



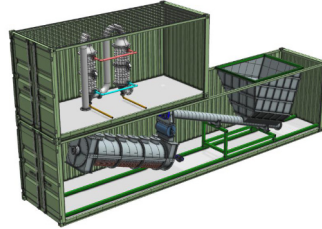
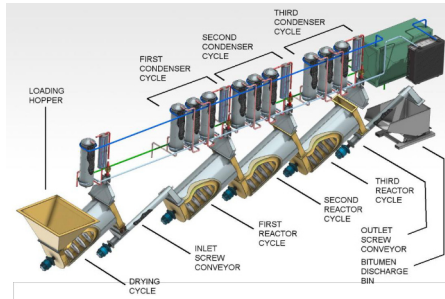
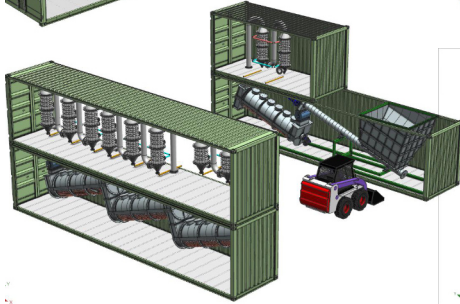
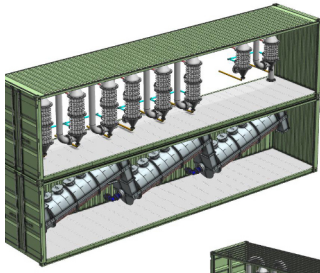
phambili
energy



+27 82 649 1218



musa@phambilienergy.com



Biomass Conversion Technology (BCT)

The Phambili BCT comprises revolutionary technology allowing us to pioneer carbon negative initiative in Africa and indeed the rest of the world. A process that can take Nature up to 280 million years to complete by converting biomass into coal, oil, and gas, is completed by us in hours. The Phambili BCT accelerates that chemistry under controlled conditions, delivering engineered high value streams from a single tonne of feedstock. A precision thermochemical core, combined with an advanced fractionating stage, allows us to convert feedstock into stable biochar for soils, bio oils, and syngas for local energy and chemicals and industrial feedstocks that displace high carbon inputs.

The system is modular with low emission, perfectly suited for use near supply sources, in agricultural areas, such as farms or rural community hubs. This allows us to capture value right where residues are produced and allows us to keep transport emissions to a minimum. While our main focus currently lies with biomass residues, the Phambili BCT is equally capable of processing rubber waste, municipal solid waste (MSW), plastics, and cattle manure. It creates custom output streams from each type of input. We're already well into investigating and developing ways to make the most of these non-biomass feedstocks. It matters because our BCT is more than just a piece of equipment. The BCT acts as an ecological translator. It speeds up nature's long chemistry to deliver proven climate benefits and create value for livelihoods, by connecting Africa's rural landscapes with the global carbon economy.



Content (%)	
Total Nitrogen (N)	48
Available Phosphate (PO)	1.25
Soluble Potash (PO)	2.31
Calcium (Ca)	1.82
Magnesium (Mg)	1.045
Potter S	0.14
Calcium (Ca)	1.85
Magnesium (Mg)	1.83
Filter GS	0.07
Calcium (Ca)	1.35
Sulfur (Ca)	1.25
Ethionium (Mg)	0.84
Captorium (Kr)	2.8
Seitler (N)	1.8
Magnum (Ka)	0.7
Magnum (C)	0.67
Lindium (U)	1.85
Iron (N)	0.77
Trace Element	



JengaBio Fusion

Jenga Bio Fusion is a "smart" fertilizer designed to bring dead soil back to life. Unlike regular fertilizers that just dump chemicals on plants, this product acts as a living sponge connecting plant roots to the soil. It comprises biochar (a type of charcoal) that is packed with essential minerals and good bacteria which plants thrive upon.



By using Bio Fusion, farmers are essentially building a healthy home for plant roots. It helps the soil retain water and nutrients, ensuring they aren't washed away, and in the process ensures the plant gets exactly what it needs to grow strong. This approach doesn't just feed the plant for one season; it heals the soil, making it better and more productive for the future.

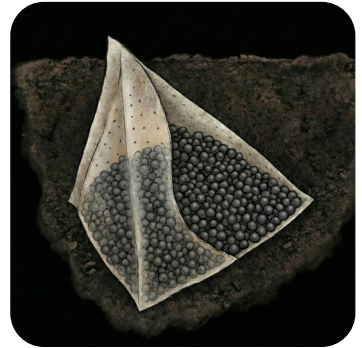


JengaBio Forge



Introducing Jenga Bio Forge, a pioneering solution in the quest for industrial decarbonization within the industry of steel making. These high-carbon, low-ash pellets are meticulously engineered to serve as a direct replacement for traditional anthracite, fundamentally reshaping steel production, and offering a cleaner path forward. They are crafted from our signature Jenga Biochar and augmented with proprietary binders and are specifically designed to meet the rigorous coking and combustion specifications demanded by heavy industry. This isn't simply another fuel source; it is a purpose-built industrial fit, formulated to seamlessly integrate as a direct substitute for anthracite in key steelmaking processes while also serving as a high-quality, efficient fuel for power generation





JengaBio Fusion NutreeBag

The NutreeBag helps cultivate a new era of growth by packaging the powerful Jenga Bio Fusion formulation into biodegradable sachets. This small, premeasured pack is designed to perfectly recreate an optimal root microhabitat, slowly releasing vital nutrients and concentrating beneficial microbes exactly where the plant needs them most. It also expertly holds moisture, significantly reducing the need for external water inputs while boosting soil carbon sequestration.

The results from extensive trials, particularly in timber plantations, have been remarkable. Use of the NutreeBag has caused seedling mortality to plummet by more than 90% while simultaneously surging yields by as much as 25%. By dramatically improving survival rates and growth outcomes, the NutreeBag offers a scalable, scientifically proven solution for regeneration and food sovereignty, ensuring healthier plants with fewer resources.



JengaBio Granule

Jenga Bio Granule is our high-quality biochar produced in convenient, easy-to-handle grains. It is designed specifically for fertilizer companies or farmers who want to mix it into their own blends. These granules make it easy to spread the benefits of biochar across a field or mix it perfectly with other nutrients.



JengaBio Vital

Jenga Bio Vital is a healthy supplement for livestock such as cattle. It is a specialized charcoal-based feed additive that improves the animals' digestion and gut health. An added bonus is that it helps the animals produce less methane gas, making livestock farming much friendlier to the climate.



JengaBio Preserve

This is our eco-friendly solution for protecting timber. Jenga Bio Preserve is a wood treatment derived directly from our biochar process. It provides a natural way to treat and preserve wood, extending its life and durability without relying on the harsh, toxic chemicals often found in standard industrial preservatives.



JengaBio Acid

Jenga Bio Acid is a potent, natural liquid known as "wood vinegar." It is captured during our production process and is packed with active biological ingredients. It acts as a versatile organic concentrate that can be used in various agricultural applications to stimulate plant growth and improve general soil biology naturally.



JengaBio Shield

Jenga Bio Shield is a natural bodyguard for crops. It is a liquid formula made from wood vinegar and natural plant compounds that boosts plant health while fighting off harmful soil pests like nematodes. Because it is chemical-free, it helps farmers protect their harvest without damaging the environment or poisoning the soil.