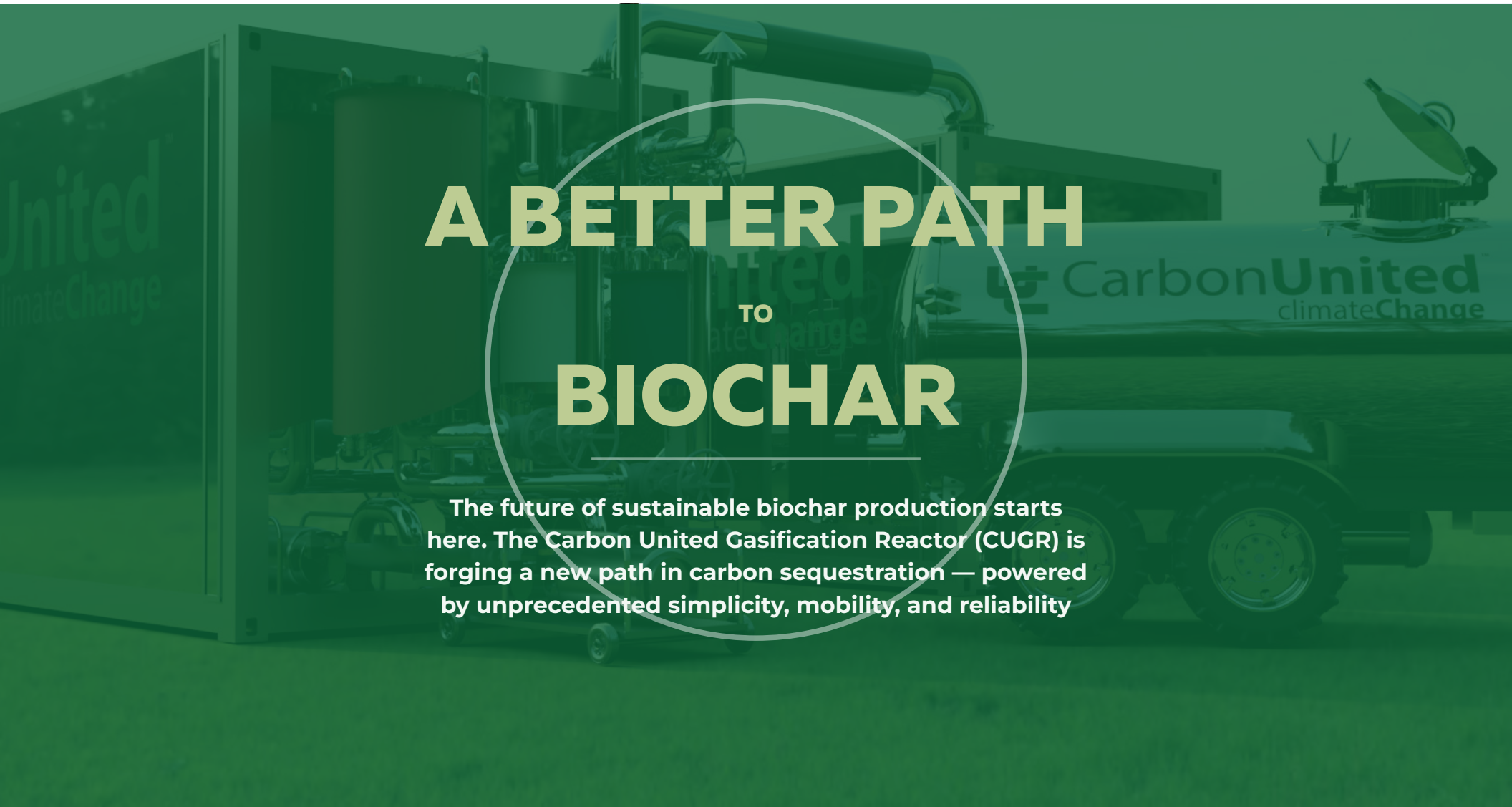
CarbonUnited™
climateChange



A BETTER PATH TO BIOCHAR

The future of sustainable biochar production starts here. The Carbon United Gasification Reactor (CUGR) is forging a new path in carbon sequestration — powered by unprecedented simplicity, mobility, and reliability

Introducing **CUGR**

The smarter way to convert **biomass to biochar**

CUGR is leading the charge in tackling climate change with self-sustainable biochar production. Leveraging a minimal, environmentally-friendly gasification workflow, CUGR meets European Biochar Certificate and SDG water conservation criteria with proprietary quenching and heat recycling functions, achieving higher quality carbon credits for enterprise-level sustainability.

Simple
Very few moving parts with operationally proven processes

Durable
Built with 340L stainless steel to ensure maximum longevity under extreme heat stress

Mobile
Can be easily relocated on standard trailers without requiring commercially licensed drivers or transport permits

Large Capacity
Up to 9 cubic meters of biomass per batch

Efficient
6 hour burn process* with high carbon fixation

Flexible
Can handle multiple biomass sources from large logs to small chipped wood

Safe
Multiple safety features built to petroleum industry standards

Minimal Pollution
100% excess forced air supply and afterburners ensure a clean burn with minimal pollutants

Multiple Startup Fuel Options
The unit can be started with either biodiesel or clean burning propane

Quenching System
On-board quenching with water recycling and dedicated water trailer

Drying Unit
Modular drying units can be doubled or tripled to provide additional drying capacity

Efficient Energy Use
Heat generated during operations recycled for drying unit operations

*Processing times dependent on moisture content and biomass composition

Minimize input. **Maximize output.**

The biochar production cycle that powers itself

Flexible bin design, offering the ability to process a variety of biomass material, from small chips to large logs

Customizable system can adapt to unique product needs, such as the addition of multiple modular drying units to process wetter biomass material

Efficient energy reuse through innovative drying system that recycles excess heat into secondary container, removing moisture from the next batch of wood to speed overall processing time

Unique mobile design, developed to fit on a standard trailer for highway transportation with no transport permit requirements

Durable unit construction utilizing 304 low-carbon, stainless steel to withstand heat and minimize cracking, rusting or other deterioration

Developed with the highest standards of safety features built-in, utilizing guidelines from the American Petroleum Industry Institute

Unique quenching system designed to recycle water for further minimization of environmental impact

A game-changer in climate change

CUGR is shaping the future of biochar production with safe, durable, and functional technology that meets you exactly where you are.

CUGR SPECIFICATIONS

Item	Description
Model	Carbon United Gasification Reactor (CUGR)
Manufacturer	Carbon United LLC
Duty Cycle	Biochar production on 8 to 12 hours per cycle. Note: 1 hour cleaning cycle required every 100 hours of operation
Capacity	Max. 9 metric tons of biomass (wet basis) per cycle projected. Projected efficiency: 20 to 30% depending on biomass quality
Biomass Type	Compatible with individual logs up to 490 cm in length down to wood chips 2,5 cm in size
Fuel Requirements Per Batch	Approx. 18 liters of diesel/biodiesel or 14 kg of propane
Biochar Product	EBC compatible based on biochar analysis conducted by accredited laboratory
Heat Efficiency	Double-walled stainless steel insulated with ceramic fiber rated with a thermal conductivity of 1,73 at 871°C
Water Supply	Mobile water trailer with 1.800 L capacity
Target Temperature	User-controlled for fine tuning biochar output from ~500°C to 1000°C
Maximum Sustained Temperature	1.149°C
Electrical	Single phase. 220/120 VAC
Maximum Dimensions	CUGR: In Operation 2,44m x 14,63m x 3,05m, In Transport: 2,44m x 6,10m x 2,59m / Drying Unit: In Operation 2,44m x 6,10m x 2,90m, In Transport: 2,44m x 6,10m x 2,59m
Footprint	Approx. 12,19m x 15,24m pad required for efficient operation when using optional drying unit
Maximum Weight	CUGR: Approx 5 metric tons / Drying Unit: Approx 3 metric tons

Take the next step to cost-effective biochar production

Learn more by contacting info@carbonunitedllc.com or (214) 699-7111

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