

## WOOD-BURNING STOVES AND OTHER SOLID FUEL-BURNING HEATING APPLIANCES

Once again, given the expected demands on fossil fuels (oil and gas) for the winter heating season, it is anticipated that many Massachusetts homeowners may again seek to supplement the heating of their homes by using wood or other solid fuels this winter. Remember, you are bringing *FIRE* into your home by installing a solid fuel-burning appliance.

It is strongly recommended that smoke detectors and carbon monoxide (CO) alarms be installed prior to use – note that the State Building Code (780 CMR) and the State Fire Code (527 CMR) have requirements for when and where smoke alarms and CO alarms are required and State law and the Fire Code have required CO smoke detectors retro-fit installed by March 31, 2006 in most residential occupancies.

The information that follows is intended for those who are considering using solid fuel-burning equipment and fireplaces to heat/supplement heat their homes. While specific sections of the Massachusetts State Building Code (780 CMR) are identified for informational use only, this Fact Sheet should not be used as a substitute for all applicable requirements of the Building Code, Boiler Regulations, or the Appliance Manufacturer's installation, operation and maintenance requirements.

### General Requirements

Solid fuel-burning appliances include: factory-built fireplaces, coal-burning appliances, wood stoves, wood pellet stoves, corn and nut-shell burning pellet stoves, wood-fired boilers and any other solid fuel-burning appliance intended to provide heat to a building or space within a building, as well as certain ancillary components such as factory-built chimneys, vent piping and certain specialized installation components for some products.

Solid fuel-burning appliances utilized within the dwelling must be:

1. Listed as tested in accordance with National Safety Standards and labeled for the intended use.
2. Placed a safe and established distance from combustible materials such as wood, draperies, furniture, carpets, wood flooring, etc.
3. Properly vented to the outside of the building.

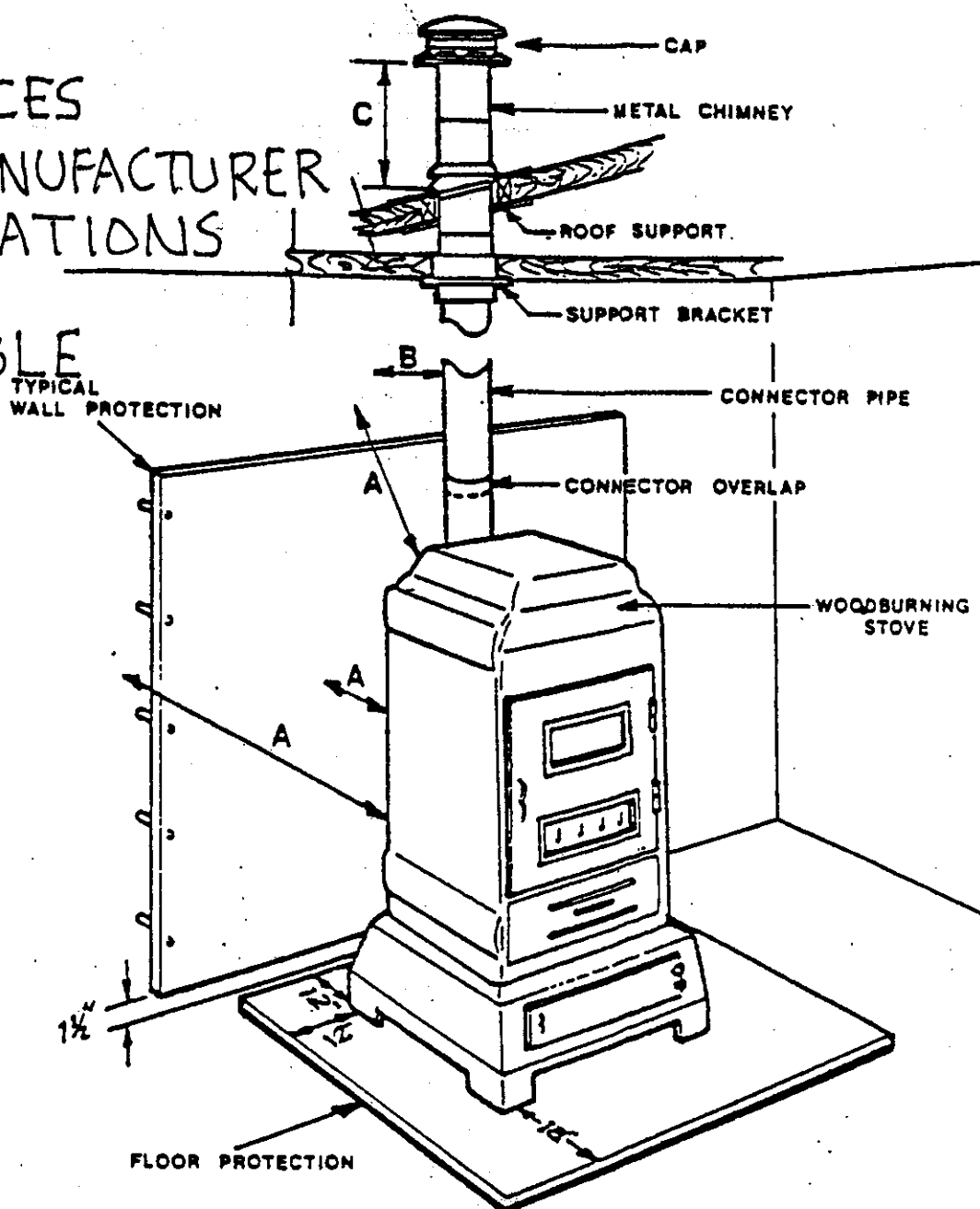
4. Installed and operated in accordance with all applicable Building Code requirements and those of the appliance manufacturer.
5. Inspected by building official to ensure compliance with the Building Code.
6. Wood-fired boilers must be constructed in accordance with the Massachusetts State Boiler Regulations 522 CMR which adopts the A.S.M.E. code and must have the applicable A.S.M.E. code symbol stamp (see figure 1).
7. Maintained in accordance with the appliance manufacturer's requirements.

#### **CHECKLIST REQUIREMENTS FOR THE INSTALLATION AND USE OF WOOD BURNING AND OTHER SOLID FUEL-BURNING HEATING APPLIANCES**

- [1] Solid Fuel Burning Appliance is Listed and Labeled, boilers are stamped with the A.S.M.E. code symbol stamp (see figure 1).
- [2] Installer holds a Construction Supervisor License (CSL)(unless the homeowner is going to install the appliance).
- [3] If installation is owner-occupied building of up to 4 units, the individual signing the contract with the homeowner holds a Home Improvement Contractor Registration.
- [4] The Building Permit is obtained prior to installation.
- [5] The location where the appliance is being installed has a satisfactory supply of fresh air.
- [6] The location where the appliance is being installed is NOT near flammable vapors, gasoline, explosives or other combustible liquids, fibers or dust.
- [7] The location where the appliance is being installed provides for the required clearances from combustible combustion and other objects such as furniture, drapes, carpets, etc., etc.
- [8] The location where the appliance is being installed has proper floor protection/hearth extension under or in front of the appliance.
- [9] The appliance has proper venting to the outside of the building.
- [10] If the appliance vents through a chimney, the connector pipe from the appliance to the chimney is the correct type and size and is installed with the required clearances to combustibles.
- [11] If the appliance vents through combustible walls or roof or ceiling, the vent system uses listed thimbles or specialized piping or free clearances where the vent system passes through combustible construction.
- [12] The appliance does not share a flue or vent with other appliances.
- [13] The building inspector has inspected the appliance after installation but before use.

**\*If you have any questions about properly installing a solid fuel-burning appliance, you should contact the Building Inspector.**

# DEFAULT CLEARANCES WHEN MANUFACTURER SPECIFICATIONS ARE NOT AVAILABLE



**STOVE INSTALLATION CLEARANCES**

Stove Components	TYPICAL WALL PROTECTION			
	Combustible Material	½" Cement Board Spaced out 1" 3.	Concrete/Masonry Foundation Wall	4" Brick Veneer
Radiant Stove 1. Front	36"	--	--	--
Circulating Stove 1. Front	24"	--	--	--
A. Radiant Stove 4. Side/Back	36"	18"	6"	18"
A. Circulating Stove Side/Back	12"	6"	6"	6"
B. Single Wall 2. Connector Pipe	18"	12"	6"	8"
B. Double Wall or Insulated Connector Pipe	2	2	2	2
C. Chimney Height (Metal or Masonry)	Three (3) feet above adjacent roof and Two (2) feet above any roof ridge within 10 feet			
D. Damper	If a damper is not included in the stove construction, it must be installed in the connector pipe, unless prohibited by manufacturer's specifications.			

1. Front: Fuel or ash access side.
2. Thimble required for passage through combustible construction.
3. Non-combustible spacers required.
4. Clearances on each side of a radiant stove with a heat shield shall be measured as if a circulating type.

For other clearance reductions see BOCA Mechanical Chapter 11.

# WOOD STOVE INSTALLATION CHECKLIST

MASSACHUSETTS STATE

BUILDING CODE COMMISSION

## PERMIT

A building permit is required for the installation of any solid fuel burning appliance. The building permit and installation inspection are limited to the stove installation and not to the stove construction.

## STOVE

A) Type/Radiant \_\_\_\_\_ Circulating \_\_\_\_\_

B) Manufacturer \_\_\_\_\_ Test Label \_\_\_\_\_

(After July 1, 1979 only)

Name/Model No. \_\_\_\_\_ Collar Size \_\_\_\_\_

Dimensions/Height \_\_\_\_\_ Length \_\_\_\_\_ Width \_\_\_\_\_

## CHIMNEY

A) New \_\_\_\_\_ Existing \_\_\_\_\_

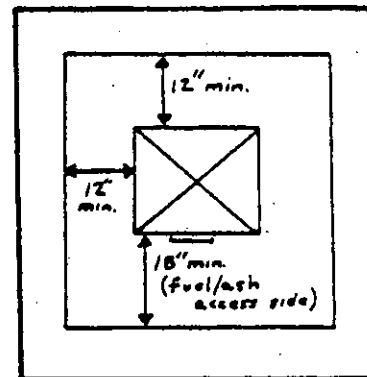
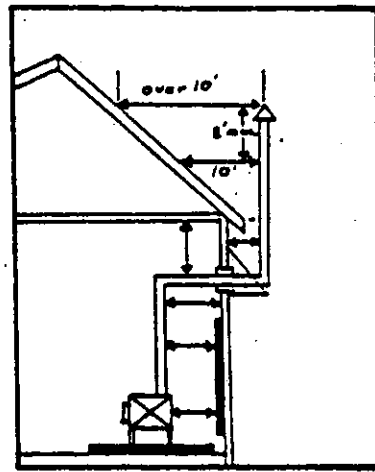
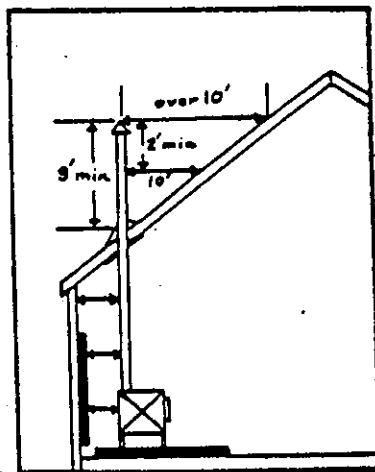
B) Size (flue area) \_\_\_\_\_

C) Other appliances attached to flue (number and flue size) \_\_\_\_\_

D) Metal (Manufacturer - Name and Type) \_\_\_\_\_

E) Masonry/Lined \_\_\_\_\_ Flue Liner \_\_\_\_\_  
Unlined \_\_\_\_\_ Type & Manufacturer \_\_\_\_\_

F) Height (refer to diagrams) \_\_\_\_\_ Cap \_\_\_\_\_



Hearth

Chimney Height

## HEARTH

A) Materials \_\_\_\_\_

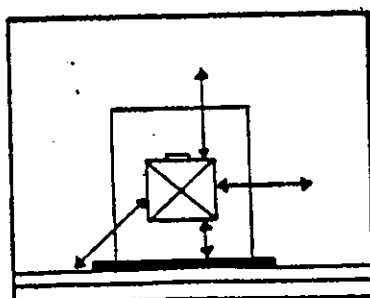
B) Sub-floor construction \_\_\_\_\_

C) Minimum dimensions (refer to diagram)

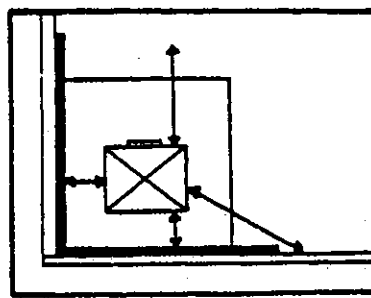
## CLEARANCE AND WALL PROTECTION (see stove installation clearances chart)

A) Type of wall protection provided \_\_\_\_\_

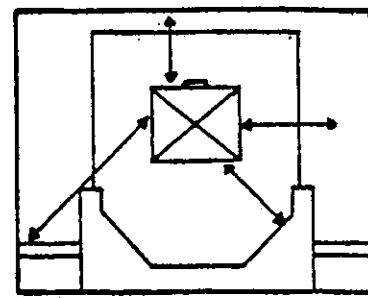
B) Clearances (refer to diagrams)



FIREPLACE



CORNER



WALL/CENTER

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**Figure 1**

**FORM OF STAMPING ON COMPLETED CAST IRON BOILERS OR THEIR NAMEPLATES**

**H**

\_\_\_\_\_  
(Name of Shop Assembler)

Maximum W.F. Steam 15 psi  
Water \_\_\_\_\_ psi

Minimum relief capacity \_\_\_\_\_ lb/hr or MBH

**Figure 2**

**BOILERS SUITABLE FOR WATER ONLY**

**H**

\_\_\_\_\_  
(Name of Shop Assembler)

Maximum W.P. Water \_\_\_\_\_ psi

Minimum relief capacity \_\_\_\_\_ lb/hr or MBH

**DETAILS**

**REQUIREMENTS FOR THE INSTALLATION AND USE OF WOOD-BURNING AND OTHER  
SOLID FUEL-BURNING HEATING APPLIANCES & THE USE OF FIREPLACES**

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