WAC 51-11C-403292 Tables for Section C403.2.11.

Table C403.2.11.1(1)
Fan Power Limitation

	Limit	Constant Volume	Variable Volume
Option 1: Fan system motor nameplate hp	Allowable nameplate motor hp	$hp \leq CFM_S \times 0.0011$	$hp \leq CFM_S \times 0.0015$
Option 2: Fan system bhp	Allowable fan system bhp	$bhp \leq CFM_S \times 0.00094 + A$	$bhp \leq CFM_S \times 0.0013 + A$

For SI: 1 cfm = 0.471 L/s. 1 bhp = 735.5 W, 1 hp = 745.5 W.

Where:

CFM_S = The maximum design supply airflow rate to conditioned spaces served by the system in cubic feet per minute.

hp = The maximum combined motor nameplate horsepower.

bhp = The maximum combined fan brake horsepower.

A = Sum of $[PD \times CFM_D/4131]$

Where:

PD = Each applicable pressure drop adjustment from Table C403.2.10.1(2) in. w.c.

CFM_D = The design airflow through each applicable device from Table C403.2.10.1(2) in cubic feet per minute.

Table C403.2.11.1(2)
Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment
Credits	
Fully ducted return and/or exhaust air systems	0.5 inch w.c. (2.15 inches w.c. for laboratory and vivarium systems)
Return and/or exhaust air flow control devices	0.5 inch w.c.
Exhaust filters, scrubbers, or other exhaust treatment	The pressure drop of device calculated at fan system design condition
Particulate filtration credit: MERV 9 - 12	0.5 inch w.c.
Particulate filtration credit: MERV 13 - 15	0.9 inch w.c.
Particulate filtration credit: MERV 16 and greater and electronically enhanced filters	Pressure drop calculated at 2x clean filter pressure drop at fan system design condition
Carbon and other gas-phase air cleaners	Clean filter pressure drop at fan system design condition
Biosafety cabinet	Pressure drop of device at fan system design condition
Energy recovery device, other than coil runaround loop	(2.2 × energy recovery effectiveness) – 0.5 inch w.c. for each airstream

Device	Adjustment
Credits	
Coil runaround loop	0.6 inch w.c. for each airstream
Evaporative humidifier/ cooler in series with another cooling coil	Pressure drop of device at fan system design conditions
Sound attenuation section (fans serving spaces with design background noise goals below NC35)	0.15 inch w.c.
Exhaust system serving fume hoods	0.35 inch w.c.
Laboratory and vivarium exhaust systems in high-rise buildings	0.25 inch w.c./100 feet of vertical duct exceeding 75 feet
Deductions	
Systems without central cooling device	-0.6 inch w.c
Systems without central heating device	-0.3 inch w.c.
Systems with central electric resistance heat	-0.2 inch w.c.

For SI: 1 inch w.c.= 249 Pa, 1 inch = 25.4 mm.
w.c. = water column.

Table C403.2.11.4
Mechanical Ventilation System Fan Efficacy

Fan Location	Air Flow Rate Minimum (cfm)	Minimum Efficacy (cfm/ watt)	Air Flow Rate Maximum (cfm)
Exhaust fan: Bathroom, utility room, whole house	10	1.4 cfm/watt	< 90
Exhaust fan: Bathroom, utility room, whole house	90	2.8 cfm/watt	Any

Table C403.2.11.5
Fan Control

Cooling System Type	Fan Motor Size	Mechanical Cooling Capacity
DX cooling	Any	≥ 65,000 Btu/h
Chilled water and evaporative cooling	≥ 5 hp	Any
	≥ 1/4 hp	Any

[Statutory Authority: RCW 19.27A.025, 19.27A.160, and 19.27.074. WSR 16-03-072, § 51-11C-403292, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27A.020, 19.27A.025 and chapters 19.27 and 34.05 RCW. WSR 13-04-056, § 51-11C-403292, filed 2/1/13, effective 7/1/13.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.