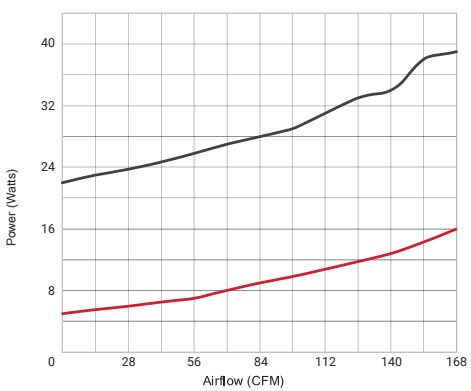
Cook now offers the most extensive range of EC-powered bathroom cabinet fans in the industry, with 7 model sizes and performances up to 1700 CFM

These graphs show energy consumption of comparable Gemini fans with PSC and EC motors.

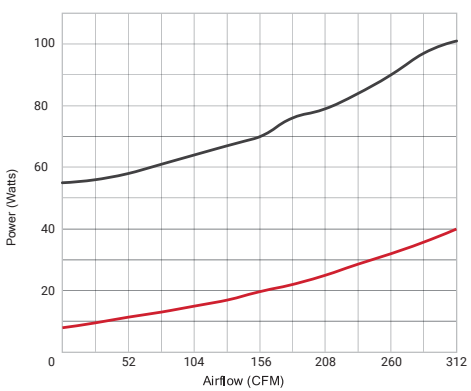
As you can see, the difference can be dramatic.



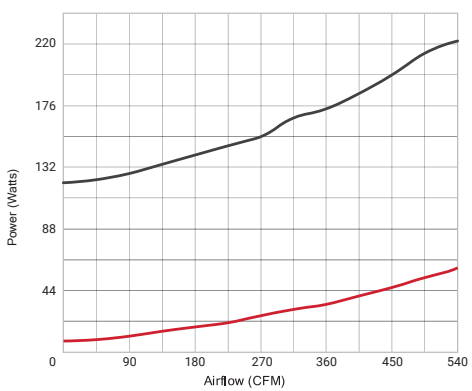
GC148 vs GCVF100



GC322 vs GCVF300



GC542 vs GCVF500

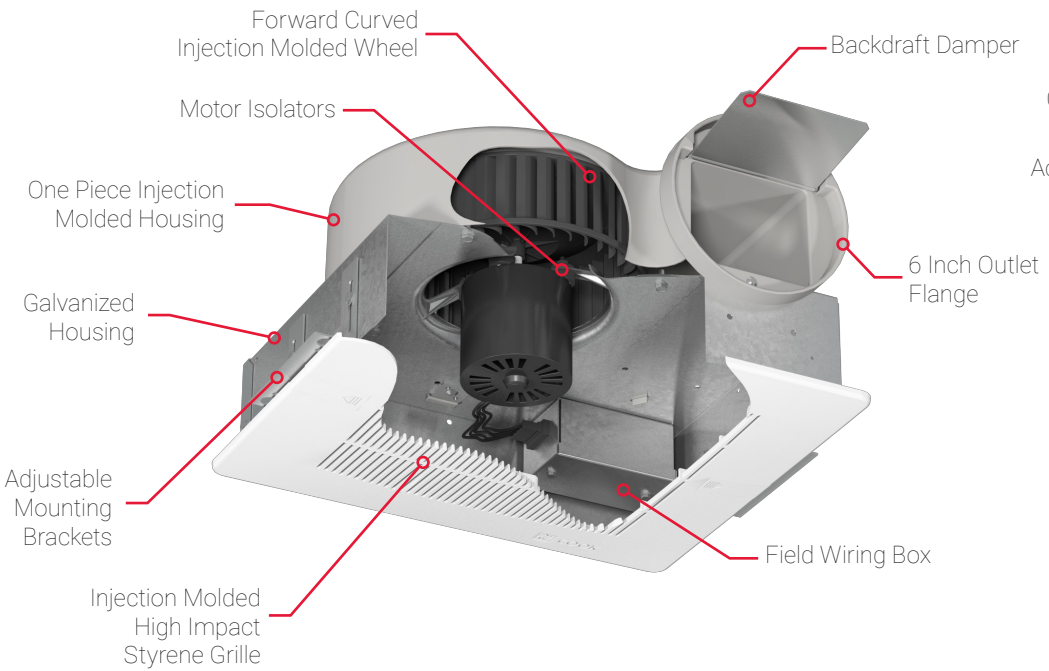


GC720 vs GCVF700

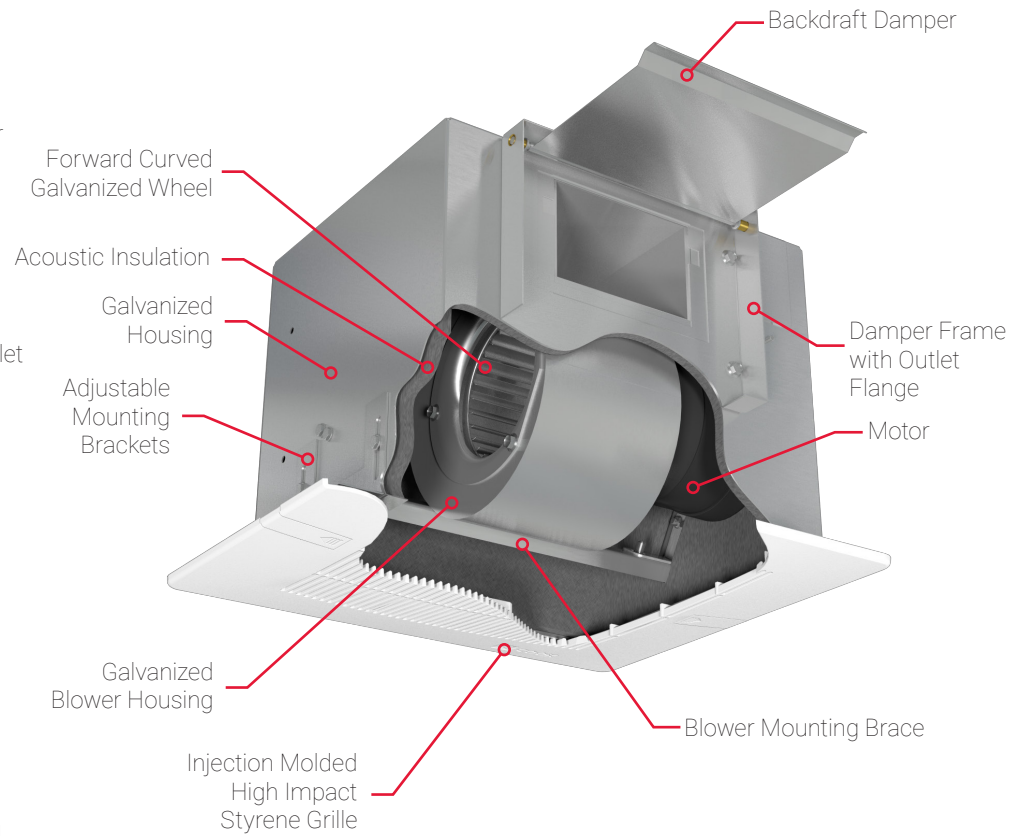
CEILING FEATURES

The Gemini ceiling standard construction features are shown below

GC 126 - 188 & **GCVF** 100 - 180



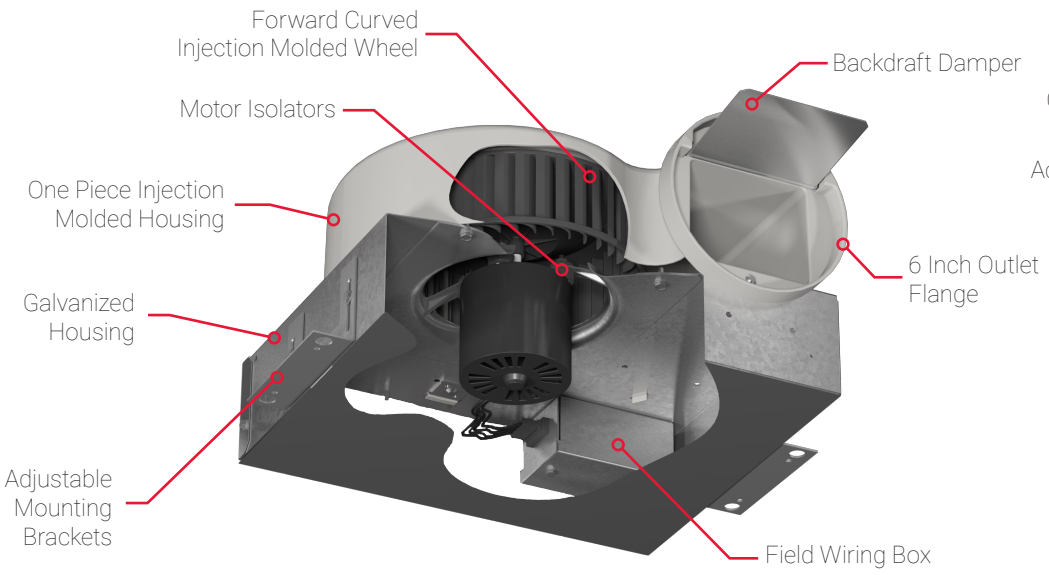
GC 222 - 2000 & **GCVF** 300 - 900



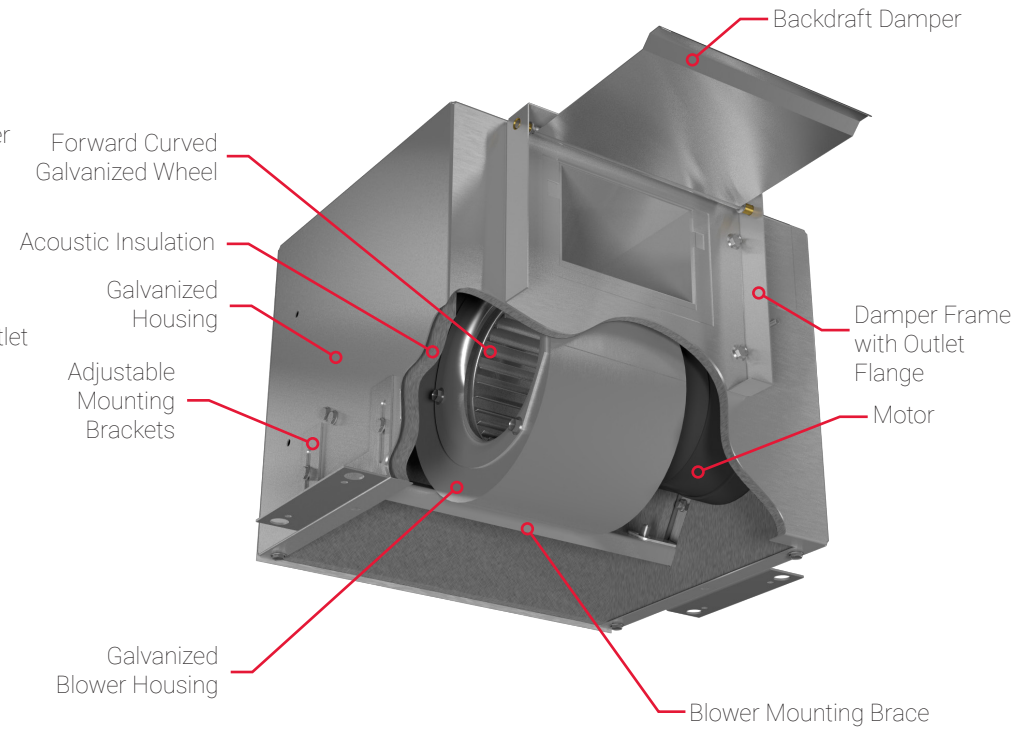
INLINE FEATURES

The Gemini inline standard construction features are shown below.

GN 126 - 188 & **GNVF** 100 - 180



GN 222 - 2000 & **GNVF** 300 - 900



POWER OPTIONS

Cook has you covered. Gemini fans can be specified to meet wide variety of voltages.

MOTOR VOLTAGES

Gemini 100 series
- 115 volt
- Optional 220/240 & 277 available on select models

Gemini 200 - 900 series
- 115 volt
- Optional 220/240 volt available on select models

Gemini 1000 - 2000
- 115 volt
- Optional 208-230 volt 1PH
- Optional 208-230/460 volt 3PH

Gemini VF 100 series
- 115 volt
- Optional 220/240

Gemini VF 300 series
- 115 volt
- Optional 220/240 volt

Gemini VF 500 - 900
- 115 volt

277 VOLT TRANSFORMER

Available with all Gemini models. This step-down transformer allows for the operation of a 120v or 220v Gemini fan from a 277 volt source. It is shipped loose for field installation.

SWITCHING OPTIONS

Cook has a variety of switches and controls available for the Gemini products

AVAILABLE OPTIONS

Motion Sensor
- Passive infrared technology, available in either wall or ceiling mounting
- Adjustable time delay from 20 seconds to 30 minutes of operation
- Fan automatic shut-off after delay to reduce energy and air consumption
- Available in 115-volt only and ships loose for field installation

Time delay
- Operates both the fan and room light.
- When the light is switched off, fan continues to run based on the pre-set delay time.
- Time delay adjustable from 1 to 60 minutes
- Available in 115-volt only and ships loose for field installation

Fan Speed Controller
- Utilized when less than 100 percent fan capacity is desired
- Available in 115, 230, 277-volt
- Available in optional factory pre-wired installation or ship loose for field installation

ASHRAE 62.2 - Fan/Light Controller
- Monitor and control fan operation to comply with ASHRAE 62.2
- Two adjustable settings control the ventilation minutes per hour and delay
- Microprocessor determines minimum required ventilation time
- Works with all type of lighting as an on/off switch and fan control

ASHRAE 62.2 - Programmable Controller
- Simple, intuitive programming
- Input square footage and bedrooms for compliance with ASHRAE 62.2 for whole residence ventilation
- Controller calculates and cycles fan for proper ventilation requirements based on control inputs
- Programmable timed-on function is also possible

Wall Motion Sensor

Ceiling Motion Sensor

Time Delay

FSC

Programmable Controller

Fan/Light Controller

VARI-FLOW® CONTROLS

Cook has a variety of EC controls available for the Gemini Vari-Flow products.

AIR BALANCE KIT

The Air Balance Kit (VFABK) integrates and simplifies the installation, and enhances the function of Vari-Flow motors and controls.

2 SPEED CONTROLLER

The 2-Speed Controller (VF2SC) allows the setting of two separate motor speeds and switching between these speeds by an external control device.

PRESSURE CONTROLLER

The Pressure Controller (VFPC) addresses a wide variety of pressure-based applications. This controller is compact and easy to set up.

REMOTE SPEED CONTROL

The Remote Speed Controller (VFRSC) allows the speed of a Vari-Flow motor to be manually adjusted and set from a location away from the fan.

TEMPERATURE

The Temperature Controller (VFTC/VFTC-N) is used to modulate fan speed based on temperature set point.

HUMIDITY

The Humidity Controller (VFHC/VFHC-N) is used to modulate fan speed based on relative humidity set point.

GRILLES

Cook offers a variety design style choices for the grille to match your interior design needs.

AVAILABLE GRILLES

Polystyrene Grille
A clean looking, high impact injection molded grille. Standard on 100, 200 and 300 series fans.

Deluxe Aluminum
Attractive, architectural styled grilles available in painted white or anodized finish. Not available on GC-1000 or GC-2000 units. Not for use with ceiling radiation damper.

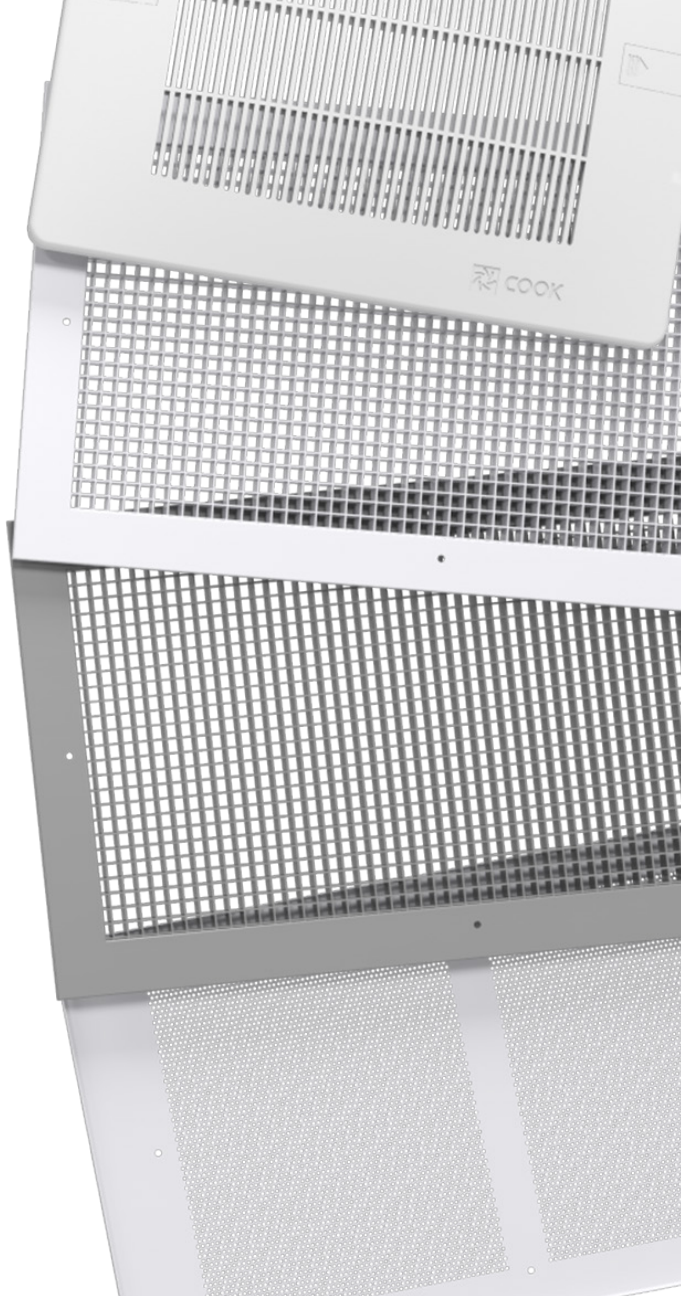
Painted Steel
Available for the 100, 200, and 300 series fans whenever a steel grille is desired for cosmetic reasons.

Polystyrene Grille

Deluxe Aluminum
Painted White

Deluxe Aluminum
Anodized Finish

Painted Steel

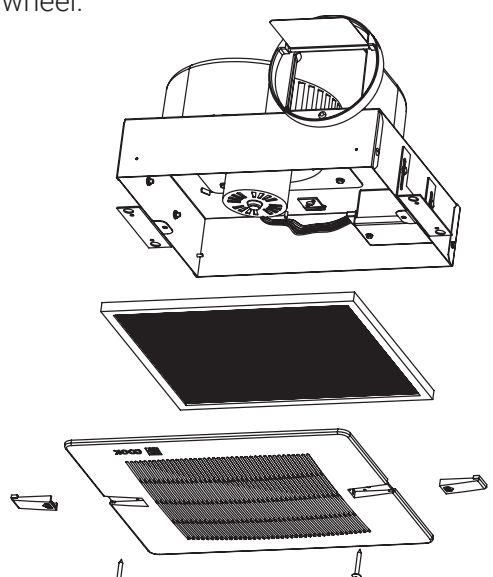


GEMINI CEILING ACCESSORIES

Grille mounted filter and ceiling radiation damper broaden fan applications

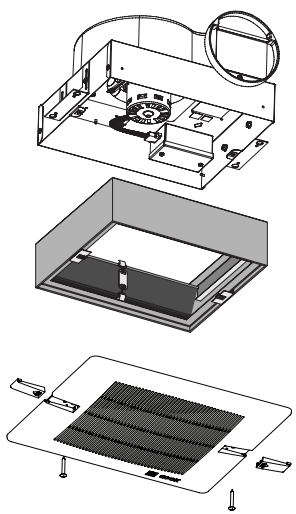
GRILLE MOUNTED FILTER

- Washable aluminum mesh filter installed between the grille and the unit.
- Captures dirt and lint that would normally accumulate on motor and wheel.
- Helps prevent the reduction in performance and vibration due to build-up on wheel.



RADIATION DAMPER

- UL 555C listed damper design to dynamically close upon heat rise.
- Classified to function as a heat and air barrier.
- Damper rated up to 3 hours based on the rating of ceiling assembly.



Meets

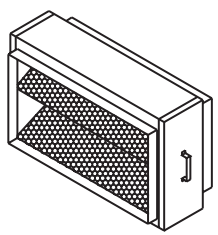
- NFPA 90A requirements
- BOCA, SBCCA, UBC requirements
- City of New York 460-88-5A
- California State Fire Marshal 3225-0935: 102

WALL VENTS

Loren Cook Company offers a variety of accessories for venting exhaust from your Gemini.

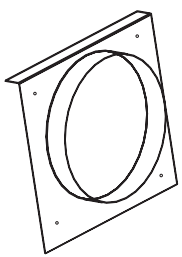
INLINE FILTER BOX

- Available as either direct or remote mount
- Galvanized steel construction
- Removable filter drawer with washable filter media
- Consult factory for other filter media options



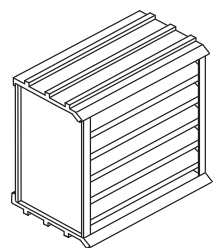
ROUND DUCT ADAPTER

- Available on Gemini 200 - 500
- Field converts unit 6" or 8" round outlet connection
- Adapter replaces damper



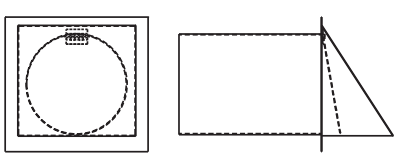
BRICK VENT

- Designed for maximum protection from water infiltration
- Frame and blades constructed of .125 aluminum
- 4" frame with 45° blades
- Clear anodized finish



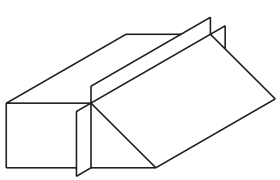
ROUND DUCT WALL CAP

- The Gemini round duct wall cap is made with corrosion resistant aluminum. Available in 4", 6", or 8" diameter.



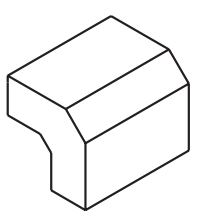
WALL CAP

- The Gemini wall cap is made with corrosion resistant galvanized steel or aluminum, with 1/2 birdscreen.



EAVE ELBOW

- The eave elbow is available for the Gemini 300-500. it is offered in a short eave and a long eave.

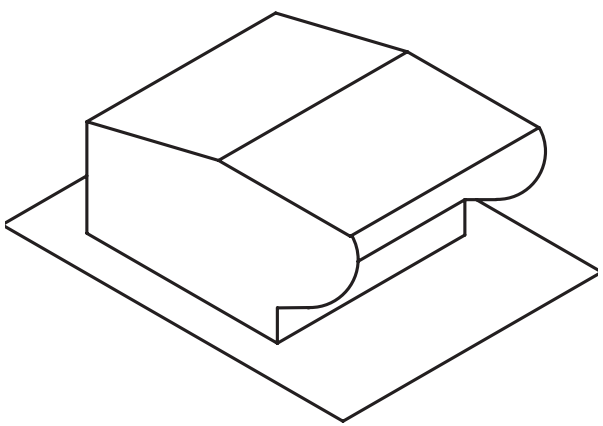


ROOF VENTS

Loren Cook Company offers a variety of accessories for venting exhaust from your Gemini.

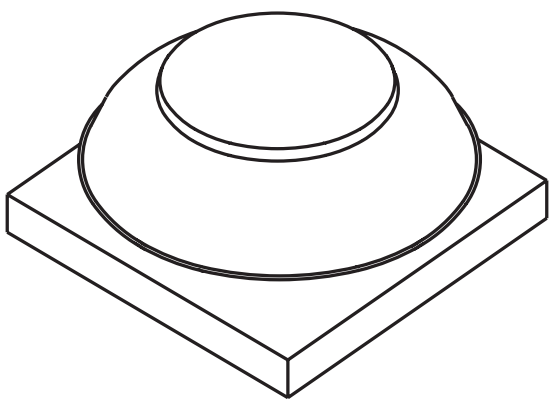
ROOF JACK

- Steel construction with black powder coated finish
- Standard with backdraft damper and bird screen
- Available with either 10 1/4" x 10 3/4" or 6" diameter throat connection



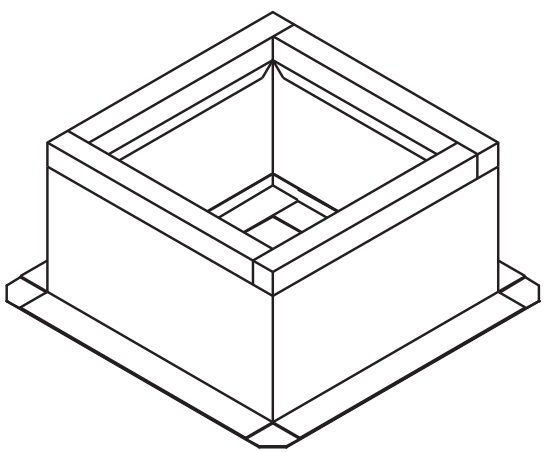
ROOF CAP

- Aluminum construction with integral anti-backdraft flange
- Choice of direct flashing to the roof or curb mount
- Available with optional birdscreen



CURB

- Design for use with the Roof Cap
- Available for flat, pitched or ridged roof
- Motorized dampers and sound attenuation available upon request

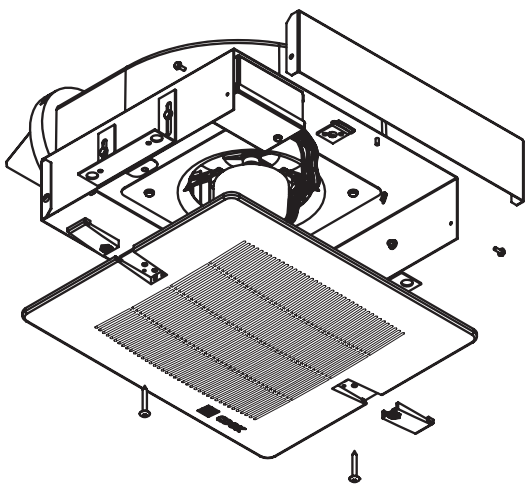


CONVERSION KITS

Units are available for ceiling installation or inline installation. The fans may also be converted, in the field, from a ceiling fan to an inline fan – or vice versa.

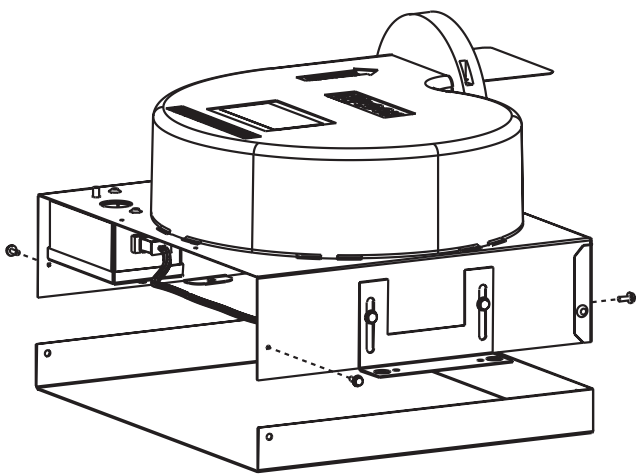
GEMINI 100 SERIES

Kits include all the necessary components to convert a 100 series fan from a ceiling to inline installation, or vice versa.



Inline to Ceiling Conversion Kit

Includes: Inlet box end plate, 2 grille screw clips, 2 grille screws, & grille



Ceiling to Inline Conversion Kit

Includes: Inline Cover Panel

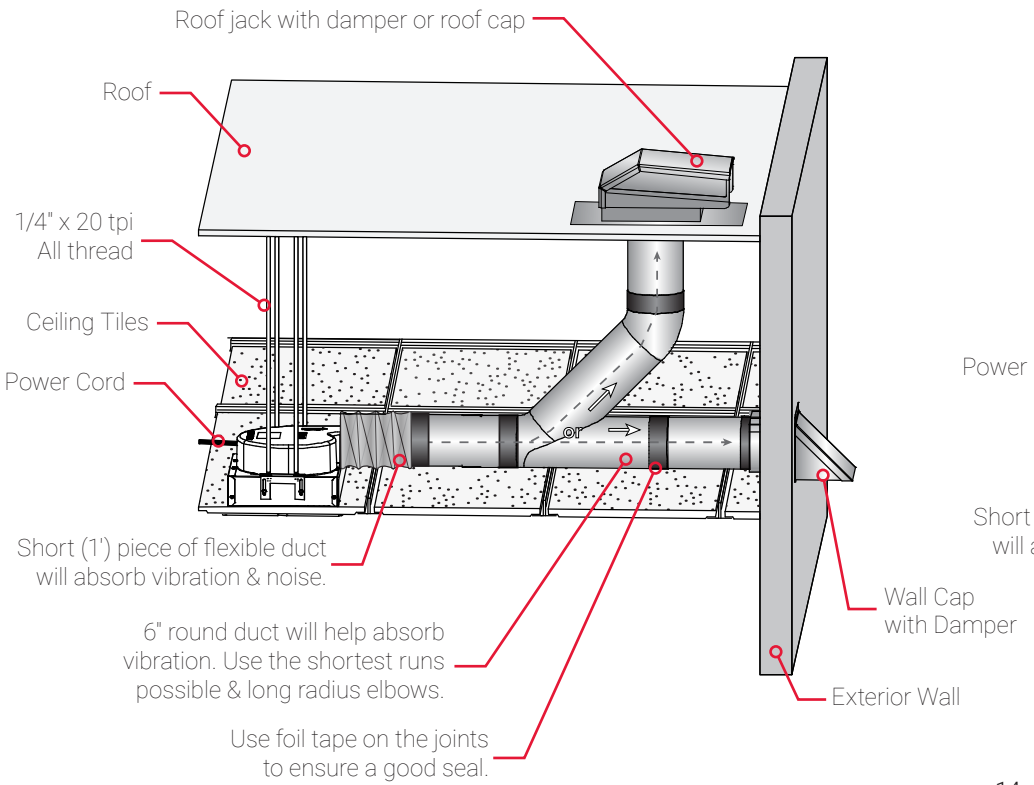
GEMINI 200 - 2000 SERIES

No kits are needed when converting ceiling to inline installation. Instructions are provided. See page 15 for options. When converting an existing inline to a ceiling installation, contact a rep for your Cook Grilles.

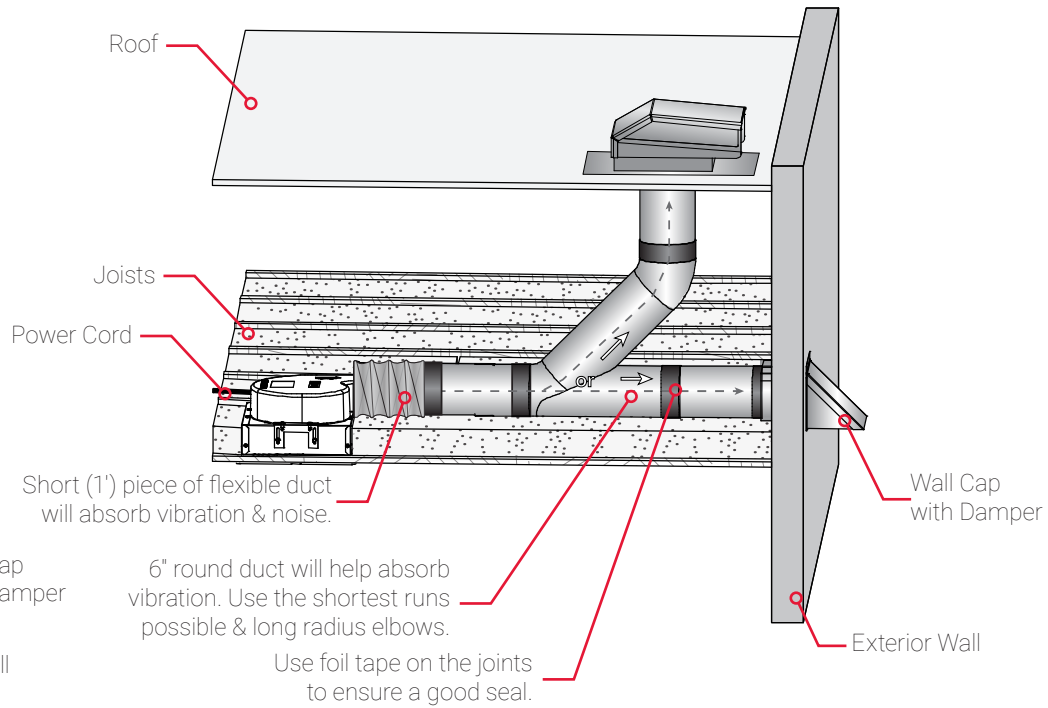
INSTALLATION & MOUNTING

Round duct options allows simple, fast installation of the Gemini unit.

HANGING INSTALLATION



JOIST INSTALLATION

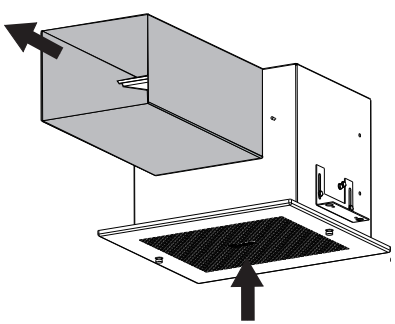


INSTALLATION & MOUNTING

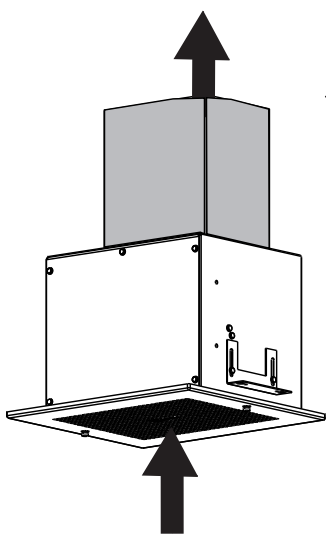
Discharge direction can be converted from right angle to straight line, without a kit, by swapping an outer panel and / or grille.

INSTALLATION OPTIONS FOR 200 - 2000 SERIES

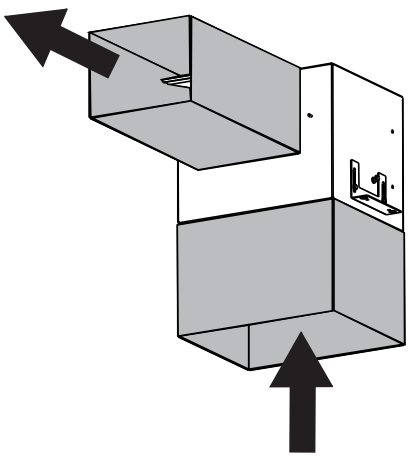
Airflow is illustrated by black arrows. Ductwork (furnished by the installer) is illustrated by shaded areas.



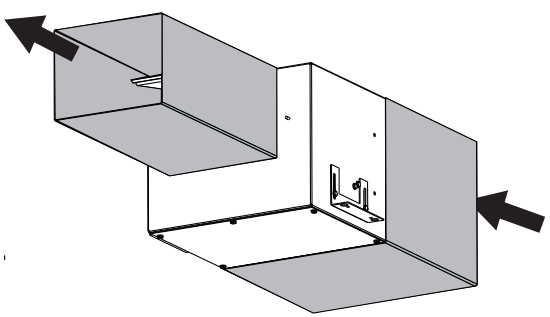
Standard Ceiling Installation



Alternate Ceiling Installation



Alternate Inline Installation



Standard Inline Installation

GEMINI CERTIFICATIONS

Through professional third party companies, the following information explains which products have obtained and maintained the title of "certified" here at Loren Cook Company.

AMCA SOUND AND AIR

AMCA Certified Ratings Seal

Loren Cook products that bear the AMCA Certified Ratings Seal are licensed by AMCA International. These products meet the AMCA Standard and are within the product scope of AMCA International.

GCVF 100 - 900	GC 126 - 960
GNVF 100 - 900	GN 126 - 960

AMCA AIR

AMCA Certified Ratings Seal

Loren Cook products that bear the AMCA Certified Ratings Seal are licensed by AMCA International. These products meet the AMCA Standard and are within the product scope of AMCA International.

GC 1000 - 2000	GN 1000 - 2000

ENERGY STAR

Energy Star

Energy Star is a voluntary program with the goal to help consumers, businesses, and industry save money and protect the environment through the adoption of energy-efficient products and practices. The Energy Star label identifies top-performing, cost-effective products.

GCVF 100	GCVF 300	
GC 128	GC 222	GC 242

CERTIFICATIONS CONTINUED

Cook utilizes third party agencies to provide and maintain required industry certifications and listings.

UL 705 LISTED

Power Ventilator

The UL 705 Listing is the standard for electrical safety for permanently connected power ventilators. These models are constructed in accordance with UL 705.

GC 222 - 960	GC 1000 - 2000
GN 222 -960	GN 1000 - 2000

c UL US
Listed

UL 507 LISTED

Electric Fan

The UL 507 Listing is the standard for electrical safety for permanently connected power ventilators. These models are constructed in accordance with UL 507.

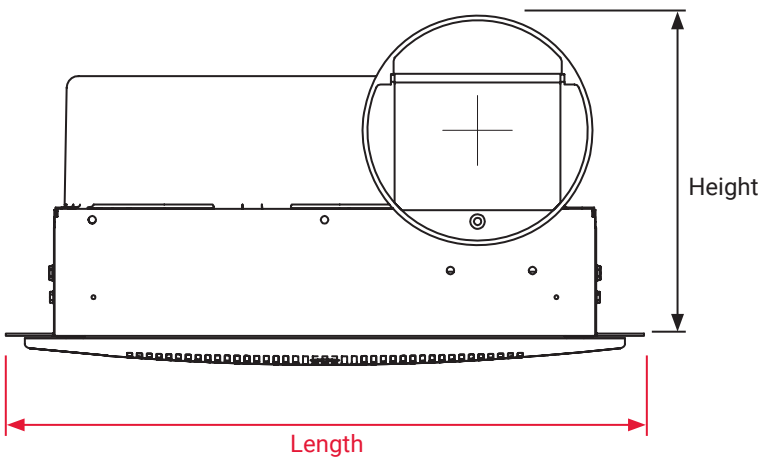
GC 126 - 188	GN 126 - 188

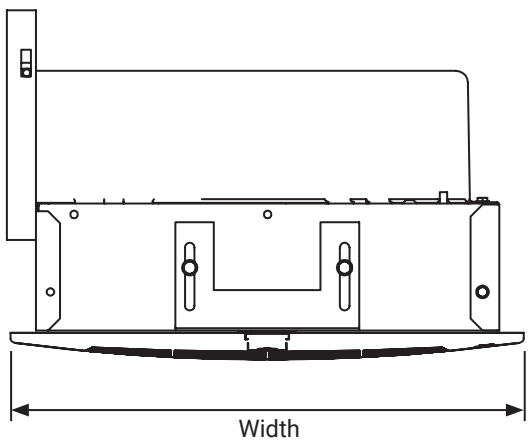
c UL US
Listed

OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GC 126 - 188 / **GCVF** 100 -180



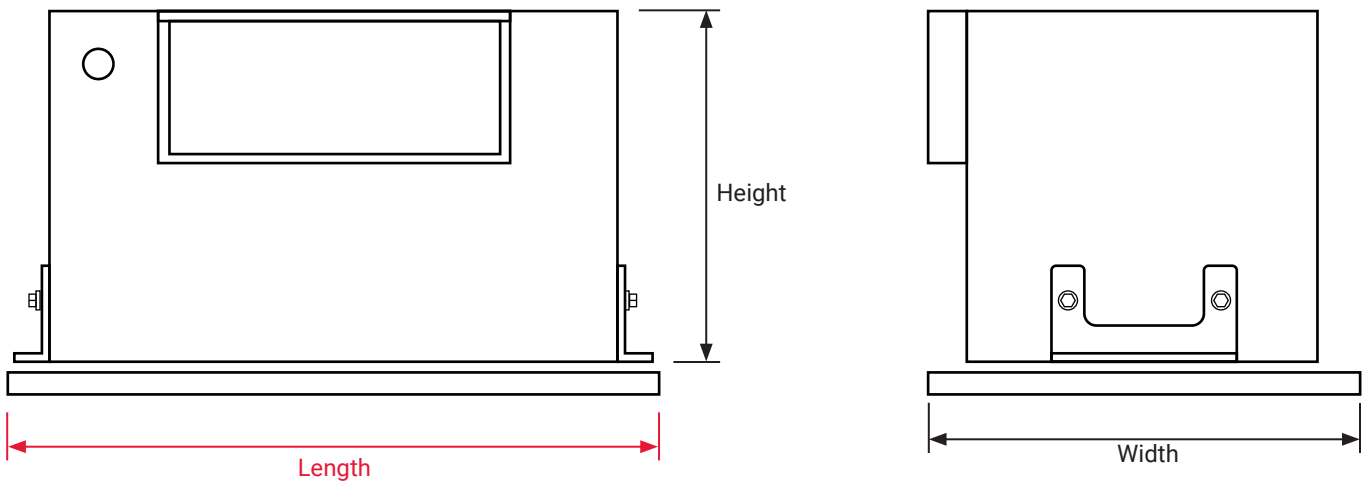


Unit Size	126 - 188		
Grille Material	Plastic	Steel	Aluminum
Height	8 3/8	8 3/8	8 3/8
Length	15 1/2	15 1/2	15 1/2
Width	13 1/4	13 1/2	13 1/4

OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GC 222 - 960 / **GCVF** 300 - 900



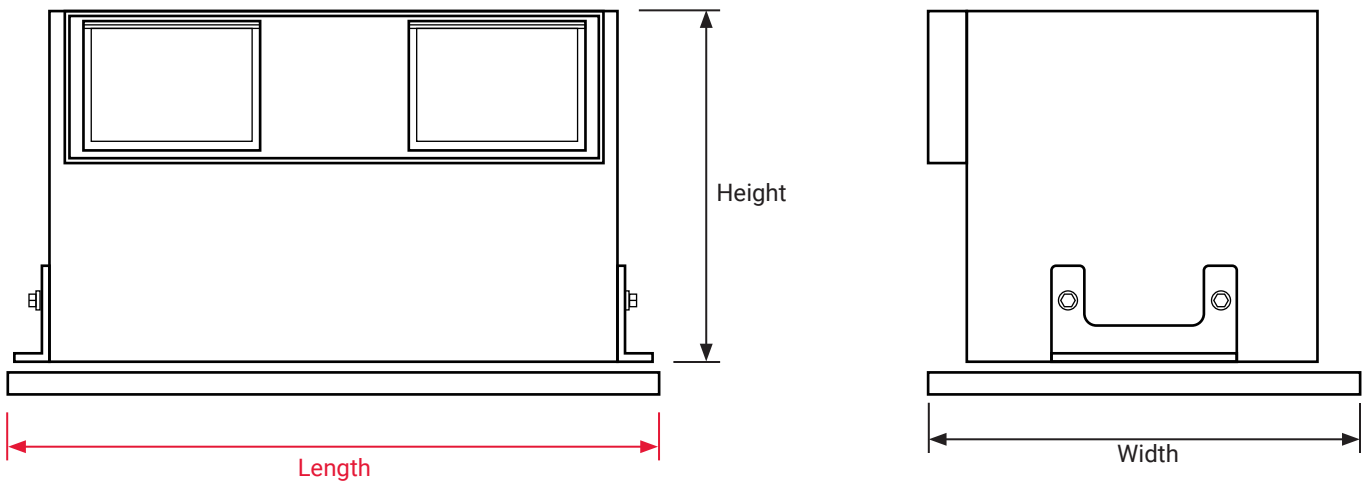
Unit Size	222 - 242			322 - 342			422 - 740		822 - 862		920 - 960	
Grille Material	Plastic	Steel	Aluminum	Plastic	Steel	Aluminum	Steel	Aluminum	Steel	Aluminum	Steel	Aluminum
Height	9 3/4	9 3/4	9 3/4	10 3/4	10 3/4	10 3/4	11 7/8	11 7/8	14 11/16	14 11/16	14 11/16	14 11/16
Length	15 1/2	16 3/8	14 1/4	15 1/2	16 3/8	14 1/4	21*	18 3/4*	31 3/8	28 3/4	35 1/8	32 3/4
Width	13 1/4	13 5/8	11	13 1/4	13 5/8	12 1/4	14 1/4	13 3/4	17 1/8	16 1/4	17 1/8	16 1/4

*GCVF 700 Length x Width: Steel 25 x 14 1/4, Aluminum 22 11/16 x 13 3/4.

OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GC 1000 - 2000

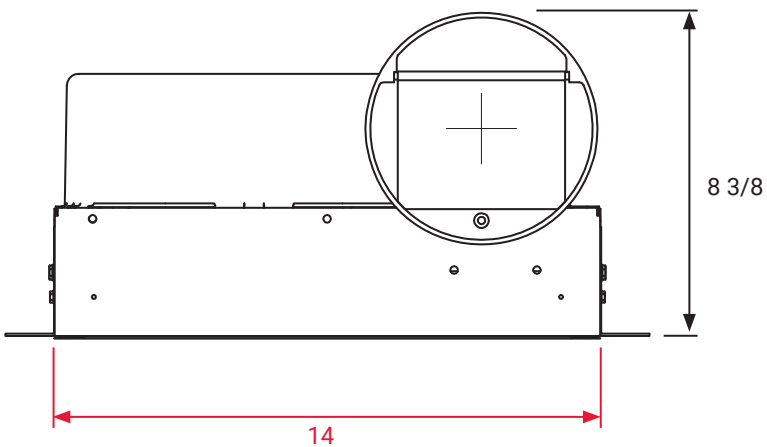


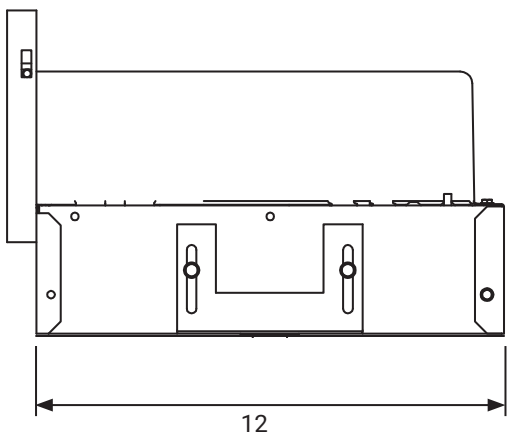
Unit Size	1000		2000	
Grille Material	Steel	Aluminum	Steel	Aluminum
Height	15 1/4	15 1/4	16 5/8	16 5/8
Length	42 3/8	38 3/4	49 1/2	45 3/4
Width	17 1/8	15 3/4	18 1/2	17 1/4

OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GN 126 - 188 / **GC** 100 - 180

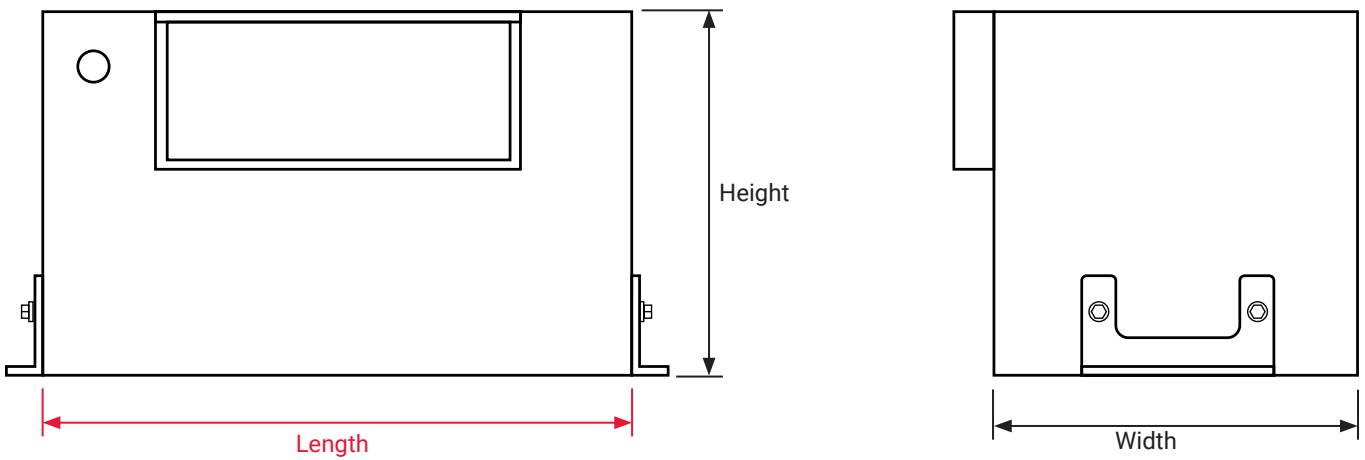




OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GN 222 - 960 / **GN** 300 - 900

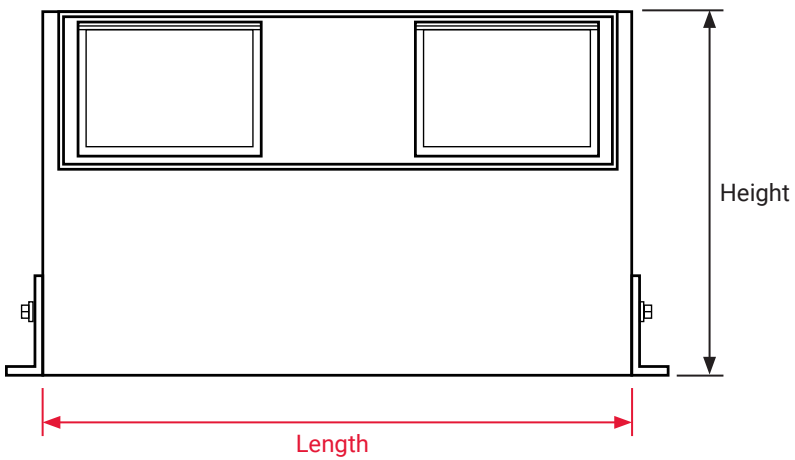


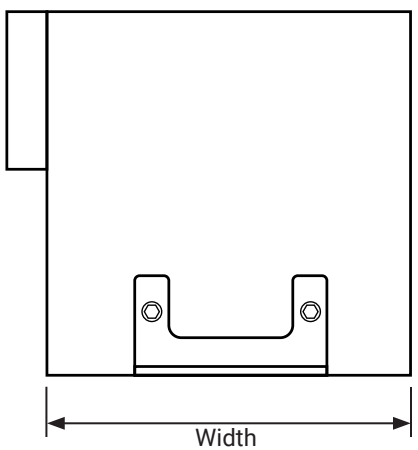
Unit Size	222 - 242	322 - 342	422 - 740	GNVF 700	822 - 862	920 - 960
Height	9 3/4	10 3/4	11 7/8	11 7/8	14 11/16	14 11/16
Length	12 3/8	12 3/8	17*	21	27	31
Width	9 3/4	10 3/4	11 7/8	11 7/8	14 11/16	14 11/16

OVERALL DIMENSIONS

Overall dimensions are in inches. For more detailed dimensions, see product submittals.

GN 1000 - 2000





Unit Size	1000	2000
Height	15 1/4	16 5/8
Length	38 1/8	45 7/16
Width	15 1/4	16 5/8

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2015 E. Dale St. Springfield, MO 65803 | 417-869-6474 | Fax: 417-862-3820 | lorencook.com