



MECHANICAL AND VENTILATION

2015 WSEC SECTION R403.5, 2015 AMENDED IRC SECTION R303.4,
2015 AMENDED IMC SECTION 403.8.5, WAC 51-51-1507, IRC SECTION M1507

JOB ADDRESS: _____

FURNACE BRAND: _____

FURNACE MODEL #: _____

ECM OR VARIABLE SPEED BLOWER? YES NO

TOTAL CONDITIONED FLOOR AREA _____ SF

OF BEDROOMS _____

REQ AIR FLOW _____ CFM

*TABLE 403.8.1 *TABLE 2A *TABLE M1507.3.3(1)

CONTINUOUS VENTILATION

INTERMITTENT VENTILATION

* REFER TO TABLE 403.8.5.1 OR M1507.3.3(2)

EFFICACY RATING _____ CFM / WATT

* REFER TO TABLE R403.51

RUN % _____

FACTOR _____

INSTALLED AIR FLOW _____ CFM

METHOD

WHOLE HOUSE SUPPLY FAN

VOLUME _____ DUCT SIZE _____

WA ST AMENDED IMC 403.8.5.2
WAC 51-51-1507 IRC SECTION M1507.3.4

*REFER TO TABLE: IMC 403.8.5.2 OR IRC M1507.3.6.2 FOR SIZING
*PROVIDE SUBMITTAL FOR VERIFICATION

WHOLE HOUSE EXHAUST FAN WITH OUTDOOR AIR INLETS

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.6
WAC 51-51-1507 IRC SECTION M1507.3.4

*PROVIDE SUBMITTAL FOR VERIFICATION

INTEGRATED FORCED AIR SYSTEM

VOLUME _____ CFM

DUCT SIZE _____

WA ST AMENDED IMC 403.8.7
WAC 51-51-1507 IRC SECTION M1507.3.5
WA STATE AMENDED IMC R403.5.1 ***EXCEPTION***

FLEX DUCT

RIGID DUCT

*PROVIDE SUBMITTAL FOR VERIFICATION

HEAT RECOVERY VENTILATOR (HRV / ERV)

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.6
WAC 51-51-1507 IRC SECTION M1507.3.7

*PROVIDE SUBMITTAL FOR VERIFICATION

ALTERNATE SYSTEM DESIGN

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.11
ASHRAE 62.2-2013

*PROVIDE SUBMITTAL FOR VERIFICATION
*REFER TO TABLE 2A

| TABLE M1507.3.3(1), 403.8.1, 2A | | | | | |
|---------------------------------|--------------------|-------|-------|-------|-----|
| (Square Feet) | NUMBER OF BEDROOMS | | | | |
| | 0 - 1 | 2 - 3 | 4 - 5 | 6 - 7 | >7 |
| | Airflow in CFM | | | | |
| <1,500 | 30 | 45 | 60 | 75 | 90 |
| 1,501 – 3,000 | 45 | 60 | 75 | 90 | 105 |
| 3,001 – 4,500 | 60 | 75 | 90 | 105 | 120 |
| 4,501 – 6,000 | 75 | 90 | 105 | 120 | 135 |
| 6,001 – 7,500 | 90 | 105 | 120 | 135 | 150 |
| >7,501 | 105 | 120 | 135 | 150 | 165 |

**TABLE R403.5.1
MECHANICAL VENTILATION SYSTEM FAN EFFICACY**

| FAN LOCATION | AIR FLOW RATE MINIMUM (CFM) | MINIMUM EFFICACY (CFM / WATT) | AIR FLOW RATE MAXIMUM (CFM) |
|------------------------|-----------------------------|-------------------------------|-----------------------------|
| Range Hood | Any | 2.8 cfm/watt | Any |
| In-line fan | Any | 2.8 cfm/watt | Any |
| Bathroom, utility room | 10 | 1.4 cfm/watt | <90 |
| Bathroom, utility room | 90 | 2.8 cfm/watt | Any |

**TABLE 403.8.5.2
PRESCRIPTIVE SUPPLY FAN DUCT SIZING**

| Specified Volume from Table 403.8.1 | Minimum Smooth Duct Diameter | Minimum Flexible Duct Diameter |
|-------------------------------------|------------------------------|--------------------------------|
| 50-90 cfm | 4 inch | 5 inch |
| 90-150 cfm | 5 inch | 6 inch |
| 150-120 cfm | 6 inch | 7 inch |
| 250-400 cfm | 7 inch | 8 inch |

**TABLE M1507.3.3(2)
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a,b}**

| Run-Time Percentage in Each | 25% | 33% | 50% | 66% | 75% | 100% |
|-----------------------------|-----|-----|-----|-----|-----|------|
| Factor | 4 | 3 | 2 | 1.5 | 1.3 | 1 |

a. For ventilation system run-time values between those given, the factors are permitted to be determined by interpolation.

b. Extrapolation beyond the table is prohibited