

## Range (Electric Stove/Oven)



### Equipment Description

The range's electric stovetop contains heating elements, or burners. They are shaped like flat coils. The temperature is controlled by dials or touch screens, which provide a choice of cooking cycles and temperatures. Some models have a glass plate stovetop where the heating elements are molded into the surface.

The range usually contains an oven for baking, roasting, and broiling. It is heated by an electric heating element mounted at the bottom or, in some cases on more expensive models, by several elements installed behind the oven walls. There is also a heating element at the top surface for roasting, grilling and broiling. Some ovens have electric fans that distribute the heat evenly within the space.

### Loss Scenario

Ranges are exposed to a harsh working environment. Heat, grease and electric power in some combination are usually the cause for breakdown. The embedded control panel contains a circuit board that sometimes warps or cracks even under normal use. Heating elements, while easily replaceable, can fail because wiring connections within the range or oven have broken down.

In the case of a glass top range, impact to the surface will sometimes break connection within the glass, rendering the range unusable. Replacement of the glass top is most often price prohibitive. Replacing the entire range may therefore be the only economically viable option.

### Size and Carbon Footprint

Energy usage is closely related to settings and controls. The operator may use the range top for a quick meal, and utilize the oven for long-term broiling. For a family of three, the monthly usage of cooking and appropriate cleaning cycles will total about 106 kilowatt-hours (kWh), or approximately 1,272 kWh annually. The carbon footprint will be about 1,920 pounds of carbon dioxide (CO<sub>2</sub>) per year.

### Maintenance Tips

- Keeping the unit clean is important. Total reliance on automatic cleaning cycles should be avoided.
- The oven door is sealed around the lip so that when closed little or no heat will escape from the oven. The seal should be inspected regularly to insure it continues to seal adequately.

### Loss Prevention Tips

- Heating elements sometimes break down in stages. If the heating element seems to be less warm than the setting indicates, do not wait to replace it.
- Avoid storing or hanging heavy articles such as cooking implements above a glass stove top. Even a minor impact from a falling object may cause a crack rendering the whole unit unusable.