

Massachusetts Whole-house Mechanical Ventilation Design Worksheet¹



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

VERIFIER:

Testing company: _____ Phone: _____
 Tester Name (print): _____ Signature: _____
 Date: _____
 BPI or HERS Rater certification number: BPI no: _____ HERS Rater no: _____

REQUIRED AIRFLOW (Q):

Infiltration credit portion of equation is optional

$$Q = .03 \times CFA + 7.5 \times (N_{br} + 1) - 0.052 \times Q_{50} \times S \times WSF$$

Required inputs:

CFA = Conditioned Floor Area = _____ ft²
 N_{br} = Number of bedrooms = _____

Optional inputs:

Q₅₀ = Blower door test result = _____ CFM50
 S = Building height factor = _____
 WSF = Weather and shielding factor = _____

Building Height Factor (S)			
Stories above grade plane	1	2	3
S	1.00	1.32	1.55

Weather and Shielding Factor	
County	WSF
Barnstable	0.60
Berkshire	0.52
Bristol	0.54
Dukes	0.59
Essex	0.58
Franklin	0.52
Hampden	0.49
Hampshire	0.59
Middlesex	0.55
Nantucket	0.61
Norfolk	0.52
Plymouth	0.53
Suffolk	0.66
Worcester	0.59

Heat or energy recovery balanced ventilation system info:

- An HRV or ERV system has been specified.
 HRV or ERV system rated airflow _____ CFM
- Systems exceeding 300 cfm:**
 Cooling enthalpy recovery ratio _____ %
 Heating enthalpy recovery ratio _____ %
- Systems 300 cfm or less:**
 Sensible recovery efficiency (SRE) _____ %
- HVI-Rated fan efficacy = _____ CFM/W

Required airflow (Q) = _____ CFM

QUALIFIED PERFORMANCE TESTING PROVIDERS:

Find qualified performance testers at:

https://www.masssave.com/-/media/Files/PDFs/Partners/Low-Rise_Certified-HERS-Rater-List.pdf

¹ This form is based on Section R403.6 Mechanical Ventilation - option 3. Other options include RESNET/ICC Standard 301 and ASHRAE 62.2-2019 or 62.2-2022

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