

Product Guide  
Zoned Comfort Control™

**Aprilaire®**  
Your Partners in Comfort®



The complete line-up of whole-home residential zoning products; designed for simpler installation, durable operation and more profitable jobs.

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YOUR PARTNERS IN COMFORT

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# Reliable zoning solutions for simpler, more profitable installs

The trusted name in Indoor Air Quality for over 60 years offers state-of-the-art Zoned Comfort Control solutions ideal for all residential zoning applications. Experts in the design and manufacturing of whole-home IAQ solutions, we hold our products to the highest industry standards.

## *Our Story*





*We designed our new line of zone boards and dampers to be tough and stand up to harsh conditions in the most demanding climates. To that end, the zoning product line endures rigorous testing for quality control and reliability.*

## Damper testing

- + Failure Mode and Effects Analysis (FMEA) performed to reduce probability and severity of product and product sub-system failures.
- + Cycle testing at ambient temperatures and at 140°F to simulate attic conditions.
- + Exceeded five-year 99% and 10-year 95% reliability targets
- + Functional testing performed at extreme environmental conditions of -40°F/90% RH and 150°F/15% RH.

## Zone Panel testing

- + Failure Mode and Effects Analysis (FMEA) performed to reduce probability and severity of product and product sub-system failures.
- + EC 61000-4-5; IEC 61000-4-12. Tested and passed 50% beyond International Electro-technical Commission (IEC) Level 4 (the highest threshold). IEC is the world's leading organization for electrical, electronic and related technologies standards.
- + EC 6100 EFT & IEC 61000 EDS Level 4
- + Exceeded five-year 99% and 10-year 95% reliability targets

## MEASURING AND ANALYZING SUCCESS

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Our reputation was built on a foundation of comprehensive testing protocol. The skills and equipment we've acquired assure the delivery of consistent, quality product. We look not only at ways to improve our products, but also to expand and perfect the methods used to quality test.

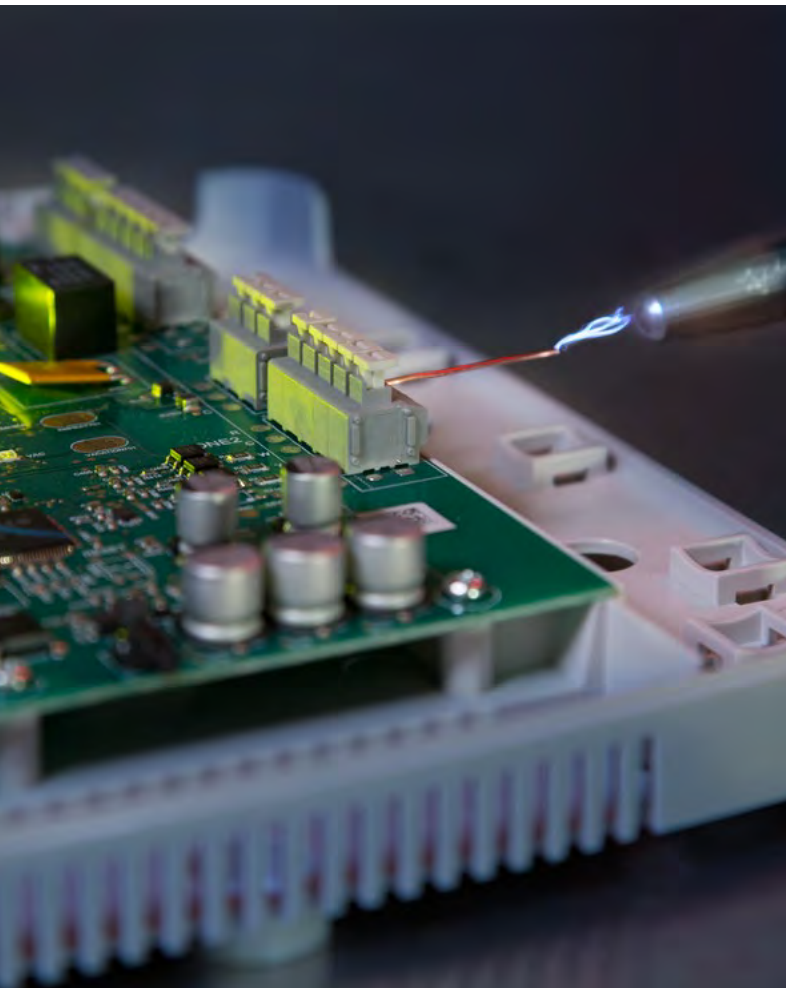
## Our objectives

- + Use statistical analysis to baseline, control and improve the quality of the manufacturing process.
- + To achieve a 100% on-time schedule adherence for resolving critical nonconformities.



# The need and solution

One of the largest issues confronted by homeowners is uneven temperatures throughout the house. Zoning is an essential component of today's energy efficient homes. Well-designed zoning systems provide reliable operation and years of optimal comfort and energy efficiency for your customers.



## APRILAIRE SOLUTION

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Aprilaire Zoned Comfort Control™ is designed for residential new construction and provides the components needed for simple, reliable and profitable installs.

- + **Simple:** Aprilaire zone panels feature simple layouts for fast and easy installation, wiring and set up. This reduces errors and minimizes the amount of time your crews spend on each job.
- + **Reliable:** Aprilaire zone panels and dampers are designed to withstand the temperature extremes of attic installations. Rigorous testing of all components assures that your company is able to concentrate on new business and not on call backs.
- + **Profitable:** Easy installations mean less training needed for your install crews. Faster and more accurate installations mean greater profits for your business.

## Any Application

*Aprilaire Zoned Comfort Control™ offers a complete line of zone panels, dampers and controls to provide the exact solution for any application. Switching to Aprilaire is easy and our zoning solutions work with all major industry thermostats.*

### ZONE OPTIONS:

2-, 3- and 4-zone panels allow you to purchase the exact number of zones needed for each job.

### FUNCTION OPTIONS:

Single stage heat/cool, universal multi-stage and heat pump options available.

APPLICATION	PART #	CAPABILITY	# OF ZONES	NOTES
Single Stage Heat/Cool	6202	1 Heat 1 Cool	Up to 2 Zones	New Design
Single Stage Heat/Cool	6203	1 Heat 1 Cool	Up to 3 Zones	New Design
Single Stage Heat Pump	6302	2 Heat 1 Cool	Up to 2 Zones	New Design, New Addition to Product Line-up
Single Stage Heat Pump	6303	2 Heat 1 Cool	Up to 3 Zones	New Design
Multi-Stage Universal	6403	2 Heat 2 Cool H/C or 4 Heat 2 Cool Heat Pump	Up to 3 Zones	New Design, New Addition to Product Line-up
Multi-Stage Universal	6404	2 Heat 2 Cool H/C or 4 Heat 2 Cool Heat Pump	Up to 4 Zones	New Design, Expandable Up to 12 Zones (Using 6401)

### APRILAIRE EXCLUSIVE ZONE PANEL FEATURES

- + Compatible with Model 8056 wireless outdoor temperature and RH sensor (Models 6403 & 6404 only)
- + Controls high and low balance point from one outdoor sensor
- + Time delay override to simplify check out and troubleshooting
- + Resettable fuses for each zone's dampers
- + Multiple mounting and wire run options
- + Short cycle protection
- + Built-in fan purge
- + Five-year warranty



# Zone Panels

## Intuitive Design

- + Visual indicators and clear terminal designations allow installers to easily understand how to wire and set up the system with minimal training

## Wiring Simplicity

- + Push terminals for quick connections
- + Wire openings on back and side provide simple organization and tracking of wires to each zone (dampers and thermostat)

## Visible Terminal Designations

- + Large, easy-to-see terminal designations
- + Zones delineated with color, clearly indicating damper and thermostat combinations

## Expandable Zones (up to 12)

Simply add the Model 6401 Expansion Panel (2-zone panel) and expand the number of zones (Model 6404)

## Vacation Mode

Press button and automatically manage all zones to preset vacation schedule

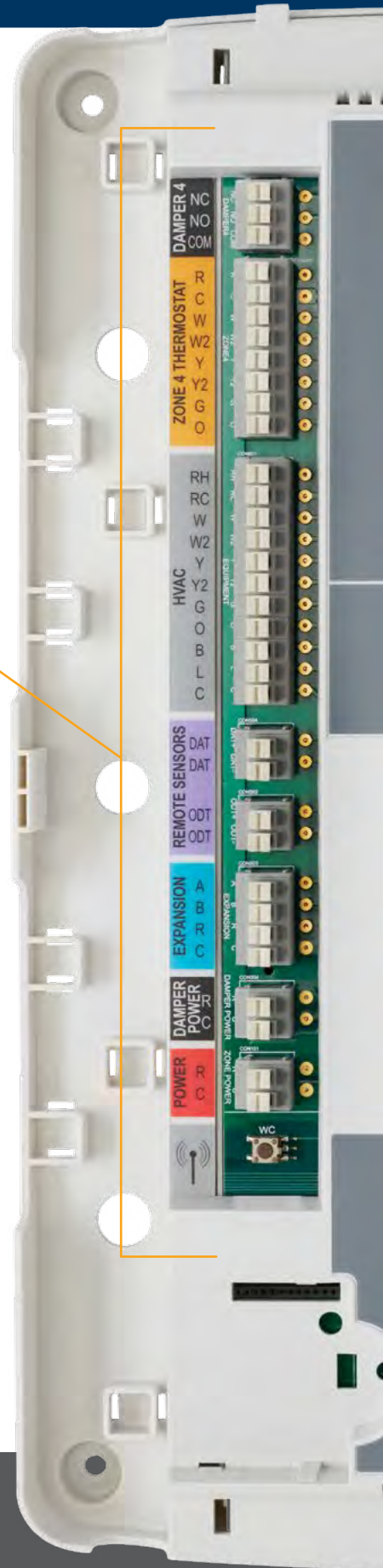
## Emergency Heat

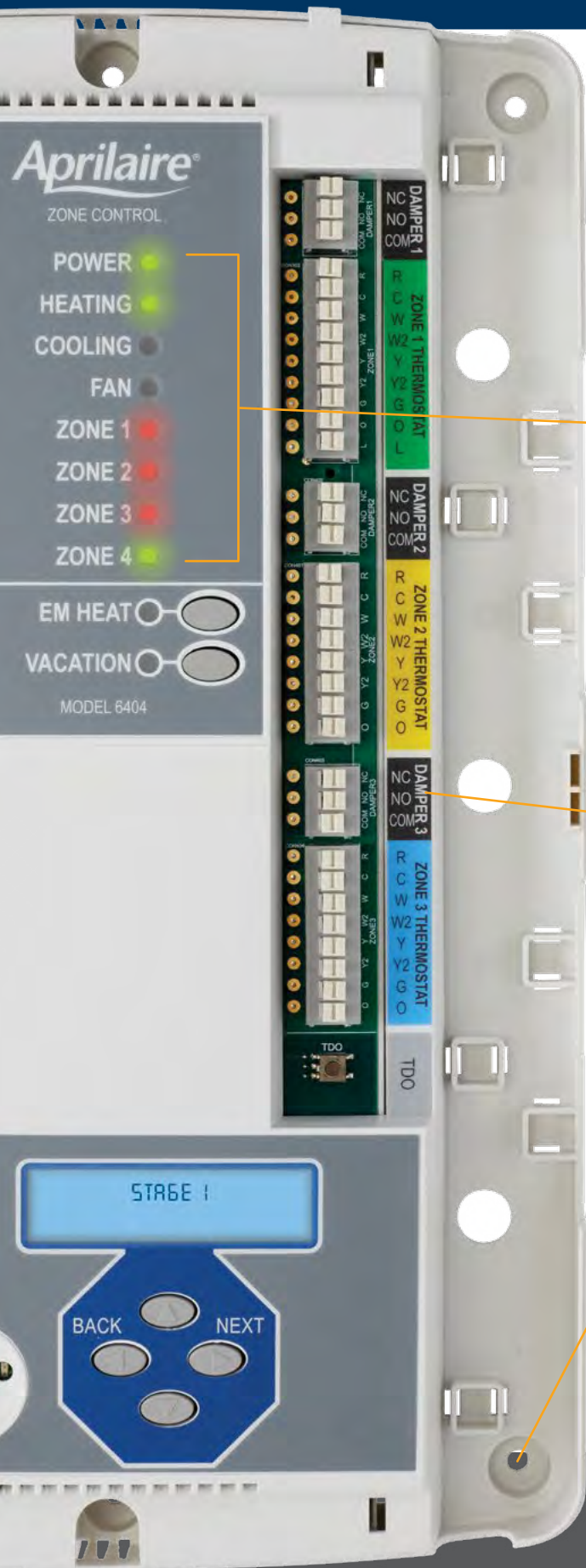
Automatically engage emergency heat across all zones in heat pump system

## Outdoor Sensors (optional)

Wired temperature only (Model 8052)

Wireless temperature and RH (Model 8056)





### Visual Indicators

- + LED indicators provide status of equipment and zones (green=open, red=closed)
- + Indicators visible without removing cover

### Testing and Troubleshooting

- + Compare the zone calling LED light to the damper blade position indicator for quick and easy troubleshooting

### Simple Set Up and Check Out

- + LED lights validate zone calling and operation of heating/cooling equipment
- + LCD screen and push buttons step through set up; eliminating hard-to-see jumpers (universal panels only)

### Dampers

- + Normally Open and Normally Closed dampers can be controlled (2-wire and 3-wire dampers)

### Zone Weighting

- + Zone Weighting allows more control when staging based on the number of zones calling. Each zone can be assigned a weight. For example, a zone can be weighted to count as 2 zones when deciding to stage up.

### Enclosure and Mounting

- + Robust mounting plate can be installed easily on stud wall or flat surface (including return plenum)
- + Cover snaps on/off, providing access without exposing PCB

Model 6404 Shown: 4-Zone Universal Multistage



# Zone Dampers

## PROVEN RELIABILITY

- + Rigorous cycle testing in extreme temperatures (over 140° F) to simulate attic summer conditions
- + Functional testing performed at extreme environmental conditions of -40°F/90% RH and 150°F/15% RH
- + 100% end-of-line testing
- + Actuator design proven successful in thousands of system installs
- + Packaging and product design for rough handling exceed shipping requirements of the ISTA 1A drop test
- + Five-year warranty

### Fail-Safe Design

- + Zone damper normally open; powers closed, allowing conditioned air to continue to flow if mechanical motor reaches end of service life

### Blade Positioning Indicator

- + Orange indicator – easy to read from a distance
- + Open and closed position clearly indicated
- + Orange position indicator on both sides of damper
- + Simple, visual system check and troubleshooting

### Flex Duct Integration

- + Raised actuator allows flex duct to encase entire damper
- + Damper shell extended beyond actuator to provide ample space to secure flex duct (zip tie)

Back View of Damper



Round



Rectangular



Slip-In





### Bypass Settings

- + Thumbscrew adjustable, no tools required
- + Factory set to 0% bypass
- + Standard setting indicated by ▲, approximate 15% bleed
- + Controlled Pressure Relief is infinitely adjustable for peak system performance

### One Piece Assembly

- + Simple, labor-saving design
- + Remove motor and actuator as one assembly
- + Assembly replacement while damper shell remains in duct



### Attic Insulation Protection

- + All openings secured, preventing spray-in insulation from entering actuator

### Round Damper Blade Design

- + Gasket material minimizes air bypass when blade is closed
- + Common plastic bearing stabilizes damper blade
- + Hex shaft allows secure blade fastening

### Robust Motor Design

- + Motor covered for improved appearance
- + Life tested to extreme usage in attic temperatures

### 2-Wire Connection

- + Simplifies installation—fewer wires to organize

Zoning  
(white label)



NORMALLY-OPEN  
POWER **CLOSED**

Ventilation  
(black label)



NORMALLY-CLOSED  
POWER **OPEN**

## Barometric Bypass Dampers

### TAKE A 'WEIGHT' OFF YOUR SHOULDERS WITH BAROMETRIC BYPASS DAMPERS

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Barometric dampers are airflow activated and relieve excess pressure in HVAC systems as zone dampers open and close.

- + Reliability: No-weighted arm! Over 99.9 percent reliability rate at 5 years comparable testing. Tested at maximum pressure in attic conditions.
- + Simple, labor-saving design: Easy to install and service. Pressure regulator can be replaced while damper shell remains in ductwork.
- + Ships completely assembled
- + Packaging and product design for rough handling to exceed shipping requirements of the ISTA 1A drop test.
- + Five-year warranty

- + Pressure setting adjustable by thumbscrew
- + Versatile installation: Counter-weighted blade allows installation at any angle
- + Blade positioning indicator: Easy to see and read, clearly indicated opened and closed positions.

#### Round Damper Blade Design

- + Gasket material minimizes air bypass when blade is closed
- + Common plastic bearing stabilizes damper blade





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Aprilaire®

Barometric Bypass Damper

Air Flow →

Blade Position

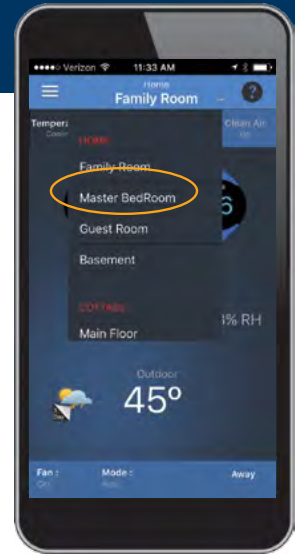
Open



Closed

-Low  
Pressure Setting

## Thermostats and Zoning Accessories

We have a complete line of thermostats with zoning and IAQ functionality, including our line of Wi-Fi Thermostats that allow consumers to control all zones from a single interface or mobile app. With the Aprilaire Wi-Fi Thermostat app, adjusting temperature and IAQ settings in a zoned home has never been easier or more convenient.



	WI-FI 		STANDARD	
<b>8900</b>		<b>MODELS 8910W &amp; 8920W</b>	+ Full color 7 in. screen, (Model 8920W). All control options on one screen. + Full IAQ control	 <b>MODEL 8910</b> + Touch screen interface + Full IAQ control
<b>8600</b>		<b>MODEL 8620W</b>	+ Easy-to-use touch screen designed for temperature and humidity control.	 <b>MODEL 8620</b> + Real language programming
<b>8400</b>		<b>MODEL 8476W</b>	+ Temperature control. Perfect for any zone.	 <b>MODELS 8444, 8446, 8448, 8463, 8465, 8466, 8476</b> + Heat/cool, heat pump and universal models

### SPECIALTY THERMOSTATS

#### Wireless

Perfect for Zoning Applications

**MODEL 8710**



#### Home Automation

Communicating Thermostat

**MODEL 8800** Wi-Fi Models:

**8810, 8820, 8830, 8840**



### ACCESSORIES

#### Model 8051 Flush Mount Sensor

- + Provides opportunity to remotely mount the thermostat out of view

#### Model 8052 Outdoor/Duct Sensor

- + Designed for outdoor or duct installation (including with zone control panels)

#### Model 8053 Flush Mount Sensor

- + Provides opportunity to remotely mount the thermostat out of view

#### Model 8022 3-Wire to 4-Wire Adapter

- + Any two thermostat equipment terminals can be combined with the diode pair (not 24V hot or common) and wired to the model

- + Provides an extra wire without pulling new

#### Model 8028 Damper Power Distribution Panel

- + Controls additional dampers per zone

#### Model 6401 Expansion Panel (6404 only)






- + Add two additional zones


#### Model 8056 Wireless Outdoor Temperature and RH Sensor

- + Installed with simple push-button assimilation process

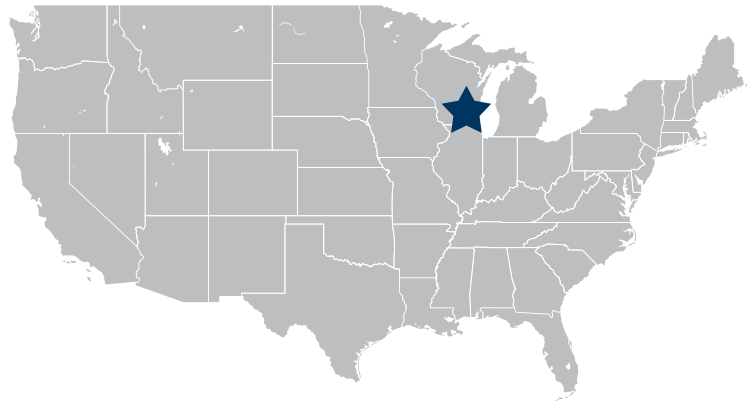
# Zone Panels

	MODEL	Specifications												
6404/6403		<p>▶ <b>6404 – 4 Zone Universal Multistage</b> + <b>2 Heat 2 Cool or 4 Heat 2 Cool (Heat Pump)</b>                      (Can be expanded to 12 zones)</p> <p><b>6403 – 3 Zone Universal Multistage</b> + <b>Compatible with Model 8506 wireless outdoor sensor</b></p>												
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		NOMINAL DIAMETER											
		4"	5"	6"	7"	8"	9"	10"	12"	14"	16"	18"	20"
<b>Round Dampers</b>  Size & Stock No.*   Zone Damper (Normally open/power closed)   Ventilation Damper (Normally closed/power opened)   Barometric Pressure Relief (Air flow activated)   Static Pressure Relief (Power activated)   Round Slip-In Damper (Normally open/power closed)	---	(127mm)	(153mm)	(178mm)	(200mm)	(229mm)	(250mm)	(300mm)	(350mm)	(400mm)	(450mm)	(500mm)	
	---	---	6606	6607	6608	6609	6610	6612	6614	6616	6618	6620	
	---	---	6506	---	6508	---	6510	---	---	---	---	---	
	---	---	---	---	6108	---	6110	6112	6114	6116	---	---	
	---	---	---	---	6208	---	6210	6212	6214	6216	6218	6220	
	6704	6705	6706	6707	6708	---	6710	---	---	---	---	---	

		NOMINAL WIDTH											
		8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"
<b>Rectangular Dampers</b>  Size & Stock No.**  Side Mount   Motor mounted on short dimension  Bottom Mount  Motor mounted on long dimension	NOMINAL HEIGHT  8" (200mm) 10" (250mm) 12" (300mm) 14" (350mm) 16" (400mm) 18" (450mm) 20" (500mm) 22" (550mm) 24" (600mm) 26" (650mm) 28" (700mm) 30" (750mm)	---	---	---	---	---	---	---	---	---	---	---	---
		6721	6722	6723	6724	6725	6726	6727	6728	6729	6730	6731	6753
		---	6732	6733	6734	6735	6736	6737	6738	6739	6740	6741	6742
		---	---	6743	6744	6745	6746	6747	6748	6749	6750	6751	6752
		---	---	---	6754	6755	6756	6757	6758	6759	6760	6761	6762
		---	---	---	---	6763	6764	6765	6766	6767	6768	6769	6770
		---	---	---	---	---	6771	6772	6773	6774	6775	6776	6777
		---	---	---	---	---	---	6778	6779	6780	6781	6782	6783
		---	---	---	---	---	---	---	6784	6785	6786	6787	6788
		---	---	---	---	---	---	---	---	6789	6790	6791	6792
		---	---	---	---	---	---	---	---	---	6793	6794	6795
		---	---	---	---	---	---	---	---	---	---	6796	6797
---	---	---	---	---	---	---	---	---	---	---	6798		
6721	6812	6813	6814	6815	6816	6817	6818	6819	---	---	---		
---	6732	6823	6824	6825	6826	6827	6828	6829	---	---	---		
---	---	6743	6834	6835	6836	6837	6838	6839	---	---	---		

\*Round damper dimension = nominal diameter + 4.5"      \*\*Rectangular dimension = nominal width + 3.5" 10-day lead time for shaded items



## Team Aprilaire

CALL - 1.800.334.6011

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You and your team can rely on our customer service and technical support teams to provide a live voice on the phone from Wisconsin whenever they need assistance. Our call performance is second to none.

**Aprilaire**<sup>®</sup>  
*Your Partners in Comfort*<sup>®</sup>



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PARTNER WITH US

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