## FLEXIBILITY FOR



## INVENT SERIES FANS WITH TRUESEAL™ DAMPER TECHNOLOGY CAN SAVE UP TO 1 HERS POINT AND UP TO \$9 PER YEAR IN OPERATING COSTS.\*

FoldAway\* Mounting Ears are precisely positioned for new construction and fold flat for room-side retrofits. Every installation can be handled more efficiently.



With our TrueSeal™ Damper Technology, InVent fans reduce air leakage by up to 50% compared to competitive models; resulting in better home performance via blower door tests.



\*Compared to competitive fans; based on software calculations and analysis conducted by Broan-NuTone Testing reflects total fan housing air tightness. ¹See Broan.com/InVent for details

EzDuct™ Connector enables room-side installation without attic access. Attach the housing, pull the duct through, attach the EzDuct™ Connector and reset it with one screw.





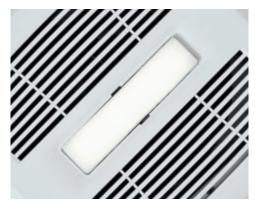
# ROOM-SIDE RETROFIT FROM **ONE FAN.**

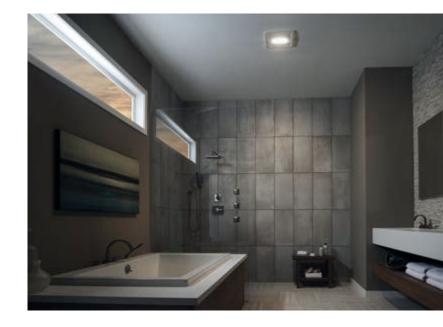
### VERSATILE INSTALLATION, AIRTIGHT PERFORMANCE, LED LIGHTING.

InVent Series gives professionals smart options for new construction or room-side retrofits in one, hard-working product line. InVent is about innovations such as FoldAway™ mounting ears and TrueSeal™ Damper Technology that improves building airtightness like never before. With fresh grille designs and a full range of operating points, there's an InVent Series solution for every installation.

## **Invent** Series

LED Lighting offers greater energy efficiency and longevity, and adds a unique design detail to this hard-working fan. 11 watt, 800 Lumens integrated LED module lasts up to 25,000 hours.





## **Invent** series

#### **INVENT FAN & FAN/LIGHT FEATURES**

## AE50, AE80, AE110, AE80B, A80, A80HD, A110

- FoldAway™ mounting ears allow for easy installation in both new construction and room-side replacement
- New TrueSeal<sup>™</sup> damper technology forms a tighter seal to reduce backdrafts
- EzDuct<sup>™</sup> Connector allows roomside installation with no attic access required
- Effective ventilation clears humidity and odors
- · Attractive grille styling

#### AE80L, AE80BL, AE110L

- LED Fan/Light with 11 watt, 800 Lumens, 3000K, 80 CRI integrated module
- LED lasts up to 25,000 hours for maintenance-free convenience

#### A50L, A70L, A80L, A110L

 Incandescent Fan/Light with A19 Base (bulb not included)



#### **INVENT Fan Models**

Model	CFM	Sones	ENERGY STAR®
A80	80	2.0	No
A80HD*	80	2.0	No
A110	110	3.0	No
AE50	50	0.5	Yes
AE80	80	0.8	Yes
AE80B	80	1.5	Yes
AE110	110	1.3	Yes

ENERGY STAR® fans use 70% less energy, on average, than standard models and may qualify for local utility rebates





#### **INVENT Fan/Light Models**

Model	CFM	Sones	Lighting	ENERGY STAR®
A50L	50	1.5	A19 Base**	No
A70L	70	2.0	A19 Base**	No
A80L	80	1.0	A19 Base**	No
A110L	110	1.3	A19 Base**	No
AE80BL	80	1.5	LED	Yes
AE80L	80	0.8	LED	Yes
AE110L	110	1.3	LED	Yes

ENERGY STAR® fans use 70% less energy, on average, than standard models and may qualify for local utility rebates



<sup>\*\*</sup>Bulb Not Included

## WALL CONTROLS

## SELECTION GUIDE

		57W 57V	59W	61W 61V	62W 62V	63W 63V	64W 64V	66W 66V	67W 67V	68W 68V	69WL 69VL	70TW	71V	72W 72V	73	77DW 77DV	78W 78V	269WL 269VL	685WL	82W, DH100W	TC24H
Litility	12C		•	•			•				•	•	•	•			•			•	•
Utility Fans	502	•	•	•			•				•	•	•	•			•			•	•
i uno	503	•	•	•			•				•	•	•	•			•			•	•
	504	•	•	•			•				•	•	•	•			•			•	•
	505	•	•	•			•				•	•	•	•			•			•	•
	506 & 507																				
	508	•	•	•			•				•	•	•	•			•			•	•
	509	•	•	•							•	•		•			•			•	
	509S1		•	•			•					•	•				•			•	•
	510 <sup>2</sup>		•	•			•					•	•				•			•	•
	511 <sup>2</sup>											•					•				
	512 & 512M	•	•	•							•	•	•	•			•			•	•
	673		•	•			•				•	•	•				•			•	•
Ventilation Fans	670	•	•	•			•				•	•	•	•			•			•	•
	682	•	•	•			•				•	•	•	•			•			•	•
	688	•	•	•			•				•	•	•	•			•			•	•
	689	•	•	•			•				•	•	•	•			•			•	•
	690	•	•	•			•				•	•	•	•			•			•	•
	LP80	•	•	•			•				•	•	•	•			•			•	•
	QTXE080 QTXE110, QTXE150		•	•		•	•			•	•	•	•				•	•		•	•
	QTXE110S									•	•										
	XB50										•							•			
	XB80										•							•			
	XB110										•							•			
	XB110H									•	•							•			
	ZB80									•								•	•		
	ZB80M									•	•							•			
	ZB110									•								•	•		
	ZB110H									•	•							•			
	ZB110M									•	•							•			
	RB80, RB110		•	•							•									•	
	A80HD		•	•							•									•	
	AE50, A80, AE80, AE80B, A110, AE110		•	•							•									•	
Ventilation	657	•	•	•		•	•			•		•	•	•						•	•
Fan/Lights	678	•	•	•		•	•			•		•	•	•						•	•
	696	•	•	•		•	•			•		•	•	•						•	•
	744					•				•		•								•	
	744FL					•				•		•								•	
	744LED					•				•		•								•	
	744SFL					•		•	•	•		•								•	
	750	•	•	•	•		•	•	•	•		•	•	•				•	•	•	•
	751	•	•	•		•	•			•		•	•	•				•		•	•
	791LEDM	•	•				•			•		•						•			
	RB80L, RB110L AE80L, AE80BL, AE110L					•	•			•								•		•	
	A50L, A70L, A80L A110L					•	•			•								•		•	

<sup>1</sup>Built-in on/off switch. <sup>2</sup>Built-in on/off variable switch

		57W 57V	59W	61W 61V	62W 62V	63W 63V	64W 64V	66W 66V	67W 67V	68W 68V	69VL	70TW	71V	72W 72V	73	77DW 77DV	78W 78V	269WL 269VL	685WL	82W, DH 100W	TC24H
Ventilation	HD80L	•	•	•		•	•			•		•	•	•				•		•	•
Fan/Lights Continued	QTXE080FLT, QTXE110FLT, QTXE150FLT		•	•	•	•	•	•				•	•						•	•	•
	QTX110SL, QTXE110SFLT							•	•							•					
	XB50L							•	•										•		
	XB80L							•	•										•		
	XB110L							•	•										•		
	XB110HL							•	•							•					
	ZB80L															•					
	ZB80ML															•					
	ZB110L															•					
	ZB110HL							•	•							•					
	ZB110ML															•					
Heater/	100HL	•	•	•	•			•	•			•	•	•						•	•
Fan/	100HFL	•	•	•	•			•	•			•	•	•						•	•
Lights	161		•	•			•				•									•	•
	162	•	•	•		•	•			•		•	•	•				•		•	•
	163		•	•		•					•									•	•
	164	•	•	•	•	•		•	•	•		•	•	•				•	•	•	•
	655	•	•	•	•			•	•			•	•	•				•	•	•	•
	656		•	•		•						•	•							•	•
	658	•	•	•		•				•		•	•	•				•		•	•
	659	•	•	•	•			•	•			•	•	•				•	•	•	•
	QTX110HL		•	•	•			•	•			•	•			•				•	•
	QTX110HFL		•	•	•			•	•			•	•			•				•	•
In-Line	MP100, MP140 MP200	•	•	•							•	•	•	•						•	•
	MP280	•	•	•							•	•	•	•						•	•
	SP100, SP140, SP200	•	•	•							•	•	•	•						•	•
Attic	349BR		•	•							•	•	•	•	•					•	•
Ventilation	350BK		•	•							•	•	•	•	•					•	•
	350BR		•	•							•	•	•	•	•					•	•
	353		•	•							•	•	•	•	•					•	•
	35316		•	•							•	•	•	•	•					•	•
	355ВК		•	•							•	•	•	•	•					•	•
	355BR		•	•							•	•	•	•	•					•	•
	356ВК		•	•							•	•	•		•					•	
	356BR		•	•							•	•	•		•					•	
	358		•	•							•	•	•	•	•					•	•

<sup>1</sup>Built-in on/off switch. <sup>2</sup>Built-in on/off variable switch

#### **ADAPTERS**

#### Model FY6

• 6" x 6" x 6" Y adapter

#### Model FY86

• 8" x 6" x 6" Y adapter



#### **DAMPERS**

#### Model 97 Damper

• 7" spring-loaded, in-line damper

#### Model BP87 Damper

• 7" vertical discharge damper

#### **DUCTING**

#### **Model 406 Round Duct**

- 6" round duct
- 2' galvanized section

#### **Model 407 Round Duct**

- 7" round duct
- · 2' galvanized section

#### **Model 410 Round Duct**

- 10" round duct
- · 2' galvanized section

#### Model 889 Duct

- 31/4" x 10" duct
- · 2' galvanized sections

## Models DT4C & DT6C Non-Insulated Flexible Duct

- 4" (DT4C) or6" (DT6C) round
- DT4C is a 4-pack
- · 25' standard length

#### Models DT4W, DT6W & 804DU Insulated Flexible Duct

- 4" (DT4W & 804DU) or 6" (DT6W) round
- · 25' standard length

#### **DUCTING KITS**

## Model RVK1A\* Flexible Roof Ducting Kit

- Includes Model 636 Roof Cap
- 4" diameter metal duct connector
- · 2 duct clamps
- 4" to 3" reducer
- 8' of 4" flexible aluminum ducting

## Model WVK2A\* Flexible Wall Ducting Kit

- Includes white polymeric wall cap
- 4" diameter metal duct connector
- 2 duct clamps
- 4" to 3" reducer
- 5' of 4" flexible aluminum ducting



#### **ELBOWS**

#### Model 415 Adjustable Elbow

· Fits 7" round duct

### Model 418 Adjustable Elbow

• Fits 10" round duct

#### Model 419 Adjustable Elbow

· Fits 6" round duct

#### Model 428 Vertical Elbow

• Fits 31/4" x 10" duct

### Model 429 Horizontal Elbow

• Fits 31/4" x 10" duct

#### Model 430 Short Eave Elbow

- For 3¹/₄" x 10" duct
- Includes backdraft damper and grille (black)
- Only recommended for fans with more than 160 CFM

#### Model 431 Long Eave Elbow

- For 3¹/₄" x 10" duct
- Includes backdraft damper and grille (black)
- Only recommended for fans with more than 160 CFM

#### Model 839 Elbow

- 90° turn
- For use with 3<sup>1</sup>/<sub>4</sub>" x 10" duct



#### **FILTERS**

#### Model 834 Filter

• For 8" fans

#### Model 854 Filter

- · Aluminum mesh grease filter
- For 10" fans

#### Model 99010042 Aluminum Filter

 Fits Utility Ventilator Models 503, 503MG, 505, 505MG, 509, 509MG, 509S and 509SMG



#### Model 99010271 Aluminum Filter

 Fits Utility Ventilator Models 12C, 12CMG, 502, 502MG, 504, 504MG, 508, 508MG, 510, 510MG, 511 and 511MG

#### METAL GRILLE KIT

#### Model 97011308

- · Steel baked white enamel finish
- Fits fan Models 670, 671, 676, 684, 688 and 689
- Grille size is 10<sup>1</sup>/<sub>4</sub>" square

#### **ROOF CAPS**

#### Model 437\* 10" Round

- · High-capacity design up to 1200 CFM
- Built-in bird screen
- Steel housing, black electrically bonded epoxy finish



#### Model 611 Roof Cap\*

- · For flat roof installation
- · Aluminum natural finish
- · For up to 8" round duct



#### Model 611CM Roof Cap\*

- · For curb mount installation
- Other features same as Model 611



#### Model 612 Roof Cap\*

- · For flat roof installation
- Aluminum natural finish
- For up to 12" round duct



#### Model 612CM Roof Cap\*

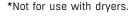
- · For curb mount installation
- Other features same as Model 612



#### Model 634 Roof Cap\*

- For 3¹/₄" x 10" or up to 8" round duct
- Black
- Backdraft damper and birdscreen





#### ROOF CAPS CONTINUED

#### Model 634M Roof Cap\*

• Same as Model 634 except for 6" round duct

#### Model 636 Roof Cap\*

- For 3" or 4" round duct
- Built-in backdraft damper and bird screen
- · Steel baked black enamel finish

#### Model 636AL Roof Cap\*

· Same as Model 636. except aluminum natural finish

#### Model 644 Roof Cap\*

· Same as Model 634, except for aluminum natural finish



#### **SLEEVES**

#### Model CVLD4

• 4" sleeve with damper



• 6" sleeve with damper



#### **TRANSITIONS**

#### **Model 886 Transition**

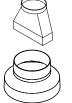
· Converts 7" round to 31/4" x 10" duct

#### **Model 475 Transition**

- · Converts 6" round duct to 4" round duct reducer
- · Available in 6 Pack (475B)



 Converts 3½" x 10" duct to 8" round duct





#### WALL CAPS

#### Model 613 Wall Cap\*

- For 12" round duct
- · Built-in backdraft damper and bird screen
- · Aluminum natural finish

#### Model 639 Wall Cap\*

- For 3½, x 10" duct
- · Spring-loaded backdraft damper
- · Built-in bird screen
- · Steel baked black enamel finish

#### Model 649 Wall Cap\*

· Same as Model 639, except aluminum natural finish

#### Model 641 Wall Cap\*

- · For 6" round duct
- · Built-in backdraft damper and bird screen
- · Aluminum natural finish
- · Model 647 for 7" Round duct

#### Model 647 Wall Cap\*

- For 7" round duct
- · Other features same as Model 641

#### Model 649 Wall Cap\*

· Same as Model 639. except aluminum natural finish

#### Model 843BL Wall Cap\*

- For 6" round duct
- · Built-in backdraft damper and bird screen
- · Black finish



#### WALL CAPS CONTINUED

#### Models 885AL and 885BL Wall Cap\*

- For 3" or 4" round duct
- 4" to 3" transition included
- · Aluminum natural finish (885AL) and steel black enamel finish (885BL)
- Standard package—6 to a carton
- · Built-in bird screen and damper

#### Model 643 Wall Cap\*

- For 8" round duct
- · Aluminum natural finish
- Backdraft damper, no birdscreen

#### Model 646 Louvered Wall\* Cap for 6" Round Duct

- · Single pack
- · White polymeric

#### Model WC650 Wall Cap\*

- · For 4" round duct
- · White polymeric
- · 4 to a carton



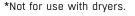












#### TECHNICAL

What is a sone, and how is it measured? A sone is a measurement of sound of how sound is sensed. The lower the sone value, the quieter the listening environment. One sone is the equivalent of a quiet refrigerator. Broan fans feature the quietest rating possible at <0.3 sones as tested for HVI certification.

#### What does "HVI certified" mean?

The Home Ventilating Institute (HVI) is an independent organization that certifies the airflow and sound performance of Broan products. For more information visit www.hvi.org.

What is ENERGY STAR®? Refer to the product matrix for specific Broan fans that meet ENERGY STAR® requirements.

Many of these Broan products use high efficiency motors and lighting to reduce energy consumption by as much as 70%. Learn more about ENERGY STAR® at www.energystar.gov.

What does CFM mean? Cubic Feet per Minute (CFM) is the measure of air volume moved by the fan blower. Choose a fan with a CFM rating appropriate for your room size to ensure adequate ventilation.

#### What does "static pressure" mean?

Static pressure is the measurement of airflow resistance as it is pushed through ductwork which reduces the effectiveness of the fan. Learn more on the Home Ventilating Institute website www.hvi.org.

#### What is whole-house ventilation?

Whole-house ventilation provides today's airtight homes with a relatively constant and controlled lower level of ventilation. Broan offers many virtually silent continuous ventilation solutions for ASHRAE 62.2 and programs such as LEED, ENERGY STAR® for Homes and CA Title 24.

#### OPERATION

How do I size a fan properly for my room size and the duct run? See the sizing guidelines on page 59 for details on proper sizing. This section provides an explanation and examples to help you make the right decision.

How long should a bath fan run after a shower is used? The Home Ventilating Institute recommends that a fan should be left on for 20 minutes more to clear humidity adequately and to ensure moisture and condensation is minimized.

How does Sensing Technology operate? Broan has unique sensing technology that detects humidity or motion. Multi-speed models automatically turn the fan speed up when someone enters the room or there is a rapid rise in the humidity level from the lower continuous CFM level. Single-speed models turn the fan on automatically.

How does the delay-off timer operate? Delay-off timers automatically shut the fan off after a time interval set by the user.

Why do the windows and mirrors fog even when the fan is running?

If windows and mirrors are very cold, condensation can still form on these surfaces. And if your bathroom is sealed tightly, replacement air may not be entering the room fast enough to displace the moist air. Fan placement can also be a factor. Your fan should be located far from the replacement air source to ensure the moist air is drawn out first. Finally, make sure your ductwork is as short and straight as it can be in order to ensure proper air outflow.

Why is water dripping from the grille of the fan? Dripping water is either condensation (usually due to cold ductwork or improper duct installation), or a problem with the seal on a wall or roof vent. Insulated ductwork can help solve condensation problems, and running the fan longer will ensure moisture is completely removed from the duct.

Will Broan fans work in wall-mount applications? Refer to the product matrix for specific Broan bath and utility fans that may be wall mounted.

What type of exhaust fan is best for a sauna or hot tub area? High CFM-rated devices are normally recommended for this type of application.

Can I use a fan in a steam shower?

No. Since these are normally sealed chambers, a vacuum will be created.

#### INSTALLATION

Can I mount Broan fans above my tub and shower? Most Broan fans are rated for use over a shower or bathtub with a GFCI (Ground Fault Circuit Interrupter).

Can my bath fan be surrounded by insulation? Yes. Broan bath fans are designed to provide adequate cooling for motors and lighting, as well as products with integral heaters.

## Can I vent more than one bath fan out of a roof or wall cap? No.

Always follow the manufacturer's recommended ventilation requirements.

What is the Broan

Ventilation fan warranty? Go to

http://www.broan.com/warranty
for this information.

Do I need attic access to install a fan in a retrofit situation? Refer to the product matrix for specific Broan fans that may be installed without access from above with features such as telescoping mounting frames, snap-in housings, bendable mounting ears, drywall-mounting tabs and insideout mounting duct connectors. Room-side retrofit installations are now a reality.

## Can I install a heater over the bathtub or in a shower?

No. Heaters are not UL Listed (Underwriter's Laboratory) for installation over a bathtub or in a shower

Can I use an inline or multi-port fan in one large bathroom? Yes, this works the best for large rooms because you can install the ports over the areas where the ventilation is needed the most (source control). The size of the multi-port would be determined by the size of the room.

Can larger diameter ducting be used with my bath fan? Yes, larger diameters will result in improved performance.

## Can I use a smaller diameter duct than what the fan is designed for?

This is not recommended. It will cause the fan to run harder, greatly reducing the CFM performance of the fan and create excess noise.

What type of duct is recommended, rigid or flexible? It is recommended, where possible, to use rigid duct. It has less resistance to air flow and allows the fan to operate much more efficiently. If flexible duct is used, be sure the duct is as straight as possible.

## Can I exhaust my fan into my attic instead of out the roof or wall?

Never exhaust air into spaces within walls, ceilings, attics, crawl spaces or garages. Humidity may damage the structure and insulation.

Where should the exhaust fan be located? Exhaust fans should be located in or near the shower or tub, and in an enclosed water closet. Keep exhaust points opposite the supply air source to ensure that the fresh air is drawn through the room. Bathroom doors should not be sealed too tightly at the bottom in order to allow "makeup air" to enter the room when the door is closed.

In what direction should I orient the exhaust outlet? The exhaust outlet is the point where air is discharged through the body of the fan housing into the ductwork. During installation, orient your fan with the exhaust outlet pointing toward the exit vent on your roof or wall to minimize turns in ductwork that impede airflow.

## Will a bath fan or wall-mount utility fan serve as a range hood?

No. Range hoods are specifically designed to handle grease and high temperature environments. Broan bath fans supplement odor and moisture removal in the kitchen, but are not intended for use as a range hood.

Can I use CFL or LED bulbs in fan/lights with A19 screw-base sockets? Yes, if key guidelines are followed. Go to broan.com FAQs for details.

# PROPER INSTALLATION MAKES ALL THE DIFFERENCE.

Tape or caulk around the seam where the fan housing meets the sheetrock on the ceiling

If possible, use smooth, rigid ductwork as large as the exit opening on the body of the fan housing

Whenever possible, ductwork should slope down and away from the fan housing to direct any condensation toward the vent

Whether rigid or flexduct, the turning radius for the duct should be as large as possible

Pre-installed screws, keyhole slots and alignment tabs facilitate installation, taking the guesswork out of proper mounting.

Elbows, turns, long ducts and ductwork smaller than the fan's exit outlet will reduce performance.

Use wide aluminum foil or duct tape to join smooth metal ductwork seams.

Do not let flexible ductwork sag as this impedes airflow.

During installation, orient the bath fan outlet in the direction of the home's exit point to minimize duct turns.

Before adding an elbow or bend, allow 24" to 36" of straight run from the fan outlet point.

Duct-wrap insulation (R-5 or above) will help minimize condensation in cold climates, especially on long duct runs.

Quick guideline: For bathrooms up to 100 square feet, the HVI recommends ventilation of at least 1 CFM per square foot (about eight air changes per hour). For bathrooms over 100 square feet, add up the needs of each fixture to determine the total ventilation rate:

- Toilet 50 CFM
- Shower 50 CFM
- Bathtub 50 CFM
- Jetted tub 100 CFM

Exit vents should have backdraft flaps to help keep cold air from entering the duct

## EASY STEPS FOR CHOOSING AND SIZING THE RIGHT VENTILATION FAN FOR YOUR HOME.

Determine which rooms could use ventilation, and how much is needed. Spot ventilation is used in localized areas to remove moisture, odor and airborne pollutants quickly. Most commonly used in the bath or powder room, spot ventilation can also be used in a laundry room, exercise area, closet, or bedroom, wherever air should be changed frequently. Decorative and recessed models can be ideal solutions for these situations. According to the Home Ventilating Institute (HVI), Air Changes per Hour (ACH) for comfortable and healthy living should be as follows: Bathrooms: 8 changes, Kitchens: 15 changes, Living/Bedrooms: 6 changes. Broan bath fans, utility fans and high capacity fans can meet these needs.

Calculate the air movement necessary for proper ventilation. Air movement is measured in Cubic Feet per Minute (CFM). To determine CFM requirements, first determine the size of your room. Measure and multiply the length, width and ceiling height of your room to determine cubic footage. Then use the multiplication factor of .13 and round up to the next "ten." See the three examples that follow.

#### Example 1:

Bathroom with 8' ceiling:

7' wide x 9' long x 8' high x .13 = 66. Select a bath fan with at least 70 CFM

#### Example 2:

Bathroom with 9' ceiling: 10' wide x 9' long x 9' high x .13 = 105. Select a bath fan with at least 110 CFM

#### Example 3:

For a bathroom with a vaulted ceiling, use the average ceiling height at the wall and the peak:8' wide x 12' long x ((8' at wall + 12' at peak) / 2 = 10') average height x .13 = 125. Select a fan(s) with at least 130 CFM

Account for long duct runs and ductwork that turns before it reaches the exterior vent. When airflow is restricted in any way it slows down. Just as a car must slow down for a sharp corner, air decelerates when going through a turn in a duct run. Whenever possible, create a straight duct run with large radius turns, if they're necessary at all. Rigid ductwork is optimal because airflow restriction is minimized. Flexible tubing may be convenient to install, but resistance is created as air is moved over the spiral metal frame of the tubing. With long duct runs or ducts with multiple turns the fan works harder, noise increases and fan performance (CFM) is compromised. Select a fan model with an even greater CFM rating to compensate.

**6"** ducting overcomes most performance-related installation issues. Broan's ULTRA and QTX Green Series fans deliver high performance in virtually any real-world installation. They are engineered with a 6" duct connector for peak air movement and extremely quiet operation, even when the duct run is not short and straight.

## **SPECIFICATIONS**

## INVENT Fans and Fan/Lights

			Sones, HVI-	Baths up to	Lighting Watts Main/	ENERGY	Fluorescent	Duct	Housing Dims			Grille	Dims		
Model	Page	CFM	Certified	() Sq Ft	Night Light	STAR®	Lighting	Size"	Ľ	w"	Н"	Ľ"	w"	Grille Finish	Amps
AE80	26	80	0.8	75	_	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	113/8	12	White Polymeric	0.3
AE110	26	110	1.3	105	-	Yes	_	4	91/4	10	5³/ <sub>4</sub>	11³/ <sub>8</sub>	12	White Polymeric	0.3
AE80B	26	80	1.5	75	_	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11³/ <sub>8</sub>	12	White Polymeric	0.3
AE50	26	50	0.5	45	_	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> /8	12	White Polymeric	0.2
A80HD*	26	80	2.0	75	_	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11	12	White Painted Metal	0.37
A80	26	80	2.0	75	_	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> /8	12	White Polymeric	0.37
A110	26	110	3.0	105	_	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11³/ <sub>8</sub>	12	White Polymeric	0.4
A80L**	26	80	1.0	75	A19 Base	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	111/2	12¹/a	White Polymeric	1.2
A110L**	26	110	1.3	105	A19 Base	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	111/2	12¹/a	White Polymeric	1.2
A50L**	26	50	1.5	45	A19 Base	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	111/2	12¹/a	White Polymeric	1.0
A70L**	26	70	2.0	65	A19 Base	No	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	111/2	12¹/a	White Polymeric	1.2
AE80BL	26	80	1.5	75	LED	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>4</sub>	12¹/2	White Polymeric	0.3
AE80L	26	80	0.8	75	LED	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>4</sub>	12¹/2	White Polymeric	0.3
AE110L	26	110	1.3	105	LED	Yes	_	4	91/4	10	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>4</sub>	12¹/2	White Polymeric	0.3

<sup>\*</sup>Metal grille. \*\*Bulb not included.

#### Fans

			Sones, HVI-	Baths up to	ENERGY	Duct		Housing Dims		Grille	e Dims		
Model	Page	CFM	Certified	() Sq Ft	STAR®	Size"	Ľ	w"	H"	Ľ	w"	Grille Finish	Amps
670	30	50	3.5	45	_	3	71/4	7 <sup>1</sup> / <sub>2</sub>	35/8	9	9¹/₄	White Polymeric	0.8
671	30	70	6.0	65	_	3	71/4	71/2	35/8	9	9¹/₄	White Polymeric	1.2
682	31	_	_	_	_	Duct-free	7 <sup>1</sup> /8	71/8	33/4	81/2	8 <del>1</del> /2	White Polymeric	1.0
688	30	50	4.0	45	_	3	71/4	71/2	35/8	9	9¹/₄	White Polymeric	0.9
689	30	60	5.5	55	_	3	71/4	71/2	35/8	9	91/4	White Polymeric	1.5
690**	31	60	3.0	55	_	_	_	_	_	95/8	111/8	White Polymeric	1.5
LP80	29	80	1.0	75	Yes	4/3	11³/8	10¹/2	4	13	13³/₄	White Polymeric	0.3
SPK110	37	110	1.0	75	Yes	4	11³/8	10¹/2	73/4	13	14	White Polymeric	0.9
SSQTXE080	23	80	_	_	Yes	_	11³/8	10¹/2	73/4	_	_	_	_
SSQTXE110	23	110	_	_	Yes	_	11³/8	10¹/2	73/4	_	-	_	_
QTXE080	18	80	0.3	75	Yes	6	11³/8	10¹/2	7 <sup>5</sup> /8	13	14	White Polymeric	0.4
QTXE110	18	110	0.7	100	Yes	6	11³/8	10¹/2	7 <sup>5</sup> /8	13	14	White Polymeric	0.3
QTXE110S	20	110	0.7	100	Yes	6	11³/8	10¹/2	7 <sup>5</sup> /8	12 <b>7</b> /8	13³/₄	White Polymeric	0.3
QTXE150	18	150	1.4	140	Yes	6	113/8	10¹/2	7 <sup>5</sup> /8	13	14	White Polymeric	0.5
QTRE100S	20	100	1.5	90	Yes	4	113/8	10¹/2	7 <sup>5</sup> /8	12 <b>7</b> /8	13³/₄	White Polymeric	0.3
RB80	15	80	<0.3	75	Yes	4	113/8	10¹/2	7 <sup>5</sup> /8	13	13³/ <sub>4</sub>	White Polymeric	0.3
RB110	15	110	0.6	100	Yes	4	113/8	10¹/2	7 <sup>5</sup> /8	13	13³/₄	White Polymeric	0.3
XB50	13	50	<0.3	45	Yes	6 / 4	10¹/2	113/8	7 <sup>5</sup> /8	13	13³/ <sub>4</sub>	White Polymeric	0.1
XB80	13	80	<0.3*	75	Yes	6 / 4	10¹/2	113/8	7 <sup>5</sup> /8	13	13³/₄	White Polymeric	0.1
XB110	13	110	<0.3	100	Yes	6	10¹/2	113/8	7 <sup>5</sup> /8	13	13³/ <sub>4</sub>	White Polymeric	0.2
XB110H	13	110	<0.3	100	Yes	6	10¹/2	113/8	7 <sup>5</sup> /8	13¹/a	14	White Polymeric	0.2
ZB80	13	80	<0.3*	75	Yes	6 / 4	10¹/2	113/8	7 <sup>5</sup> /8	13	13³/ <sub>4</sub>	White Polymeric	0.1
ZB80M	13	80	<0.3*	75	Yes	6 / 4	10¹/2	113/8	7 <sup>5</sup> /8	13¹/8	14	White Polymeric	0.1
ZB110	13	110	<0.3	100	Yes	6	10¹/2	113/8	7 <sup>5</sup> /8	13	13³/ <sub>4</sub>	White Polymeric	0.2
ZB110H	13	110	<0.3	100	Yes	6	10¹/2	113/8	7 <sup>5</sup> /8	13¹/8	14	White Polymeric	0.2
ZB110M	13	110	<0.3	100	Yes	6	10¹/2	113/8	7 <sup>5</sup> / <sub>8</sub>	13¹/8	14	White Polymeric	0.2

Radiation Dampers can be found on page 11, 19, 22, 27, 29 and 72  $\,$ 

<sup>\*</sup>With 6" duct (with 4" duct 0.3)

<sup>\*\*</sup>Replacement grille and motor kit