

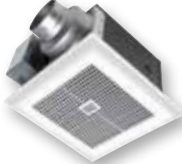
Building Codes and Standards: Single Family

Designed for sustained performance and meeting ventilation and IAQ requirements

Panasonic High Performance Ventilation Solutions



**WhisperGreenSelect™**  
VENTILATION FAN  
**Continuous Exhaust Solution**  
One Fan – Multiple IAQ Solutions



**WhisperSense™**  
VENTILATION FAN  
**Humidity Control Fan Solution**



**WhisperRecessed LED™**  
VENTILATION FAN  
**Spot Ventilation Design Solution**



**WhisperCeiling™**  
VENTILATION FAN  
**Spot Ventilation Solution**



**WhisperComfort™**  
VENTILATION FAN  
**Balanced Fresh Air Ventilation Solution**



**WhisperControl**  
Condensation Sensor Plus – **Humidity Control Solution**  
Includes built-in RH sensitivity adjustment and adjustable minutes per hour fan timer

Guide to Ventilation Codes and Standards Requirements – Single Family

	ASHRAE 62.2-2010	ASHRAE 62.2-2013	2012 IECC/IRC	CA Title 24-2012/CALGreen Eff 7/1/14	EPA ENERGY STAR 3.0	LEED for Homes REQUIREMENTS	Indoor airPLUS	DOE Zero Energy Ready Homes 2014 (IAP Required)	RESNET or Other Field Verification
Whole House Ventilation Rates	7.5 CFM/person + 0.01 CFM/sq ft	7.5 CFM/person + 0.03 CFM/sq ft – measured leakage from blower door test	Table from 62.2-2010 with no formula	7.5 CFM/person + 0.03 CFM/sq ft – measured leakage from blower door test	7.5 CFM/person + 0.01 CFM/sq ft	7.5 CFM/person + 0.01 CFM/sq ft Must be ESTAR fan	7.5 CFM/person + 0.01 CFM/sq ft Must be ESTAR fan	7.5 CFM/person + 0.01 CFM/sq ft Must be ESTAR fan	100-120% of required airflow
Field Verification	Optional	Required	Optional	Required	Within +/- 15 CFM or 15% of designed airflow	Required	Required	Required	Verify Certification Requirements
Bathroom	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	Verify Fan Airflow
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Max 1.0 sone	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level
Min CFM/W Efficacy	No requirement	No requirement	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	ESTAR Qualified or exhaust bath with H/ERV ≥2.8 CFM/W	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	No Requirement
Field Verification	Optional	Required	Optional	Required	Required	Required	Required	Required	Verify Requirements
Kitchen	100 CFM Intermittent or 5 ACH Continuous	100 CFM Intermittent or 5 ACH Continuous	100 CFM Intermittent or 25 CFM Continuous	100 CFM Intermittent or 5 ACH Continuous	100 CFM Intermittent or 5 ACH Continuous	100 CFM Intermittent No Recirculating Range Hoods	100 CFM Intermittent or 5 ACH Continuous	100 CFM Intermittent or 5 ACH Continuous	Verify Fan Airflow
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level
Min MERV Rating	MERV 6	MERV 6	No requirement	MERV 6	MERV 6	Min MERV 8	MERV 8	MERV 8	Verify Fan MERV Level
Field Verification	Optional	Required	Optional	Required	Required	Required	Required	Required	Verify Requirements
Garages	Airsealing Required	Airsealing Required	Airsealing Required	Does not address	70 CFM fan with 10 minute delay-off occupancy control. Airsealing Required	Airsealing Required	70 CFM fan with 10 minute delay-off occupancy control. Airsealing Required	70 CFM fan with 10 minute delay-off occupancy control. Airsealing Required	Verify Airsealing Measures Verify Fan Airflow
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level

Building Codes and Standards: Multi-Family

Designed for sustained performance and meeting ventilation and IAQ requirements

Panasonic High Performance Ventilation Solutions\*

\*Radiation Damper (model # PC-RD05C4) is available for most Panasonic ventilation fans



WhisperGreenSelect

Exhaust Driven Fresh Air Solution

One Fan – Multiple IAQ Solutions



WhisperValue

Local Exhaust Solution

UL listed for ceiling or wall mount

3-3/8" housing depth – actually fits in a 2 x 4 stud bay



WhisperComfort

Balanced Fresh Air Ventilation Solution



WhisperControl

Condensation Sensor Plus – Humidity Control Solution

Includes built-in RH sensitivity adjustment and adjustable minutes per hour fan timer

Guide to Ventilation Codes and Standards Requirements – Multi-Family (Low or Mid-Rise)

	ASHRAE 62.2-2010 (Up to 3 stories)	ASHRAE 62.2-2013 (Up to 3 stories)	2012 IECC/IMC	CA Title 24-2012/CALGreen Eff 7/1/14 (Up to 3 stories)	EPA ENERGY STAR 3.0 (≤5 Stories)	LEED for Mid Rise Multi-Family REQUIREMENTS (up to 8 Stories)	Indoor airPLUS (≤5 Stories)	RESNET or Other Field Verification
Whole House Ventilation Rates	7.5 CFM/person + 0.01 CFM/sq ft	7.5 CFM/person + 0.03 CFM/sq ft	5 CFM/person + 0.06 CFM/sq ft	7.5 CFM/person + 0.03 CFM/sq ft filtered supply	7.5 CFM/person + 0.01 CFM/sq ft	7.5 CFM/person + 0.01 CFM/sq ft Must be ESTAR fan	7.5 CFM/person + 0.01 CFM/sq ft Must be ESTAR fan	100-120% of required airflow
Field Verification	Optional	Required	Optional	Required	Within +/- 15 CFM or 15% of designed airflow	Required	Required	Verify Certification Requirements
Bathroom	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	50 CFM Intermittent or 20 CFM Continuous	Verify Fan Airflow
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Max 1.0 sone	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level
Min CFM/W Efficacy	No requirement	No requirement	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	ESTAR Qualified or exhaust bath with H/ERV ≥2.8 CFM/W	1.4 CFM/W up to 89 CFM. 2.8 CFM/W above	No Requirement
Field Verification	Optional	Required	Optional	Required	Required	Required	Required	Verify Requirements
Kitchen	100 CFM Intermittent or 5 ACH Continuous Recirculating Range Hood acceptable	100 CFM Intermittent or 5 ACH Continuous Recirculating Range Hood acceptable	100 CFM Intermittent or 25 CFM Continuous Recirculating Range Hood acceptable	100 CFM Intermittent or 5 ACH Continuous Recirculating Range Hood acceptable	100 CFM Intermittent or 5 ACH Continuous Recirculating Range Hood acceptable	100 CFM Intermittent Recirculating Range Hood NOT acceptable	100 CFM Intermittent or 5 ACH Continuous Recirculating Range Hood acceptable	Verify Fan Airflow
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level
Min MERV Rating	MERV 6	MERV 6	No requirement	MERV 6	MERV 6	Min MERV 8	MERV 8	Verify Fan MERV Level
Field Verification	Optional	Required	Optional	Required	Required	Required	Required	Verify Requirements
Common Areas	Does not address	0.06 CFM/sq ft	0.06 CFM/sq ft	0.06 CFM/sq ft	Default to IMC or ASHRAE 62.1	Ventilation systems must not exceed requirements by more than 50%	Default to IMC or ASHRAE 62.1	Verify Airsealing Measures Verify Fan Airflow
Hallways	Does not address	0.06 CFM/sq ft	0.06 CFM/sq ft	0.06 CFM/sq ft	Default to IMC or ASHRAE 62.1	Ventilation systems must not exceed requirements by more than 50%	Default to IMC or ASHRAE 62.1	Verify Fan Sone Level
Garages	Airsealing Required	0.4 CFM/sq ft	MF: 0.05 CFM/sq ft continuous + boost to 0.75 CFM/sq ft when vehicles move	Airsealing Required	70 CFM fan with 10 minute delay-off occupancy control. Airsealing Required	0.5 CFM/sq ft Airsealing Required	70 CFM fan with 10 minute delay-off occupancy control. Airsealing Required	Verify Fan Sone Level
Max Sound Rating	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	No requirement	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	3.0 sones Intermittent or 1.0 sone Continuous	Verify Fan Sone Level