

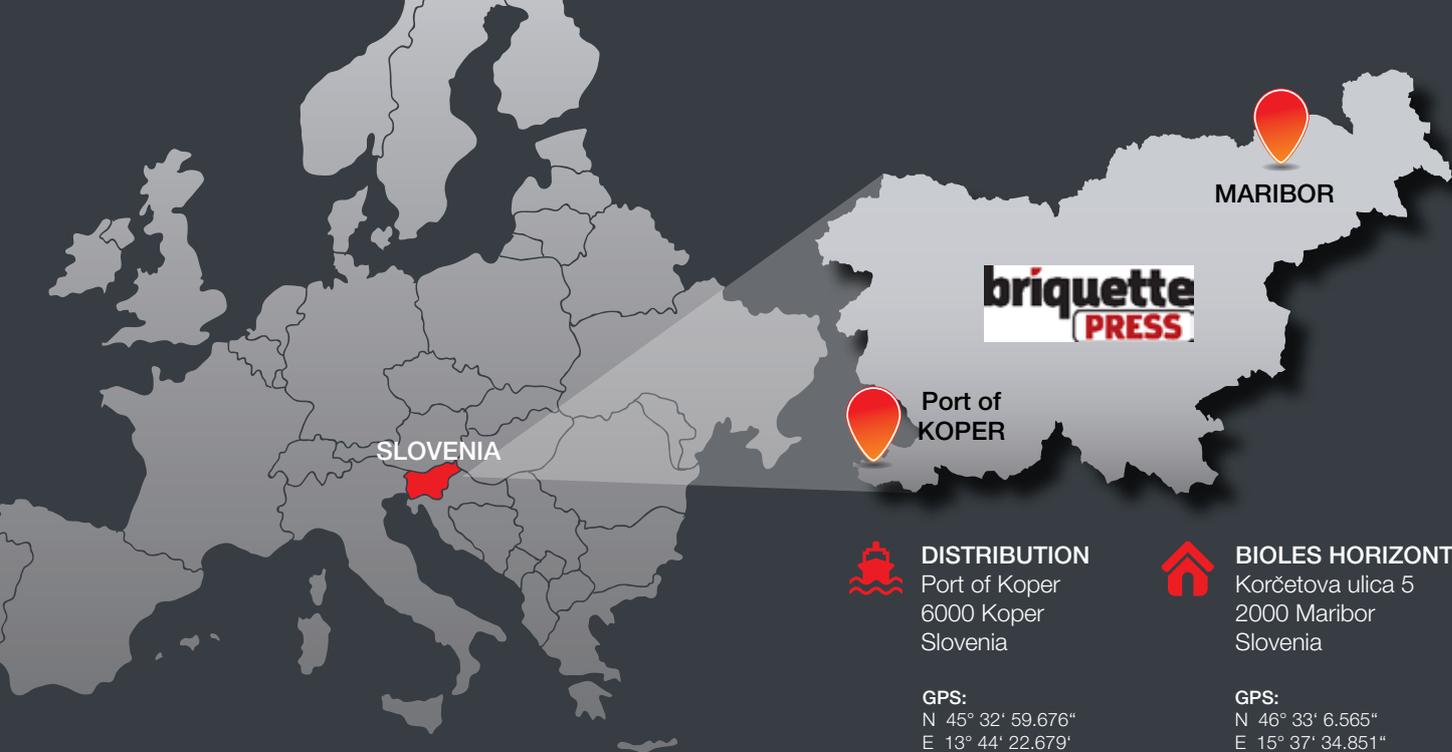
# briquette PRESS

for wood biomass and agrarian waste



**#1** *The largest briquette press manufacturer in the world.*





SLOVENIA

MARIBOR

**briquette**  
**PRESS**

Port of  
KOPER



**DISTRIBUTION**

Port of Koper  
6000 Koper  
Slovenia

**GPS:**  
N 45° 32' 59.676"  
E 13° 44' 22.679'



**BIOLES HORIZONT**

Korčetova ulica 5  
2000 Maribor  
Slovenia

**GPS:**  
N 46° 33' 6.565"  
E 15° 37' 34.851"

# PRESENTATION

Our beginnings date back to 1990, when we were one of the first private companies in Slovenia with their own sales and distribution of solid fuels. Bioles Horizont d.o.o., as the first private company and multiple recipient of the Gazela business award in the field of energy supply, strives to constantly provide high-quality products and services to even the most demanding customers. With excellent sales success, we have achieved the position of one of the leading companies in north-east Slovenia.

In line with the ecological trend, we expanded our program with briquetting machines for wood biomass and agro waste. We put the environment ahead of business with our futuristic and technology-driven product portfolio of biomass briquetting plants. Our plants consist of a RAM/PISTON type briquetting press and pellet pan with a mechanical process. Our briquette presses are heralding a green era by creating a cheaper and alternative fuel to costly and fast-disappearing fossil fuels like natural gas, coal, lignite, diesel etc. by turning agro waste, forestry waste and municipal waste into biomass briquettes.

Our endless innovation and technological upgradation designed to create a world-class portfolio of biomass briquetting plants is our way of healing Mother Nature and the environment that reduces carbon footprint caused by excessive industrial and other forms of emissions by encouraging the use of biomass briquettes.

## VISION

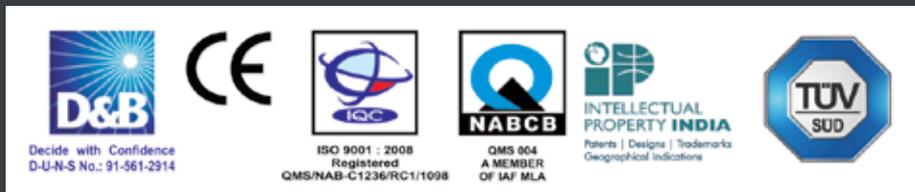
“We will become a successful and socially responsible company, focused on customer satisfaction – an expert with extremely satisfied customers. In Bioles Horizont we provide high quality, economical and clean ways of heating and at the same time we take care of the customers’ satisfaction.”

## MISSION

“With the sale of natural energy sources, we have committed ourselves to creating a healthy, clean and safe present and future for our society and the world in general.”

# COMMITTED TO QUALITY

We are committed to offer premium-quality briquetting machines, which conform to international quality norms. Therefore, we apply stringent quality control systems and testing procedures. Our quality control and assurance department keeps a strict vigil on the entire manufacturing processes right from the purchase of raw materials to the shipment of finished goods. In order to ensure flawless performance, all machines are tested on well-defined quality and performance parameters in our own quality checking laboratory.



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**TUV  
SUD**

# GO GREEN PROJECT

Fuel is the prime need of every industry and pollution-free environment is the prime concern of our society. Every year millions of tons of agricultural waste and biomass are generated, which are either destroyed or burnt inefficiently in loose form, causing air pollution. These wastes can be recycled and can provide a renewable source of energy by converting biomass waste into high-density fuel briquettes without the addition of any binder. This recycled fuel is beneficial for the environment as it conserves natural resources. What many people do not know is that recycling also prevents global warming, which has a direct impact on the global climate.

There is no better project than to generate revenue from agro and forestry waste, save the global environment and to produce green energy.

This project produces renewable energy from waste. Eco-friendly fuel is produced from agricultural, forestry and industrial wastes. The wastes from these sources are used as the raw material of this project and the finished product is called briquettes. The main concept of this project is to produce biofuel from the agricultural waste, which is otherwise either destroyed or burnt inefficiently in loose form causing air pollution. These wastes cannot be completely destroyed, but we can use them as a renewable source of energy by converting biomass waste into high-density fuel briquettes with the help of the briquetting plant and produce briquettes, which ultimately produce energy. We can say that to provide pollution-free energy at a low cost is the main concept of this project.

The raw material in this project is provided through waste. This project requires 40 to 90 HP, depending on the model. It also requires a minimum of 1000 sq. metres of space to work and store the materials. No special land or shed is needed, but a suitable space and shed can give the best results in production and storage.

This project converts low-density biomass into high-density biomass fuel that is called briquettes, bio coal or white coal. Briquettes are made from agricultural or forestry waste, which can be used effectively as the best substitute for any fossil fuel (coal or wood) and can easily be used in various kinds of thermal applications.

**Viability:** The viability of manufacturing briquettes is tremendous as the demand for energy is increasing day by day, while the supply of natural fossil fuels is limited. Moreover, the government of India has announced a series of incentives for promoting this project and for installing briquetting plants as the entire world is engaged in developing alternative energy sources. It is promoted to the industries as the prime renewable energy project throughout the world. The project provides excellent viability. The total payback period of the project is approximately 2 years. It is pollution-free and there are no hazards in this project. It is an eco-friendly renewable green energy project.





# BENEFITS OF briquetting

Biomass briquettes are an environmentally friendly, renewable, smog-free, economical and non-conventional source of energy. Briquettes are 100% natural and are made using a binderless technique, i.e. without the use of any chemicals or sulfur.

Biomass briquettes have a high specific density of 1200 kg/m<sup>3</sup> and bulk density of 800 kg/m<sup>3</sup> compared to 60 to 180 kg/m<sup>3</sup> of loose biomass. Considering their density and compactness, briquettes are excellent for long distance transport.

Compared to loose biomass or firewood, loading, unloading and moving costs are much lower. Likewise, a lot less storage place is required due to the size and shape of briquettes that makes them easy to store.

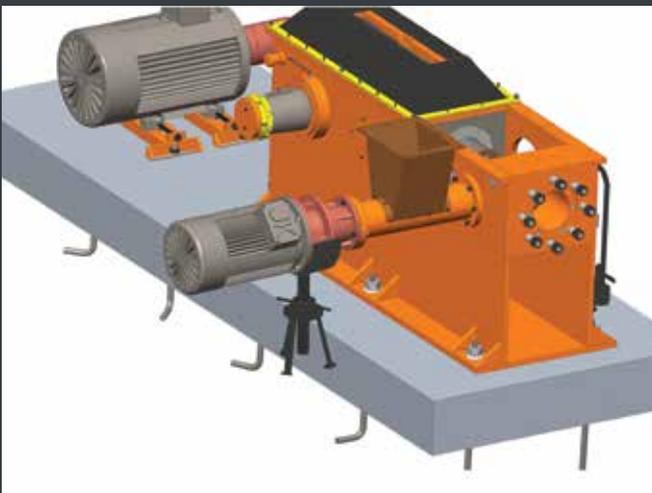
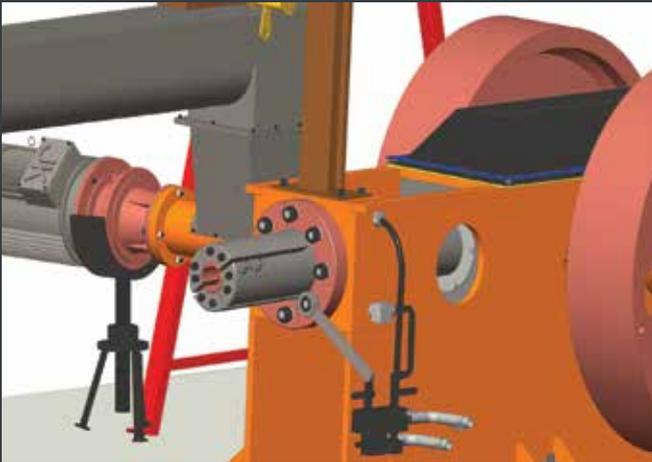
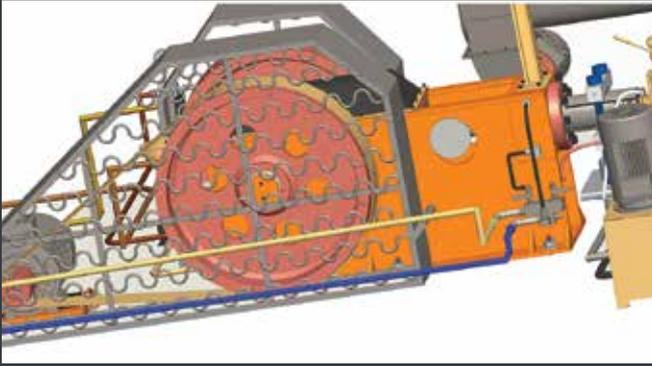
Briquettes can relatively produce more intense heat than other fuels. This greater efficiency can be attributed to their low moisture and high density.

Besides being a cheaper alternative to conventional fuels, easy availability of agro waste in ample quantities makes the future of biomass briquetting even brighter. With the growing awareness and increasing demand for biomass briquettes, an increasing number of companies across different sectors are waking up to the benefits of briquetting.

More importantly, the governments of various countries have also realized the importance of biomass as being a cheaper and eco-friendly alternative source of energy. Governments are promoting biomass processing with a heap of tax benefits and financial incentives. These actions help boost the usage of bio-briquettes as alternative source of renewable energy.

The fast viability of the project within a timeframe of two years makes it even more investment-friendly.

# PHOTO GALLERY



# SUPER 65

65 mm briquetting machine

The first model developed by us that sets off the voyage of technological brilliance and novelty is the Super 65 which delivers briquettes with a diameter of 65 mm with near to the ground process cost. This model is the best fit for reaching medium production capacity with minimum capital outflow.

# SUPREME 75

75 mm briquetting machine

Our Supreme 75 models are the ideal choice for the manufacturer who is looking for output in the range of 800 – 1000 kg/h and is not yet ready to invest in the installation of the Jumbo 90 model. This machine is also supported by a hammer mill (powder making unit) that crushes raw material into smaller pieces / powder suitable for the final steps of the briquetting process.

# JUMBO 90

90 mm briquetting machine

The most outstanding and flagship product from our product portfolio is the Jumbo 90. This model has been armed with cutting technology and engineered to deliver the maximum output. Our innovative product is exceptionally cost-effective and technically superior.



All electrical components are of the Siemens brand.



Maximum production capacity up to 1,800 kg/h of raw material.



Heavy structure with standard design.



Raw material size acceptability: up to 25 mm can be operated without a hammer mill.



Designed with a special sensor system to indicate the temperature of the machine.



Delivers finished and high density briquettes with a diameter of 60, 75 or 90 mm.



Easy-to-operate system helps to save costs in production.



Reliable dustproof design of the main components.



Special siren systems alert about any minor or major problems in the machine.

# WHAT IS INCLUDED

A list of all the standard equipment, parts and spare parts that come with your Briquette press machine.

## PART-A

Main unit of briquetting plant includes:

- ✔ Body, Load wheel, Crank shaft, Rod, Liner and Piston,
- ✔ Electric motor with a nylon belt,
- ✔ Complete lubrication and filter system,
- ✔ 3 HP electric motor for lubrication with oil Pump and Pressure Gauge,
- ✔ Dosing screw with ELECON NU 5 standard gear and 10 HP (1440 RPM) motor and accessory,
- ✔ Auxiliary spares like Ram, Taper Die, Collets, Split Die and Oil Seal,
- ✔ Die holder and ring clamp,
- ✔ Die holder press clamp.
- ✔ Lifting stand with chain pulley (Wt. 2 Mt/Tn capacity),
- ✔ Main socket with cooling lines (total length 10m),
- ✔ 51 Hz electrical panel board with controls for operating the machine,
- ✔ Electrical sensors (Die Holder, Piston Bush, Oil System),
- ✔ Foundation bolts, pulley etc,
- ✔ Foundation channel for main motor.
- ✔ Induction Motors, Electrical panels and parts (Make: SIEMENS)

## PART-B

Material Handling Unit:

- ✔ 6 m long screw conveyor with 5 mm worm thickness.
- ✔ Reduction gear (ELECON 3.54 – NU) with 3 HP Electric motor.
- ✔ Slide, variable pulley and V-belt for speed control

## SPARE PARTS

Continuous wear and tear spare parts supplied along with JUMBO 90 press:

- ✔ Ram: 4 pcs
- ✔ Taper Die: 4 pcs
- ✔ Collette: 10 pcs
- ✔ Split Die: 3 pcs
- ✔ Oil Seal (For Crank, Piston, Ram, Feeder box): 2 Set
- ✔ Screw worm: 1+1 pcs
- ✔ Feeder Box: 1+1 pcs
- ✔ Ram Holder: 2 pcs



	JUMBO 90	SUPREME 75	SUPER 65
<b>TECHNICAL SPECIFICATIONS</b>			
Production capacity (depends on raw material)	average 1.200-1.800 kg/h	average 800-1.000 kg/h -	average 700-800 kg/h
Finished product size	90 mm diameter	75 mm diameter	65 mm diameter
Briquette length	100 mm to 350 mm	100 mm to 350 mm	100 mm to 350 mm
Finished product shape	Cylindrical	Cylindrical	Cylindrical
Raw material size	Up to 25 mm	Up to 15 mm	Up to 10 mm
<b>PRODUCTION CAPACITY</b>			
Sawdust (approximately)	1.500 to 1.700 kg/h	800 to 950 kg/h	700 to 800 kg/h
Straw (approximately)	1.000 to 1.200 kg/h	650 to 750 kg/h	600 to 700 kg/h
Sugar cane bagasse (approximately)	1.000 to 1.300 kg/h	600 to 750 kg/h	450 to 550 kg/h
Groundnut shell (approximately)	1.800 to 2.500 kg/h	800 to 1000 kg/h	700 to 900 kg/h
Other & mix raw materials (approximately)	1.200 to 1.800 kg/h	750 to 950 kg/h	600 to 700 kg/h
<b>OPERATING PARAMETERS</b>			
Input bulk density	140 to 200 kg/m <sup>3</sup>	140 to 200 kg/m <sup>3</sup>	140 to 200 kg/m <sup>3</sup>
Moisture content	8-12%	8-12%	8-12%
Briquetting pressure (binderless briquetting)	1.200 kg/cm	1.200 kg/cm	1.200 kg/cm
<b>ELECTRICITY / POWER</b>			
Required power connection	91 HP/ 68 kW	70 HP / 53 kW with powder mill	65 HP / 49 kW with powder mill
Practical used Amp.	75 - 85 Amp (approximately)	60-70 Amp (approximately)	55-60 Amp (approximately)
Power consumption average	30 - 40 units/h	28- 32 units/h	26- 28 units/h

## TURN WASTE INTO FUEL WITH OUR briquette press

We are one step ahead of the rest of the market with our innovative approach in the field of renewable energy. We provide an alternative fuel to natural gas, coal, lignite, diesel, and many others, as they are going to disappear in the near future. We use a new binderless briquetting technology, which helps convert organic agro waste into biomass briquettes without the use of any chemicals.

**Go green, go renewable with our briquetting machine!**

**briquette**  
**PRESS**

European Authorized Representative:

**BIOLES** *Horizont*

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