

Preliminary Specifications:

PHYSICAL

Weight (without feedstock): 200lbs.
Dimensions: 72" H x 42" W x 72" D (maximum size, final production units will be smaller)
Feedstock tank capacity: 200 US gallons or 400 lbs.
Fuel tank capacity: 30 US gallons

OPERATING

Temperature: -20° F (-29° C) to 120° F (49° C)
Operating cycle time: 7 days max.
Output potential per cycle: up to 70 US gallons
Water consumption: 0-4 US gallons per gallon of ethanol produced
Key lock for operation
Waste output: water and yeast residue, non-toxic
Power consumption: approx. 3 KWh per gallon of E100 ethanol produced

REQUIREMENTS

Power: 110V, 20 amp breaker
Tap water supply with drain
Level installation
Feedstock: dry sugar with E-Fuel yeast mixture or alcohol

Warranty: 1 year limited, on-site. Extended warranties available.
Life expectancy: 10-15 years

Note: Specifications provided herein are preliminary and in some cases reflect design goals which may change once final production MicroFueler units ship. Specifications are subject to change without notice.



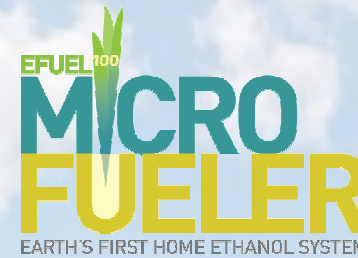
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Authorized Dealer



E-FUEL CORPORATION

Data Sheet

- **Portable, Reliable, Sustainable**
- **Produce up to 35 gallons per week (70 gallons using alcohol feedstock)**
- **Take control of your fuel costs**

Introducing E-Fuel's MicroFueler™, the world's first home-sized fuel alcohol plant. Set up involves placing it on a level surface and connecting it to a source of water, power, and wastewater disposal, just like a washing machine.

The MicroFueler includes a fermentation tank with an enclosure on one end that houses distillation and fuel dispensing equipment. The machine operates automatically, managed by the user through an LCD interface. The user only needs to turn it on and fill it with E-Fuel feedstock.



The feedstock is an inexpensive form of sugar, combined with yeast and yeast nutrients. When this mixture is added to the fermentation tank, it is automatically mixed with a measured amount of water and the fermentation process begins. In this process, yeast consume the sugar and convert it to ethanol, carbon dioxide gas, and heat. A high tech control system manages the pumps, agitator, valves, fans, sensors, and thermoelectric coolers that automatically maintain the proper fermentation environment.

After fermentation, the ethanol must be concentrated to be a fuel. Over a period of several days, it is slowly pumped from the fermentation tank through a distillation column, which creates a vapor of ethanol and water. The vapor is fed to a unique membrane, designed specifically for the MicroFueler. The smaller water molecules pass through the wall of this membrane while the larger ethanol molecules stream through the exit port. A number of heat exchangers and thermoelectric coolers convert the ethanol and water vapors back into liquids and make this process energy efficient. The water is recycled and the fuel grade ethanol is available for use.

Fuel is metered and dispensed just like at a gas station through a retractable hose and nozzle.

Legend:

HE = Heat exchanger
TEC = Thermoelectric cooler
AD = Analog to digital converter
DA = Digital to analog converter
CPU = Central Processing Unit
LCD = Liquid Crystal Display

MICRO FUELER

