

FlexFerno

2.009 Orange Team

Customer Need	Attribute	Engineering Spec	Value
Compact for easy packing.	Size	Volume Dimensions	Volume $\leq 228 \text{ in}^3$ Length $\leq 12 \text{ in}$
Adds minimal weight to backpack.	Weight	Weight	$W \leq 10 \text{ lbs}$
Lasts several meals on one fuel tank.	Efficiency	Time for burner to consume 16.4 oz propane at max output	$t \geq 45 \text{ min}$
Cooks two pots of food concurrently.	Ability to hold pots	Can hold two pots (each 7 in diameter and 4 kg)	yes/no
Can be packed without breaking.	Durability	Maximum static load in closed position Survives 3 ft drop test	$F \geq 30 \text{ lbs}$ yes/no
Can be used repeatedly.	Reliability	No leaks after 500 cycles of opening/closing	yes/no
Provides enough heat to cook food.	Cooking power	Boiling time for 1 L of water	$t \leq 5 \text{ min}$
Cooks food evenly.	Balanced heating	Maximum temperature difference between vertices of equilateral triangle on 2 in radius circle centered 1 in above burner	$\Delta T \leq 50^\circ \text{ C}$
Easy to set up.	Setup time	Setup time	$t \leq 2 \text{ min}$
Easy to clean.	Cleanability	Clean time	$t \leq 2 \text{ min}$
Complies with standards for camping stoves.	Safety	Follows ANSI standards: Z21.72-2011/CSA 11.2-2011	yes/no
Looks aesthetically pleasing.	Visual appeal	User Feedback	n/a