

RESIDENTIAL HVAC DESIGN FORM WHOLE-HOUSE MECHANICAL VENTILATION DESIGN WORKSHEET

House Address: _____ Permit #: _____ Date: _____
 Permit holder: _____ Phone: _____

1. Fill in the conditioned floor area and number of bedrooms for the dwelling:

Conditioned Floor Area = _____ ft² Number of bedrooms = _____

2. Circle the required airflow value on the table below:

RCNYS Table M1505.4.3(1)
 Continuous Whole-House Mechanical Ventilation System Airflow Rate Requirements

Dwelling Unit Floor Area (square feet)	Number of Bedrooms				Airflow in CFM										
	0-1	2-3	4-5	6-7	>7	30	45	60	75	90	105	120	135	150	165
> 7,500						105	120	135	150	165					
6,001 – 7,500						90	105	120	135	150					
4,501 – 6,000						75	90	105	120	135					
3,001 – 4,500						60	75	90	105	120					
1,501 – 3,000						45	60	75	90	105					
< 1,500						30	45	60	75	90					

3. Does the fan operate continuously or intermittently? Continuous Intermittent

4. If the fan is to be operated intermittently on a pre-set schedule, multiply the airflow value from Table M1505.4.3 (above) by the appropriate value in Table M1505.4.3(2) (below).

RCNYS Table M1505.4.3(2)
 Intermittent Whole-House Mechanical Ventilation Rate Factors

Run-time Percentage in Each 4-hour Segment	Factor
25%	4.0
33%	3.0
50%	2.0
66%	1.5
75%	1.3

5. Enter the required airflow = _____ CFM

6. R403.6.1. Fan efficacy. Enter the following information regarding the specified fan:
 Rated fan airflow = _____ CFM Fan make: _____
 HVI-rated fan efficacy = _____ CFM/Watt

RESIDENTIAL HVAC EQUIPMENT DESIGN WORKSHEET

HEATING AND COOLING EQUIPMENT

House Address: _____ Permit #: _____ Date: _____

Permit Applicant: _____ Phone: _____

Requirements:

- R403.1.1** All thermostats are programmable
- R403.3.1** Ducts in unconditioned spaces are insulated
- $\geq 3"$ diameter insulated to $\geq R-8$ in attics and $\geq R-6$ elsewhere
- $< 3"$ diameter insulated to $\geq R-6$ in attics and $\geq R-4.2$ elsewhere
- R403.3.2.1** Air handler has manufacturer's designation of $\leq 2\%$ air leakage when tested per ASHRAE 193
- R403.3.3** Completed *Duct and Envelope Testing Form* will be submitted to the inspector
- R403.4** HVAC pipe insulation is R-3 minimum (e.g. hydronic systems, refrigerant lines) and outdoor insulation is protected
- R403.7** Manual J report, including heating and cooling design loads, is attached
- R403.7** Heating and cooling equipment have been selected in accordance with Manual S, based on loads calculated in accordance with Manual J (see below)

Complete the following based on the attached Manual J report:

Design loads:

Design cooling load _____ (Btu/h)

Cooling equipment make: _____

Cooling equipment model: _____

Design heating load: _____ (Btu/h)

Heating equipment make: _____

Heating equipment model: _____

- Manual S.** Specified *cooling* equipment capacity is ≤ 1.15 times the design load or the next larger nominal size, whichever is greater. (Exception: Heat pumps may exceed the design load by 1.25 times or the next nominal size.)
- Manual S.** Specified *heating* equipment capacity is ≤ 1.40 times the design load or the next larger nominal size, whichever is greater

RCNYS R303.4 Whole-house mechanical ventilation worksheet has been completed (see reverse)