

Chofu Wood-Fired Water Heater

Description

The Chofu CHS is a precision built wood-burning water heater designed specifically for hot tubs. It circulates water using the principal of thermo-siphon (the pumping action created by rising hot water), eliminating the need for a circulating pump or electricity. This unique feature opens up a whole new range of possibilities for alternative hot tubs. Now you can have a basic soaking tub without pumps, chemicals, or high maintenance. With the Chofu heater you can retrofit an existing tub or put together a low-cost soaking tub, using a wooden tub or stock tank.

The stove body of the Chofu is made with high quality stainless steel, grade (316), so it can be used outside, without worry. And since the firebox is also made of stainless, it will withstand years of service without danger of burning-out. The smoke outlet on the Chofu features a unique vented collar that provides secondary combustion of unburned gases. This also reduces smoke emissions and chimney sparks.

The Chofu utilizes an ingenious design to produce efficient water heating. The stainless steel stove body surrounding the firebox is a double-walled water-jacket with a 1-inch space between, making the entire firebox (except for the front) a heat-transferring surface. Additional heat transfer takes place in a water-filled baffle plate that runs horizontally through the firebox. The baffle deflects the path of the fire, so it gives up more heat into the water jacket before going up the chimney.

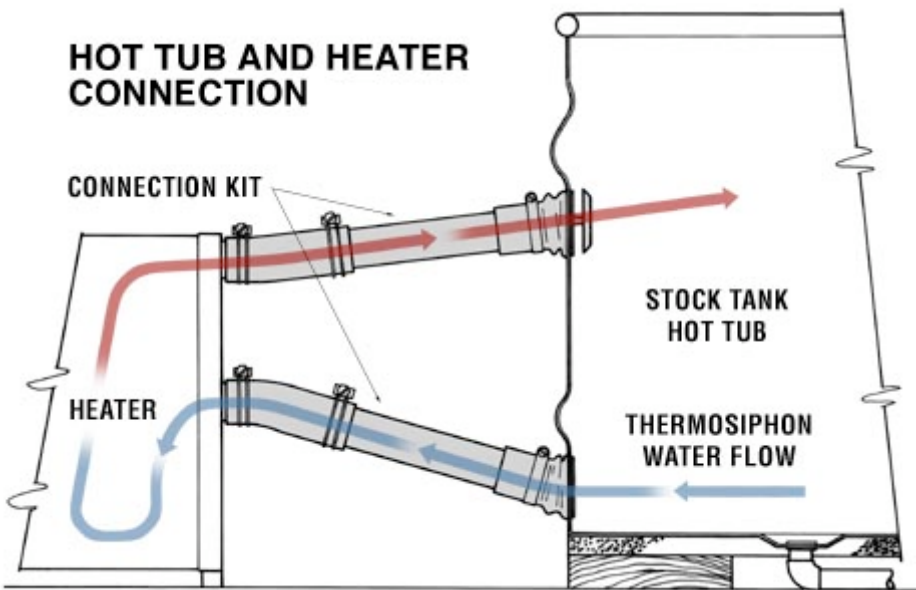


Installation

The Chofu will connect to any tub using accessories provided: flexible neoprene tubes, stainless steel pipes, and thru-wall tub ports. (Thickness of the tub wall must be specified to determine the length of thru-wall ports.)

Installation requires these four basic steps:

1. Preparing a brick or cement foundation next to the hot tub to receive the Chofu heater.
2. Cutting 1⁷/₈-inch holes in the side of the tub wall for thru-wall ports.
3. Installing pipes to connect heater and tub.
4. Installing the stove pipe, (8ft recommended)



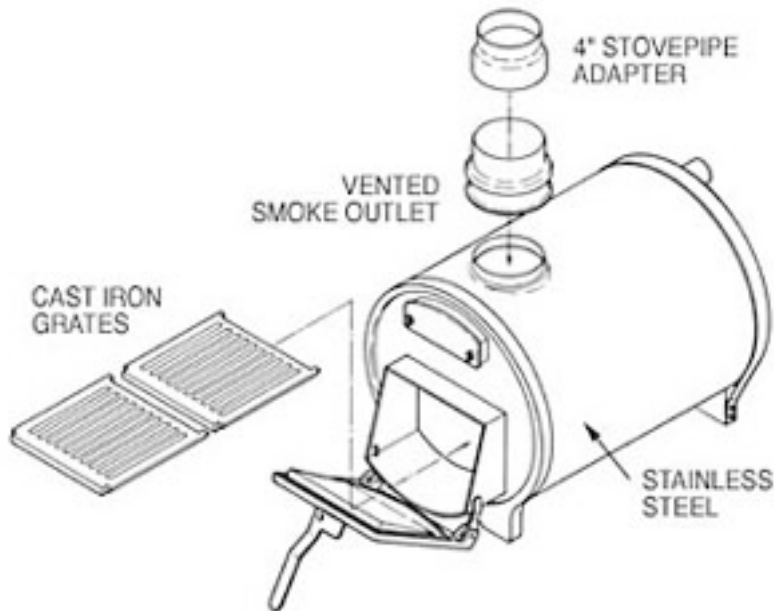
Operation

The Chofu operates like a conventional wood stove, achieving the fastest heating rate from dry hardwoods. It uses 17-inch wood with an 18-inch x 14-inch x 14-inch firebox. The most efficient heating comes from using 17-inch x 1_-inch x 1_-inch wood, loaded at 45 min. intervals.

The Chofu has a high and low-speed draft for controlling the heating rate. It's run with the draft wide open for fast heating, and slowed down to maintain temperature once the water is hot.

Features

- High grade (316) stainless steel stove body
- 1/8-inch steel stove front
- Heavy cast iron door and grates
- Generous size firebox, 18-inch x 14-inch x 14-inch
- Vented smoke-outlet for secondary combustion.
- _-inch drain for freeze protection.
- An ash drawer for easy removal of ashes.
- A long handle ash rake



Specifications

Dimensions: 23-inches long x 16-inches wide x 18-inches high

Weight: 59-lbs.

Stove body: Grade 316 stainless steel, inner wall 20-gauge, outer wall 22-gauge

Stove Front: $\frac{1}{8}$ -inch steel

Firebox door and grates: cast iron

Firebox dimensions: 18-inch x 14-inch x 14-inch

Heat exchange surface area: 9 sq. ft.

Smoke outlet: $4\frac{5}{8}$ -inch (reduced to 4-inch)

Circulating pipes: 1_-inch O.D.

Drain: _-inch

Heating Rate Information

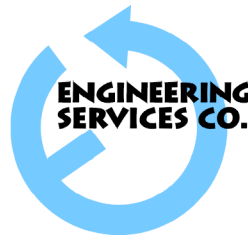
Although the heating rate is variable depending on dryness of wood, frequency of loading, etc., the average heat output of the Chofu-CHS is 32,000 BTU's. A 200-gallon tub can be heated at approx. 20F°/hour.

Please Note: The heat output of the Chofu increases after an initial 45-min. warm-up period that heats the stove body and establishes a bed of coals.

Heating Schedule

55°F to 105°F

Gallons	Time
100	1 hour
200	2 hours
300	3 hours
400	5 hours



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