

# Biomacon USA

## Data Sheet



General information	
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Website	<a href="http://www.biomacon.com">www.biomacon.com</a> / <a href="https://www.hpbiochar.com/carbon-negative-technology">https://www.hpbiochar.com/carbon-negative-technology</a>
Installed units	24

Technology name: Pyrolysis Boiler  
model types (C40-F, C63-F, C100-F, C160-F, C250-I, C400-I, C500-I)

Note:

Business model: Biomacon: Manufacturing and installation  
High Plains Biochar LLC (USA): Installation and operation

Item	Description
Price of one reactor	Listprices: C40-F \$130.000,00 + 13.000,00 (Biochar filling station) C63-F \$160.000,00 + 13.000,00 (Biochar filling station) C100-F \$215.000,00 + 13.000,00 (Biochar filling station) C160-F \$270.000,00 + 13.000,00 (Biochar filling station) C250-I \$371.000,00 + 13.000,00 (Biochar filling station) C400-I \$505.000,00 + 13.000,00 (Biochar filling station) C500-I \$615.000,00+ 13.000,00 (Biochar filling station)



Tonnage in (tpy) [ton/a] referring to pine wood chips	C40-F 200 C63-F 300 C100-F 500 C160-F 770 C250-I 1.200 C400-I 1.900 C500-I 2.400
Tonnage out (tpy) [ton/a] referring to pine wood chips No production of oils or uncombusted gases	C40-F 38 C63-F 57 C100-F 95 C160-F 148 C250-I 230 C400-I 364 C500-I 460
Footprint (sqft or sqm)	C40-F 2.346 x 4.838 C63-F 1900 x 5100 C100-F 1900 x 5400 C160-F 2500 x 6100 C250-I 2500 x 8700 C400-I 2500 x 10200 C500-I 2500 x 11700
<b>Feedstock</b>	
Type of feedstock	Min HHV, type, etc
Required Pré-conditioning	No metals, no plastics
Particle size max/min at the entrance	70mm
Max humidity at the dryer	No dryer
Max humidity at the reactor	30%
<b>Technology</b>	
Technology type (instant torrefaction, slow pyrolysis, etc.)	Continuous slow pyrolysis process
Heat transfer (direct with air, indirect with electrical screw, etc.)	Indirect
Reactor (rotary drum, vertical up lift reactor, fluidised bed...)	Horizontal screw converter
Temperature range	600-800°C
Pressure inside the vessel	-1,0mbar
Duration of the process	
Mode of process (continuous vs batch)	continuous



Insulation and reactor materials	<ul style="list-style-type: none"> <li>• Steel,</li> <li>• refractory ceramics heat resistant up to 1420°C</li> <li>• Thermal insulation 30mm calcium silicate, heat resistant up to 1000°C</li> </ul>
Energy sources for the system (gas, electricity, etc.)	Electricity (only for moving parts operation and start up of machine)
Included equipments in proposal (turnkey, what is included, or not)	Pyrolysis boiler and biochar filling station (Feedstock storage, intake system, hot water tank additional works by High Plains Biochar LLC)
<b>Production</b>	
Yield in on a dry basis (%)	See above: Tonnage in (tpy) [ton/a] referring to pine wood chips
Capacity of the reactor (h/yr)	8000h/yr
Types of products produced and tonnage	See above; Tonnage out (tpy) [ton/a] referring to pine wood chips
<b>Operation and control</b>	
Number of operators/employees	1
Automatization	Yes
Instrumentation	PLC Siemens
Maintenance frequency (regular & yearly)	Monthly cleaning interval (automated) and ash disposal Yearly bearing checking and exchanging

Item	
<b>Environmental aspects</b>	
Syngas recycling	In the system
Dust emissions control	Internal dust scraper and separator
Energy recycling system	Gas-water heat exchanger (86% efficiency)
<b>Time for delivery</b>	
Duration for drawing the engineering plans	Two weeks max.
Manufacturing duration	12 Month
Installation and commissioning	One week
<b>After sale services</b>	
Warranty	1 year (8000h) warranty
Basic training	Two days during commissioning – ongoing remotely via internet
After sale services	Rowdy Yeatts High Plains Biochar LLC,
<b>Any other comments about the tech or the company</b>	
Existing facilities, previous versions, other pricing inclusions	<a href="http://www.biomacon.com">www.biomacon.com</a> check out references, downloads and news update

