



- The “**Seven Times Rule**” is:

The flow area of the largest common vent or chimney shall not exceed **seven times** the area of the smallest draft hood outlet.

Typically: many water heaters use a 3" flue, the largest area to connect the water heater should be 49" in area or an 8" x 8" chimney tile or 7" round chimney.

- If a 3" flue is $7.06" \times 7 = 49.42"$ is the largest flue area it may go into.
- If a 4" flue is $12.56" \times 7 = 87.92"$ is the largest flue area it may go into.

Chimneys



12.6.3 Size of Chimneys

NOTE: there are significant differences between the operation of interior and exterior chimneys.

Exterior Chimney- one or more sides are exposed to the outdoors below the roof line.

Interior Chimney- largely isolated from weather changes, including chimneys that pass thru unheated attics or garages.

12.6.3.1 (2)

...Sizing an individual chimney venting system for a **single** appliance with a draft hood, effective area of the vent connector and chimney flue shall **not be less than** the area of the appliance flue collar or draft hood outlet, **or greater than** seven times the draft hood outlet area...

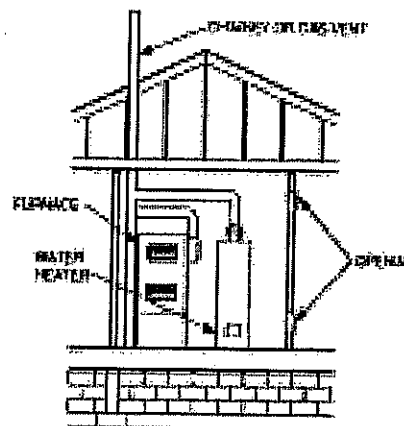


12.6.3.1 (3)

...Sizing a chimney venting system connected to **two** appliances with draft hoods, the effective area of the chimney flue shall be **not less than** the area of the **larger** draft hood outlet **plus 50%** of the area **of the smaller** draft hood outlet, or greater than **seven times** the smaller draft hood outlet area...

12.6.3.1 (4)

Chimney venting systems using mechanical draft shall be sized in accordance with approved **engineering** methods.



12.6.4 Inspection of Chimneys



12.6.4.1

Before replacing an existing appliance or connecting a vent connector to a chimney, the chimney passageway shall be **examined** to ascertain that it is clear and free of obstructions and shall be **cleaned** if previously used for venting solid or liquid fuel burning appliances.

NOTE: Inspectors may require the permit holder to **confirm** the chimney has been examined, for example- sign something saying they have inspected the chimney. Also, if changing from oil to gas, may need to **provide** proof the chimney has been cleaned after previously burning solid or liquid fuel.

12.6.4.2

Chimneys shall be **lined** in accordance with NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances.

NOTE: Replace 12.6.4.2 with MA Modification 248 CMR 5.12 (3) Exception:

248 CMR 5.12 (3) MA Modification to NFPA-54 12.6.4.2



Chimneys which are tile lined or existing chimneys which **do not meet** the requirements of sub-section **12.6.4.2** may be utilized with the replacement or installation of a gas appliance, including a gas appliance replacing an oil appliance, when the following requirements are met:

- (a) The **existing appliance** must have operated with a non-positive vent static pressure that did not create condensation in the chimney.
- (b) Existing chimneys may not be utilized when replacing an **atmospheric** appliance with a fan assisted appliance.
- (c) An existing chimney may only be utilized with one or multiple gas appliances if the interior area of the chimney is no greater than **seven times** the area of the smallest flue to be connected to that chimney.

12.6.7 Chimney Cleanouts



12.6.7

Where a chimney that formerly carried flue **products from liquid** or solid fuel burning appliances is used with an appliance using fuel gas, an accessible cleanout shall be provided.

The **cleanout** shall have a tight-fitting cover and be installed so it's upper edge is at least 6" below the lower edge of the lowest chimney inlet opening.