

Carbonization Furnace

Meditech Carbonization is a process to make charcoal from Biomass. Meditech Manufactures World Class Equipment for carbonization to increase calorific value of the End Product Charcoal Almost all the biomass can be made into charcoal, we list some as follow: Wood logs, wood branches, sawdust, rice husk, briquettes, biomass waste, coconut shell, Macadamia nut, cashew nut shell, bamboo, etc



Technical Parameters : Specification:				
Wood Charcoal Making Carbonization Furnace				
Model	Capacity	Diameter	Height	Material
MDCM-300	300kg/4-6h	1.45m	1.85m	Carbon steel, refractory
MDCM-500	500kg/4-8h	1.8m	1.9m	Carbon steel, refractory
MDCM-1000	1000kg/5-8h	2.15m	2.2m	Carbon steel, refractory

We also can supply a special model according to your requirements.



Wood Briquette



walnut shell



Coconut Shell



Wood Log



Rice Husk



Straw



Operational Cycle of Reactor	Time in Hrs	Temp	Reaction
1. Loading of raw material and closing of lid	0.25 Hours	Ambient	No Smoke
2. Slow Heating First Stage	3 Hours	150 to 280 Degree C	yellow and heavy smoke
3. Medium Heating Second Stage	2 Hours	280 to 450 Degree C	thin and smaller smoke
4. High Heating Third Stage	1 Hour	450 To 550 Degree C	lucid and blue color smoke
5. Long cooling time helps to make better quality charcoal			



Carbonization Furnace

Biomass dry distillation carbonization furnace is Meditech's latest products, with the adoption of advanced thermal dry distillation carbonization technology, greatly increase the carbonization rate from 85% to 98%, and easy to operate, safe environmental protection, high production efficiency, which can save a lot of energy, and it is the ideal equipment of coal, gas, oil, power plant. Many sets of combined distillation carbonization furnace, used the hoisting composite structure, the method of using hanging from the cooling, greatly shorten the production cycle, improve the efficiency of charcoal production, meanwhile using a unique cooking gas (volatile hydrogen material and tar, etc.) back - burning technology, make full use of the flue gas produced by carbonization, in addition, to meet the demand of heat stove, to achieve energy conservation and environmental protection requirements, excess gas can serve as a heat source for drying, which save a lot of fuel in the production, improve the benefit of enterprise. Carbonized without using dynamic electricity, it can use mobile production, simple and convenient operation, it is an ideal equipment of large-scale production of charcoal.

Working Principle

Meditech Biomass dry distillation carbonization furnace is composed of a carbonization furnace body, furnace cover, inner tank, cage, combustible gas return pipe, exhaust pipe, flue gas dust removal device, tank lifting device, and thermometer. The furnace adopts the principle of anaerobic dry distillation to remove the volatile substances in the biomass and achieve the purpose of biomass carbonization; the Carbonization process through charging sealing furnace - preheat drying - anaerobic carbonization - cooling out carbon four steps to complete. Charging sealing furnace is to prepare carbonized biomass core rods, shells and other materials into the cage, the cage is divided into two or three layers, in turn into the inner tank, cover, lock the buckle, lifting the charging tank into the furnace; Preheat drying in the furnace with wood and other fuel heating, slowly heated from room temperature to 220-250 °C, the processing time 1.2-2.0 hours (according to the material moisture content, density, particle size determines the specific heating time), and discharge material moisture and the air in the tank; Anaerobic carbonization is the furnace temperature to the beginning of weak yellow smoke in the smoke pipe (hydrogen and other volatile substances) discharge, that is the beginning of carbonization, recovery of combustible gas into the furnace ignition, adjust intake air, maintain the tank temperature 300-450 °C for 2.0-3.5 hours (according to the carbonized material density, particle size and carbonization depth requirements determine the specific temperature and carbonization time), when the furnace is natural flameout, namely for the end of carbonization; Cooling out the carbon is hanging out of the tank from the furnace, into the cooling area of natural cooling or spray water cooling, until the inner tank temperature dropped to below 50 °C, then open the cover out of charcoal. The total furnace temperature and carbonization time are 3.5-5.5 hours, can complete 3-6 furnace time in 24 hours. Exhaust gas through dust collector treatment to reach discharge standards. 3 sets of carbonization furnaces in parallel use, peak shifting carbonization, which can be completely used volatile gas heating carbonization furnace, without using additional fuel.

Scope of Application

Biomass dry distillation carbonization furnace is suitable for: Saw Dust , Rise husk, wood, logs, mechanism charcoal, shells, bamboo, and other different shapes of biomass raw materials carbonized.

Equipped With	Cooling discharging machine
Control Cabinet	PLC automatic control cabinet
Production Status	with carbonized color display
Matching Products	flue gas purification, heat exchange system, and cooling system, feeding machine, carbonization host, cooling discharging machine, PLC automatic control cabinet
Suitable Materials	Bamboo, Bamboo Stick, Coconut Shell, Cherry Shell, Walnut Shell, Apricot Shell, Peanut Shell, Corn Cob, Wood Sticks, Palm Kernel Shell, Cashew Husk, Hardwood, Wood Branch
Application	agricultural and forestry biomass charring making