



Keep in mind that heat can be conducted down the shank of mounting screws into the studs in which they are anchored. Evidence of this phenomenon has been seen in actual installations where studs have been charred around the screw threads. For this reason, Table 4 specifies that shield mounting hardware should not be placed directly behind the appliance in the area of the most intense radiation. Where the shield mounting hardware extends from the face of the shield into combustibles behind, it must be located only at the outer edges of the shield. However, if channel stand-offs are used, they may be located within 200 mm (8") from the vertical centre line of the appliance.

Shields must be supported at least 25 mm (1") up from the floor to provide an entry point for the cooling air. If the shield is large or heavy, or you feel that the wall mounting hardware is not sufficient to support it, metal feet should be attached at the bottom of the shield for additional vertical support.

If the installation calls for the shield to extend to ceiling level, a 75 mm (3") space must be left between the top of the shield and the ceiling to allow convection air flow to exit from behind the shield. For the same reason, air cooled shields for ceilings should be given a 75 mm (3") edge clearance.

Wall shields are to extend 450 mm (18") beyond each edge of the appliance. The spaces at the edges of the shield should be left open to allow air to flow in from the sides unless the shield extends more than 450 mm (18") beyond the edges of the appliance. The top of the shield should extend at least 500 mm (20") above the top surface of the appliance. The air space at the top of the shield must never be closed because the cooling air flow would be blocked.

The calculation of minimum wall shield size is simple. For example, a space heater that is 600 mm (24") wide needs a wall shield 1500 mm (60") wide. If the stove were 750 mm (30") tall, the shield would have to protect the wall to at least 1250 mm (50") above the floor. The actual dimension of the shield would be 1225 mm (49") because of the 25 mm (1") space needed under the shield for air flow. The 500 mm (20") extension beyond the top and 450 mm (18") beyond each edge of the appliance are minimum values and must not be compromised.