Residential Zoning Product Guide

Zoned Comfort Control™

Aprilaire®
Your Partners in Comfort®

The complete lineup of whole-home residential zoning products. Designed for simpler installation, durable operation and more profitable jobs.

Find the right zoning product for any application.

Industry Need

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

Aprilaire Zoned Comfort Control™ is designed for 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 call backs on zoning jobs. It also minimizes the amount of time your crews spend on each job.

+ **Reliable:** Aprilaire zone panels and dampers have been 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 means reduced callbacks. All of these things 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.

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

1st digit	**6**	Zone Panel
2nd digit	**2**	Heat/Cool system Single Stage
	3	Heat Pump System Single stage
	4	Universal Multi-Stage
3rd & 4th Digits	**02**	Up to 2 Zones
	03	Up to 3 Zones
	04	Up to 4 Zones

Easy-to-understand part-numbering system

Aprilaire Exclusive Zone Panel Features:

+ Compatible with wireless outdoor temperature sensor (Models 6403 & 6404 only)

+ Controls high and low balance point from one outdoor temperature senor

+ 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

+ 5-year warranty

Intuitive Design

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

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)

+ Pre-installed RC/RH jumper

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

Vacation Mode

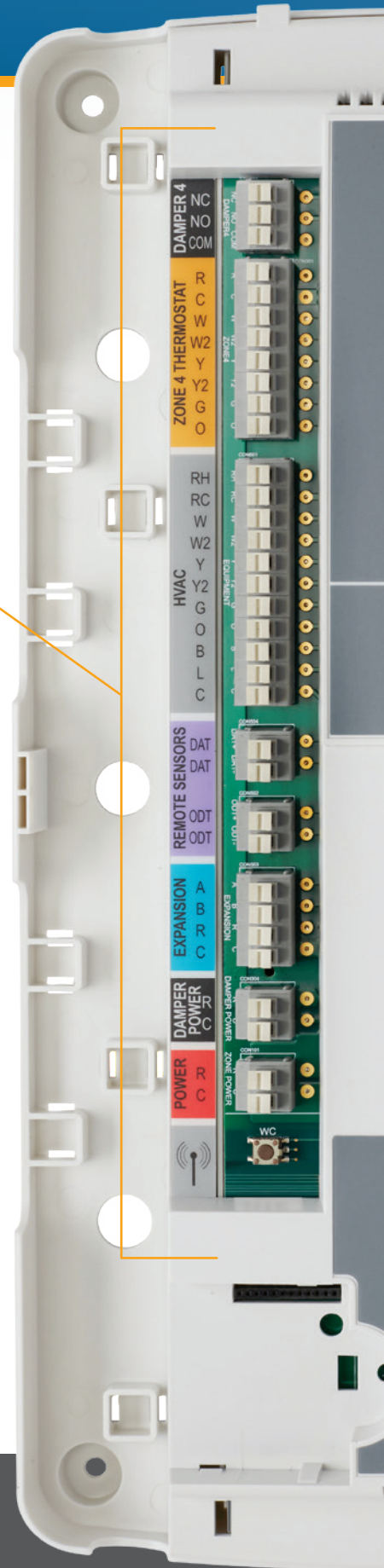Press button and automatically manage all zones to preset vacation schedule
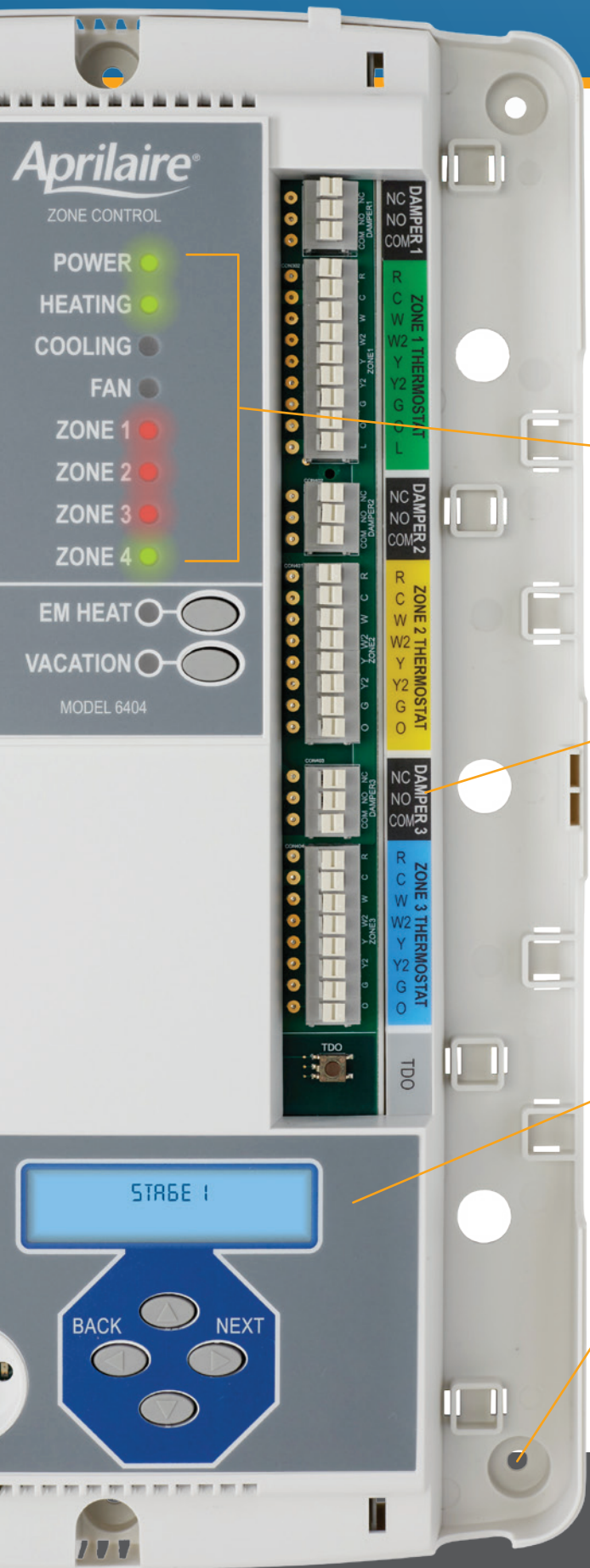
Emergency Heat

Automatically engage emergency heat across all zones in heat pump system

Outdoor Temp

Wired or wireless ODT
Optional (Model 8056)

Installed with simple push button assimilation process
(Models 6403 & 6404 only)

Aprilaire®
ZONE CONTROL

POWER
HEATING
COOLING
FAN
ZONE 1
ZONE 2
ZONE 3
ZONE 4

EM HEAT
VACATION

MODEL 6404

NC NO COM DAMPER 1

R C W W2 Y Y2 G O L ZONE 1 THERMOSTAT

NC NO COM DAMPER 2

R C W W2 Y Y2 G O ZONE 2 THERMOSTAT

NC NO COM DAMPER 3

R C W W2 Y Y2 G O ZONE 3 THERMOSTAT

TDO

STAGE 1

BACK   NEXT

Visual Indicators

+ Easy-to-see LED indicators provide status of equipment and zones
+ Indicators visible without removing cover

Testing and Troubleshooting

+ Easily compare the zone calling LED light to the damper blade position indicator, 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.

LCD Screen and Push Buttons

+ Step-through setup; eliminating hard-to-see jumpers and DIP switches (universal panels only)

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

Aprilaire offers a complete line of zone panels.

Zone Dampers

WORLD-CLASS QUALITY

+ Rigorous cycle testing assures years of reliable performance

+ Tested in extreme temperatures (over 140° F) to simulate attic summer conditions

+ 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
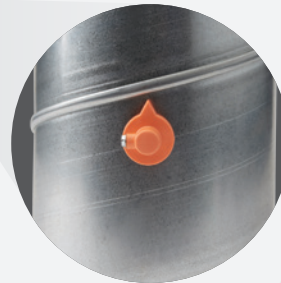
+ Five-year warranty

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
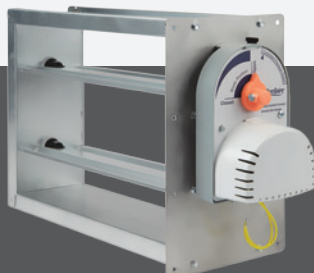
+ Simple, visual system check and troubleshooting

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

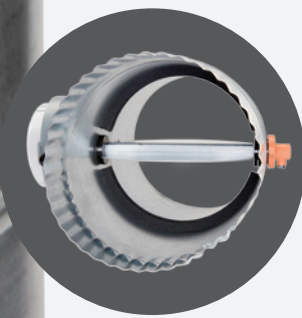## Bypass Settings

+ 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

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

Attic Insulation Protection

+ Insulation proof – all openings secured preventing spray in insulation from entering actuator and causing problems

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

+ Start-up torque dampened with torsion lever for extended life
+ Motor covered for improved appearance, cover tightly secured
+ Life tested to extreme usage in attic temperatures

2-Wire Connection

+ Simplifies installation – fewer wires to organize

Ventilation
(black label)

Zoning
(white label)

NORMALLY-CLOSED
POWER *OPEN*

NORMALLY-OPEN
POWER *CLOSED*

Install Aprilaire Wi-Fi thermostats with IAQ Control and control all zones from one interface. Consumers no longer need to walk to each thermostat to make changes. All thermostats are connected through the same app, making changes convenient and simple. The thermostats and zone boards wire the same as traditional products and all Aprilaire Wi-Fi products have this capability.

1 Press the zone on the top of the app, and all zones will display

2 Select the zone to modify

3 Change setting for that zone (thermostat)

4 Apply changes to all zones, or set them individually

Thermostat Overview

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

Specialty Thermostats

Wireless

Perfect for Zoning Applications

MODEL 8710

Intelligent Zoning

Residential or Light Commercial

MODEL 8570

Home Automation

Communicating Thermostat
MODEL 8800 Wi-Fi Models:
8810, 8820, 8830, 8840

Accessory Overview

**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
Surface Mount Sensor**

+ Provides opportunity to remotely mount the thermostat out of view

**Model 8028
Damper Power
Distribution Panel**

**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 8022 through one wire avoiding the need to run new thermostat cable

+ Provides an extra wire without pulling new

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

+ Add 2 additional zones

**Model 8056
Wireless Outdoor
Temperature Sensor
(6403 and 6404 only)**

Zone Panels

MODEL	Specifications

6404/6403

▶ **6404 – 4 Zone Universal Multistage**
6403 – 3 Zone Universal Multistage

Overall Dimensions	14.72″ H x 8.85″ W x 1.86″ L
Humidity	5% - 90% RH, non-condensing
Operating Temperature	32°F - 158°F
Shipping Temperature	-40°F - 165°F
Voltage	18-30VAC 50/60 Hz
Maximum Current	Damper output per zone (fused): 18VA at 158°F, 30VA at 90°F zone panel and thermostats (fused): 18VA at 158°F, 30VA at 90°F zone panel consumption: 4VA max Note: Use 18 or 20 AWG solid (non-stranded)wire
Warranty	5 years

6303/6302

▶ **6303 – 3 Zone heat pump**
6302 – 2 Zone heat pump

Overall Dimensions	9.66″ H x 8.63″ W x 1.86″ L
Humidity	5% - 90% RH, non-condensing
Operating Temperature	32°F - 158°F
Shipping Temperature	-40°F - 180°F
Voltage	18-30VAC 50/60 Hz
Maximum Current	Damper output per zone (fused): 18VA at 158°F, 30VA at 90°F zone panel and thermostats (fused): 18VA at 158°F, 30VA at 90°F zone panel consumption: 4VA max Note: Use 18 or 20 AWG solid (non-stranded)wire
Warranty	5 years

6203/6202

▶ **6203 – 3 Zone Heat/Cool**
6202 – 2 Zone Heat/Cool

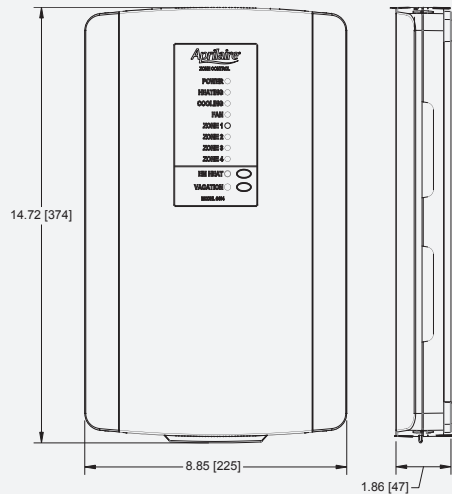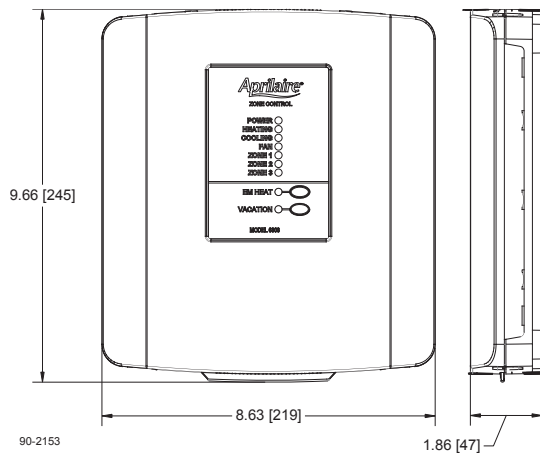|	
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Warranty	5 years

All panels feature:

+ **COVERED CIRCUIT BOARDS** ------------------------------- > Protection from damage and clean appearance
+ **COLOR CODED TERMINAL LABELS** --> Simple error-free wiring
+ **PUSH TERMINALS** -- > Fast & easy wiring
+ **MULTIPLE WIRING PATHS & MOUNTING OPTIONS** ------------------------> Flexible installation options with clean layout
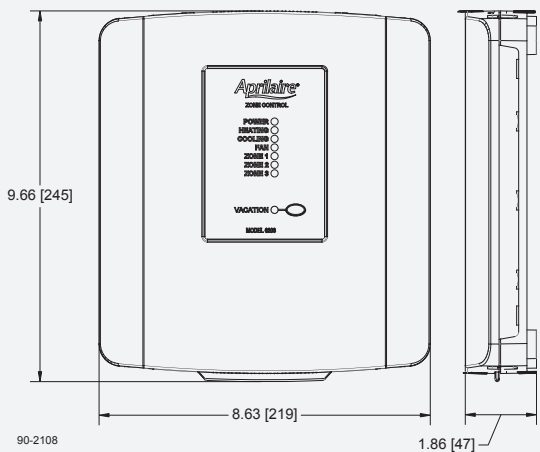
Model Drawings with Specifications	Model-Specific Features & Benefits
14.72 [374] 8.85 [225] 1.86 [47]	+ 2 Heat 2 cool or 4 heat 2 cool (heat pump) + LCD for simple setup, check out and operation status + LEDs (Red = Closed Zone) (Green = Open Zone) + Easy access emergency buttons for heat & vacation mode + Can be expanded to 12 zones (Model 6404) + Compatible with Model 8506 out door temperature sensor
9.66 [245] 8.63 [219] 1.86 [47] 90-2153	+ 2 Heat 1 cool single stage + Compact design + Simple layout + Easy-to-use push connectors + Resettable fuses + LEDs (Red = Closed Zone) (Green = Open Zone) + Ideal for new construction
9.66 [245] 8.63 [219] 1.86 [47] 90-2108	+ 1 Heat 1 cool single stage + Compact design + Simple layout + Easy-to-use push connectors + Resettable fuses + LEDs (Red = Closed Zone) (Green = Open Zone) + Ideal for new construction

Round Dampers

Size & Stock No.*

Type	4" (102mm)	5" (127mm)	6" (153mm)	7" (178mm)	8" (200mm)	9" (229mm)	10" (250mm)	12" (300mm)	14" (350mm)	16" (400mm)	18" (450mm)	20" (500mm)
Zone Damper (Normally open/power closed)	---	---	6606	6607	6608	6609	6610	6612	6614	6616	6618	6620
Ventilation Damper (Normally closed/power opened)	---	---	6506	---	6508	---	6510	---	---	---	---	---
Barometric Pressure Relief (Air flow activated)	---	---	---	---	6908	---	6910	6912	6914	6916	---	---
Static Pressure Relief (Power activated)	---	---	---	---	6208	---	6210	6212	6214	6216	6218	6220
Round Slip-In Damper (Normally open/power closed)	6704	6705	6706	6707	6708	---	6710	---	---	---	---	---

Rectangular Dampers

Size & Stock No.**

Side Mount — *Motor mounted on short dimension*

Nominal Height \ Nominal Width	8" (200mm)	10" (250mm)	12" (300mm)	14" (350mm)	16" (400mm)	18" (450mm)	20" (500mm)	22" (550mm)	24" (600mm)	26" (650mm)	28" (700mm)	30" (750mm)
8" (200mm)	6721	6722	6723	6724	6725	6726	6727	6728	6729	6730	6731	6753
10" (250mm)	---	6732	6733	6734	6735	6736	6737	6738	6739	6740	6741	6742
12" (300mm)	---	---	6743	6744	6745	6746	6747	6748	6749	6750	6751	6752
14" (350mm)	---	---	---	6754	6755	6756	6757	6758	6759	6760	6761	6762
16" (400mm)	---	---	---	---	6763	6764	6765	6766	6767	6768	6769	6770
18" (450mm)	---	---	---	---	---	6771	6772	6773	6774	6775	6776	6777
20" (500mm)	---	---	---	---	---	---	6778	6779	6780	6781	6782	6783
22" (550mm)	---	---	---	---	---	---	---	6784	6785	6786	6787	6788
24" (600mm)	---	---	---	---	---	---	---	---	6789	6790	6791	6792
26" (650mm)	---	---	---	---	---	---	---	---	---	6793	6794	6795
28" (700mm)	---	---	---	---	---	---	---	---	---	---	6796	6797
30" (750mm)	---	---	---	---	---	---	---	---	---	---	---	6798

Bottom Mount — *Motor mounted on long dimension*

Nominal Height \ Nominal Width	8" (200mm)	10" (250mm)	12" (300mm)	14" (350mm)	16" (400mm)	18" (450mm)	20" (500mm)	22" (550mm)	24" (600mm)
8" (200mm)	6721	6812	6813	6814	6815	6816	6817	6818	6819
10" (250mm)	---	6732	6823	6824	6825	6826	6827	6828	6829
12" (300mm)	---	---	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