

# How the No Boil-Over Pot Works

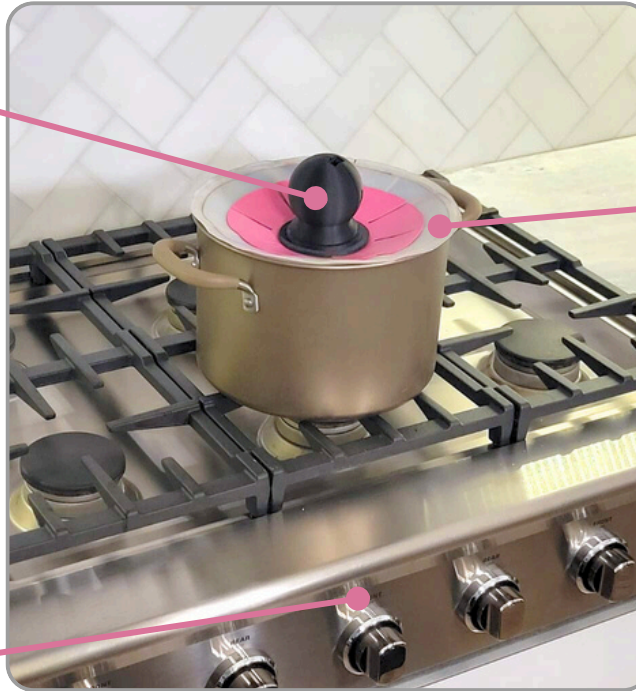
The No Boil-Over Pot is a **smart cooking system** that autonomously prevents boil-over. As opposed to a stand-alone appliances, (InstaPot, rice cooker, crockpot, etc) this system works with any pot and can integrate with most home stoves. With this setup, users don't need to worry about their dinner boiling over, but can walk away and let the algorithm do the work.

## The Handle

The handle is the brain behind the system. It houses a thermocouple, a microcontroller, and an alarm that sounds in case of emergency. It monitors the temperature of the pot and decides what the heat should be set to.

## The Dial

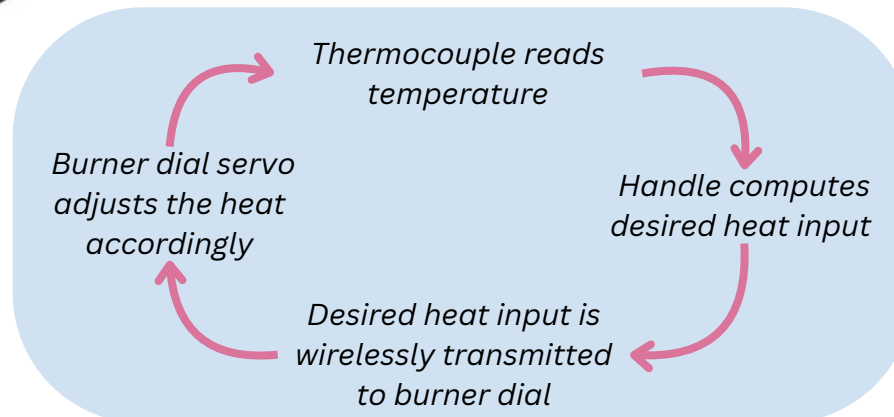
Think of this as a "smart knob". It replaces the existing burner dial and turns the stove to the right heat, at the right time. Inside the smart knob is a servo motor, microcontroller, and battery. The microcontroller receives angular commands from the handle, and sends those commands to the servo motor. The servo motor then rotates the dial to the commanded angle to achieve the desired heat input.



## The Lid

The lid is made from two sheets of flexible silicone with pink flower-like flaps covering holes in the bottom layer.

This component is vital for handling the system's "thermal inertia". "Thermal inertia" is like a car's momentum: when you hit the brakes, the car doesn't stop instantly. Similarly, after turning down the heat, boiling doesn't immediately subside. During this lag, bubbles continue to escape through the flaps, but the insulative lid cools the bubbles and they return as liquid into the pot.



## Summary

By monitoring the temperature through the handle, this pot autonomously controls the heat to perfection. Say goodbye to over-boiled dinners and hello to stress-free cooking!