



### SERVODAY GROUP PRESENTS

# BIOMASS & WOOD PELLET PLANT

**ON TURNKEY BASIS** 

DESIGN

MANUFACTURING

INSTALLATION

COMMISSIONING



WWW.WOODPELLET.IN



### Since 1970



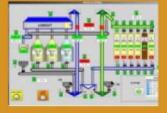
















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### **BIOMASS & WOOD PELLET PLANT**



### VISION

To provide cost - effective, highest quality, technically advanced & environmentally friendly solutions to our client's individual Biomass & Wood Pellet Plant requirements in the fastest timescale utilizing the latest designs, materials & through the most efficient administrative & manufacturing procedures.

### **WOOD & BIOMASS MATERIALS**

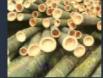
Pine Wood Saw Dust Pellet - Hard Wood Saw Dust Pellet - Soft & Hard Wood Chips Pellet - Peat Tourbe Pellet - Rice Straw Pellet -Corn (Maize) Cobs Pellet - Rice Paddy Pellet - Coffee Shell Pellet -Cotton Hull Pellet - Soya Husk Pellet - Sugarcane Bagasse Pellet -Almond Shell Pellet - Macadamia Nut Shell Pellet - Palm Kernel Shell Pellet - EFB Palm Empty Fruit Bunch Pellet - Prosopis Juliflora Pellet - Fire Wood Pellet etc.

### PELLET PRODUCTION CAPACITY











### TURNKEY SOLUTION

0

2 ГРН

5 ТРН

10 ТРН

20 ТРН

We supply complete Wood, Feed & Biomass Pellet Production Plants on Turnkey basis, from concept to commissioning, the service include site Layout, Design, Manufacturing, Handling, Storage, Building, Power, Water, Installatiion, Testing, Commissioning, Training and Support.



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### Servoday Group Presents

### WOOD & BIOMASS FUEL PELLET PLANT ON TURNKEY BASIS

India produces a large amount of biomass material under its agriculture, agro-industry and forestry activities.

Some of these materials are used for fodder and fuel in the rural economy. However, studies show that at least 200 million tons of this biomass material is of little use and can be alternatively used as a fuel at a cheaper rate.

### **FEATURES:**

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- State Of The Art Module Technology
- Less Manpower Less Electricity- Less Land Required
- Less Installation Time Less Handling Equipment
- Less Maintenance Expense
- Lower Production Costs
- No Shed or Building Required Less Fire Hazard
- No Major Foundation Required
- Optimal Use Of Gravity To Reduce Handling Equipment

INSTALLATION

COMMISSIONING

Advanced Applicability

MANUFACTURING

High Degree Of Automation

DESIGN

PELLET TOWER

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NOW THERE IS NO NEED TO BURN THE STRAW OF THE FIELD INSTALL WOOD AND BIOMASS FUEL PELLET PLANT AND MAKE PROFIT OF CRORES BY USING THE AGRO BIOMASS PROPERLY



LOW PRODUCTION COST = HIGH PROFIT

2 CRORE PER YEAR\*

MORE THAN

10 CRORE PER YEAR

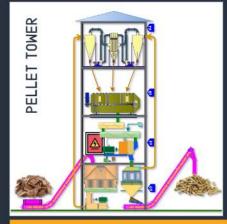
# 5 CRORE PER YEAR







### PELLET PLANT SUITABLE TO RUN WOOD AND BIOMASS MATERIALS



2

TPH

10

TPH

Saw Dust - Wood Chips - Fire Wood - Hard Wood - Soft Wood - Babool Tree Wood Eucalyptus Wood - Sugarcane Bagasse- Castor Seed Shell - Castor Stick - Coconut Wastes Coffee Husk - Coir Pith - Corn Cobs - Corn Dental Stick - Cotton Stalk & Shell- Groundnut Shell - Lemon Grass - Mulberry Stick - Rice Husk - Sugar Cane Leaves - Sun Flower Stalk - Sweet Sorghum Stalk - Tobacco Waste- Gum Arabic Tree Wood - Paddy Straw - Mustard Shell & Stalk - Barks Wood - Wheat Straw Soya Bean Husk - Jute Waste - Cashew Husk Palm Husk - Bamboo Dust - Napier Grass Forestry Waste - Rice Straw - Tea Waste Rapeseed Stalk & Many More



### **TURNKEY SOLUTION**

We supply complete Wood & Biomass Pellet Production Plants on Turnkey basis, from concept to commissioning, the service include Site Layout, Design, Manufacturing, Handling, Storage, Building, Power, Water, Installation, Testing, Commissioning, Training and Support.



CALL NOW: 94 272 10483 - 94 272 10484 OR SEND EMAIL: INFO@SERVODAY.COM

# WE DELIVER **TURNKEY** SOLUTIONS WOOD & BIOMASS PELLET PLANT

### WHO WE ARE?

GROW started 50 years ago and since then we helped companies around the world to become what they are today.



### WHAT WE DO?

We are specialized in rising your business income by bringing in world class technology to your door step.

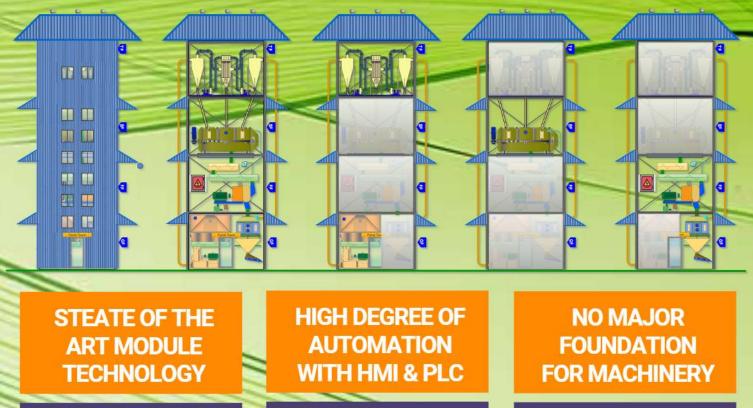


### GUARANTEED PELLET OUTPUT

FULLY AUTOMATIC PLANT

2 OPERATOR CAN RUN PLANT/SHIFT

### NO BUILDING REQUIRED



MINIMAL PLANT ERECTION TIME

LESS POWER CONSUMPTION LESS MATERIAL HANDLING EQUIPMENTS

LESS PRODUCTION COST LESS MACHINERY MAINTENANCE

LESS FIRE HAZARD

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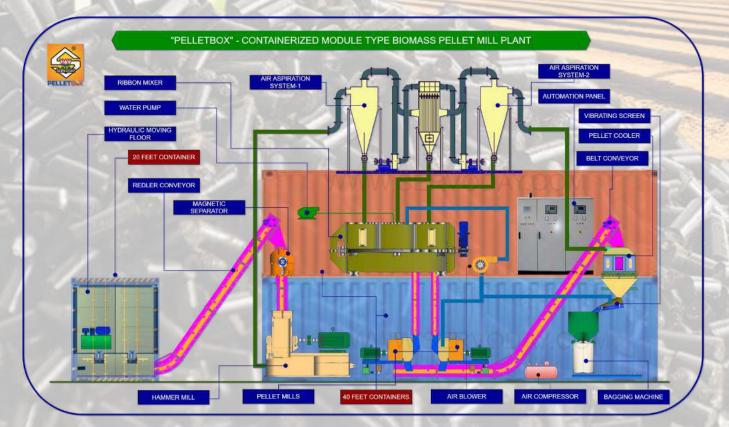




### CONTAINERIZED MODULE TYPE

# BIOMASS

## PELLETBOX PLANTS



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# PELLETBOX

### **PLANT CAPACITY CHART\***

MODEL MATERIAL	PELLETBOX-1	PELLETBOX-2	PELLETBOX-3	PELLETBOX-4	PELLETBOX-5
SOFT WOOD	>1.0 TPH	>2.0 TPH	>3.0 TPH	>4.0 TPH	>5.0TPH
HARD WOOD	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
SOFT SAW DUST	>1.0 TPH	>2.0 TPH	>3.0 TPH	>4.0 TPH	>5.0 TPH
SAWMILL WASTE	>1.0 TPH	>2.0TPH	>3.0 TPH	>4.0 TPH	>4.5 TPH
BARKS WOOD	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
FORESTRY WASTE	>0.8 TPH	>1.7TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
RICE STRAW	>0.9 TPH	>1.8TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
MUSTARD STALK	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
CORN STALK	>0.8 TPH	>1.7 TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
CORN COBS	>1.0 TPH	>2.0 TPH	>3.0 TPH	>4.0 TPH	>5.0 TPH
RICE HUSK	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
<b>GROUNDNUT SHELL</b>	>0.8 TPH	>1.7 TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
BAGASSE	>0.8 TPH	>1.7 TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
COFFEE HUSK	>0.8 TPH	>1.7 TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
DE-CAKE	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
COIR PITH	>0.8 TPH	>1.7 TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH
PRESS MUD	>0.9 TPH	>1.8 TPH	>2.7 TPH	>3.6 TPH	>4.5 TPH
PEAT	>0.8 TPH	>1.7TPH	>2.6 TPH	>3.4 TPH	>4.3 TPH

APPROX. POWER LOAD:

300 HP

710 HP

910 HP

1180 HP

\*CAPACITY & POWER SUBJECT TO STANDARD CHEMICAL & PHYSICAL COMPOSITION OF RAW MATERAILS

452 HP



- Moisture: Below 15%
- Raw Material Input Size: 15mm x 15mm
- Input form: Loose or Bale •
- Raw Material free from metal & stone

- Raw Material Sizing Machinery
- Raw Material Drying Machinery
- Pellet Packing Machine
- Pellet Storage Silo

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# SERVODAY GROUP PRESENTS **MOVING FLOOR LIVE BOTTOM PUSH FLOOR FUEL BUNKER**

Biomass Storage & Discharge System For PELLET PLANT - POWER PLANT - CEMENT PLANT



### **OPTIMUM STORAGE & DISCHARGE SYSTEM**

Servoday offers a wide range of bulk handling equipment including silo systems with controlled discharge arrangemet. All of this is designed for free and difficult non free-flowing bulk solids and is therefore mainly suitable for the Pellet Plant, Power Plant & Cement industries for handling of Straw, Stalk, Sawdust, Wood, Bagasse, Press Mud, Husk, Shells, Lignin, RDF as well as for sludge cake handling in the paper & water industry and indeed for many other industries worldwide.

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## **RECEIVE - STORE - TRANSFER**

### Servoday Design Technology

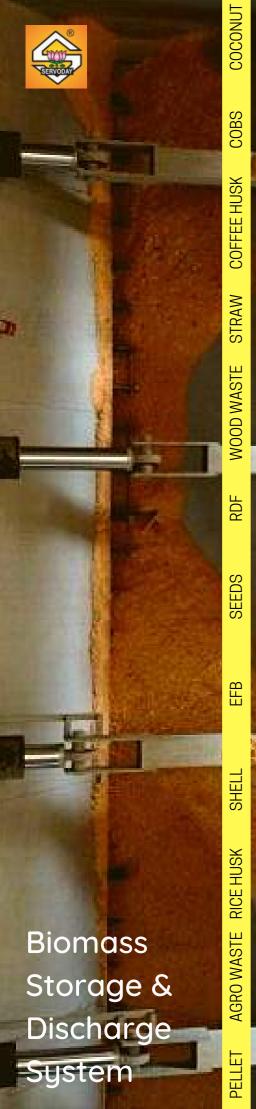
The Moving Floor is an discharger design by Servoday for square and rectangular silo & bunkers. It is designed to function with free & non-free flowing and difficult to handle bulk solid materials. The flat bottom floor concept gives many advantages and the Moving Floor can be used in a number of different configurations to suit the client' s particular requirement. This discharge device with automation system ensures a reliable material discharge, an exact dosage and allows the storage of large volumes.





Biomass Storage & Discharge System

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### Purpose

The moving floor consists of hydraulically driven push floor ladders, which move alternately over the bottom of the silo or bunker. Due to the movement of the ladders arranged in parallel, the bulk material is pushed & pulled from the sio or bunker floor into a discharge screw or into other downstream conveyors. The desired dosage from the moving floorr is either by screw or by the push floor ladders themselves.

### **Reliable & Versatile**

The Moving Floor discharge system can be used in a number of different configurations. Installed on the bottom of a square/rectangular silo or bunker, the bulk material is reliably pushed from one side of the bunker towards the discharge device. If the material is to be transferred through a discharge opening into one or more screws or a solids pump, the bulk material is additionally conveyed into the middle of the bunker. Due to the versatility of the sliding floor, it can be used for dosing tanks, undergrou

Discharge Capacity: **1-50 TPH** 

Storage Capacity: 10 - 1000M3

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TEARDROP Design



### SERVODAY GROUP

### HAMMER MILL BIOMASS - WOOD - FEED

Tear Drop Design Hammer Mill for the most demanding applications like Feed, Biomass and Wood Pellet Plant and Grinding industries, the heavy-duty Tear Drop Hammer mill comes in a variety of sizes and models that match all particle size-grinding needs.

Tear Drop Hammer Mill built to the highest standards, the heavy duty frame is design to minimize vibration and noise, a robust regrind chamber and pivoting arms type full-access doors, allow the doors to move out of the way during maintenance of Mill.

SERVODAY

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#### FEATURES:

- Air-swept teardrop design
- Dual Hammer position
- Space-saving Hinged door design
- Center-hinged screen carriage
- Pillow Block mounted inboard and outboard bearings
- Dynamically balanced Rotor with Bitters
- Screen with required Diameter hole.
- Heavy Duty Base frame for Electric Motorn
- Available from 60 HP to 450 HP capacity

#### Also available WOOD & BIOMASS PELLET PLANT ON TURNKEY BASIS



### YOUR PARTNER IN PRODUCTIVITY

# SERVO BOODOO BOODOO Bellet mill

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# GEAR DRIVEN POWERFUL PELLETING



### performance

The SERVO 3000 Pellet Mill is a compact workhorse that just keeps running. A finetuned design that offers highly efficient pelleting. The SERVO 3000 combines the best of current pellet mill technology with proven features from our long-established family of gear-driven pellet mills, offering the highest output per kWh in its class

### standard features

Compact profile, small footprint, modular design – makes the mill easy to fit into your facility. The die-area-to-kW combinations provide increased efficiency and throughput, ensuring that there are fewer blockages, and providing longer die life. Shear pin hub array – protects the shaft against foreign objects.

### engineering

Robust, easy-to-maintain design Singlereduction, precision helical gearing delivers quieter operation,

The SERVO 3000 Pellet Mill utilizes a single motor and a positive direct gear drive that boasts 98% power transfer for efficiency you'll see on Day One.

### key features

Clamp-on die for fast die change. Modular gearbox design for production flexibility. Replaceable quill flange. Stainless steel pellet chamber. Automatic grease system. Two-roll main shaft for maximum capacity and efficiency. Automation software to operate and control SERVO 3000 Pellet Mill.







# BIOMASS - WOOD - FEED

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SERVODA









# **RING DIE - GEAR DRIVEN**







### who we are

Servoday Group is a global engineering company that serves all kinds of organisations, corporation and a private client. Servoday Group has been in the industry for more than 50 years. And, commonly known as one of the best engineering company herein India and abroad.

### what we do

We are responsible for designing and supplying of Pellet Manufacturing Plants on TURNKEY basis.

### SERVO PELLET MILL MODELS

MODEL*	DIE ID MM	DIE WIDTH MM	DIE WORKING AREA	KW	RPM	CAPACITY TPH*	REMARK
3022-63	558	63	1115cm <sup>2</sup>	132	1500	2.0	For Wood & Biomass
7730-100	762	94	2480cm <sup>2</sup>	200	1500	3.0	For Wood & Biomass
7930-100	762	94	2480cm <sup>2</sup>	250	1500	3.0 to 4.0	For Wood & Biomass
7932-125	826	125	3220cm <sup>2</sup>	315	1500	4.0 to 5.0	For Wood & Biomass

\*Specifications & capacity may change on raw material selection and application.







### contact us

Servoday Plants & Equipments Limited Ahmedabad - Jamnagar (Gujarat) India +91 73834 10723 | +91 94272 10484 info@servoday.com - www.servoday.com



#### **Servoday Group Presents**

# COUNTER FLOW COOLER

SERVODAY Counter Flow Coolers are used for cooling pellets and extrudates to near ambient temperature. The coolers are available in 8 sizes with capacities up to 30 t/h.







PELLEI	•
MEAL	٠
	•
FLAKES	•
	•
GRANULES	•
CAKE	۰
CARE	۲
COLLETS	•
	•

SERVODAY Counter Flow Cooling is the most efficient process for granular products and meal. The air flows in the opposite direction to the product which means that the product is gradually cooled on its way from pellet-mill to discharge hopper. The air is gradually warmed on its way from air inlet to cooler exhaust, thus preventing pellet damage due to a temperature shock.

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# COUNTER FLOW COOLER

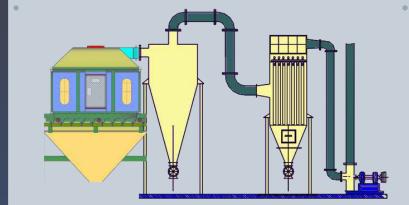




### **PELLET - MEAL - FLAKES - GRANULES - CAKE - COLLETS**



SERVODAY Counter Flow technology is suitable for drying and cooling of any granular products that requires the highest standards of sanitation. Drying and cooling of breakfast cereals, snack foods, coffee beans, cocoa, chocolate, bread crumbs, couscous, fruits, vegetables, nuts, pellets, meal, flakes, granules, cake and collets can be achieved with lowest need for cleaning and fastest cleaning times. Energy savings of 20-70% are achievable when replacing belt dryers, fluid bed dryers or tumbling dryers. The gravity flow principle leads to much lower maintenance costs and almost uninterrupted up-time.

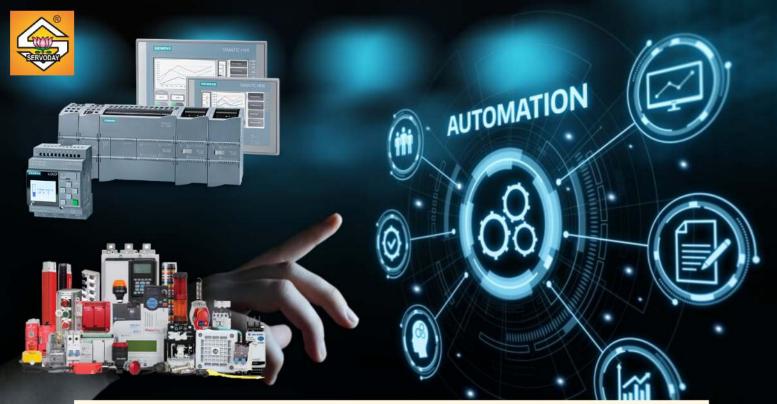


Complete Air Systems available upon request

DRYER - CHIPPER - SHREDDER - HAMMER MILL PELLET MILL - FEEDER - CONDITIONER - SILO

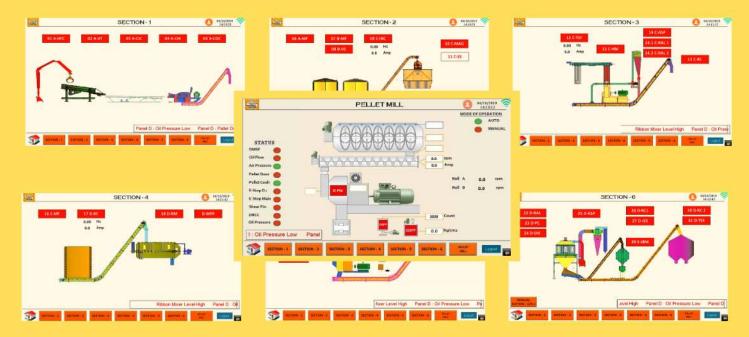
	ТҮРЕ	COOLING AREA	CAPACITY*	
	IRM 14/14	2.0 M3	4.0 TPH	
	IRM 14/19	2.7 M3	6.0 TPH	
	IRM 19/19	3.6 M3	8.0 TPH	
	IRM 19/24	4.5 M3	12.0 TPH	
	IRM 24/24	5.7 M3	16.0 TPH	
	IRM 24/28	6.8 M3	20.0 TPH	
	IRM 28/28	8.2 M3	25.0 TPH	
	IRM 28/38	11.0 M3	30.0 TPH	
Ð	*CAPACITY BA	SED ON 4MM GRANULES WITH DE	NSITY 600 KG/M3	

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# PELLET PLANT AUTOMATION SYSTEM

Pellet Plant Automation System to control the operation of the whole pellet production line, including Raw Material Preparatory Section, Chipping Section, Drying Section, Grinding Section, Mixing Section, Pelleting Section, Cooling Section, Storage Section, Bagging Section.



We are number one in this business and we was chosen by a lot of small companies needing our help. Give us a chance to help you to!

### **SERVODAY PLANTS & EQUIPMENTS LIMITED**

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### PELLET HANDLING - STORAGE - FIRING SYSTEM WITH AUTOMATION

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Pellet Automation System to control the operation of Boilers, including Pellet Receiving equipments, Pellet Storage Silo, Pellet handling equipments and Pellet Firing Burners for all kind of Boilers and Hot Air Generators.



We are number one in this business and we was chosen by a lot of small companies needing our help. Give us a chance to help you to!

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### "INNOVATION STARTS WITH US"

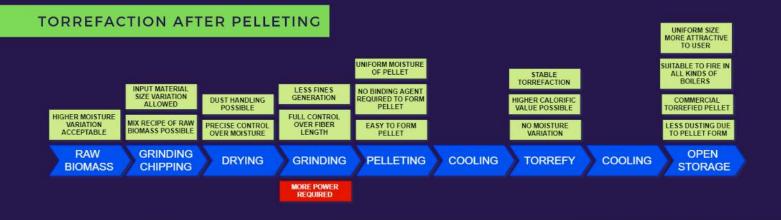
# WOOD BIOMASS TORREFACTION

### **TORREFACTION PLANT**

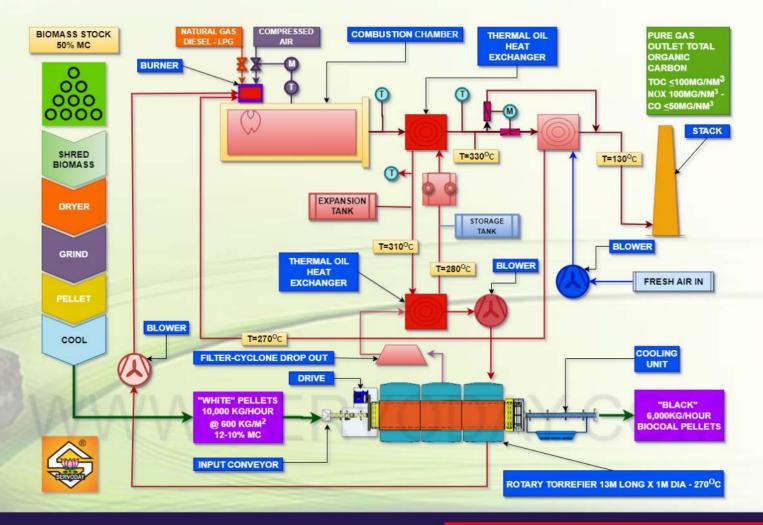
NEW concept in process drying Technology, using dry super heated steam as the heating medium to replace the traditional air/oxygen methods of drying.

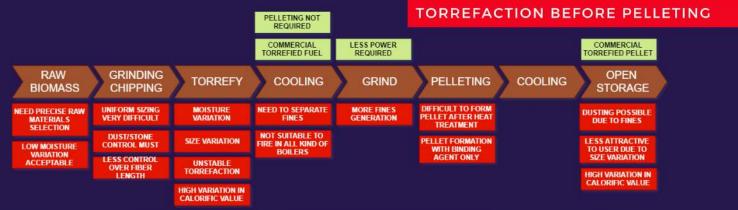
This dramatically improves the efficiency of the drying process whilst at the same time using a safe, invisible dry gas being used at atmospheric pressure.

### VISIT WWW.WOODPELLET.IN



### TORREFACTION PROCESS







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### 1 fistful pellets = 2 fistfuls compost



Call on 9427210483 - 9427210484



This innovative form of compost pellets allows the soil to be nourished slowly over time, in a way that plants love.

# COMPOST PELLETING



The screening system cleans the raw material of stones, metal pieces, wood, feathers etc.

## COMPOSTING

The composting process is done outdoors the product is accumulated on piles and are periodically turned by a mechanical turning machine, in order to obtain correct drying and fermentation.

## REFINING

The compost raw materials is forced out through grids with holes with the desired dimension and cleaned of undesired parts in the product.

# PELLETING

The material is entering in the pellet mill passing through the ribbon mixer and conditioner. Here other ingredients could be added, before the material goes into the pellet pressure chamber to be transformed into pellets.

## COOLING

After pelleting, the product is very hot, hence it's necessary to cool the product through pellet cooler, in order to give it the right hardness and the best consistence to store and handle it.

### **TURNKEY PROJECT SUPPLIER**



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### FOLLOWING PRODUCTS CAN BE PELLETED WITH SERVODAY PELLET PLANT

<b>BIOMASS MATERIALS</b>	ASH %	KCAL/KG
Bagasse	1.8	4380
Castor Seed Shell	8.0	3862
Castor Stick	5.4	4300
Coconut Wastes	6.31	3720
Coffee Husk	5.3	4045
Coir Pith	9.1	4146
Corn Cobs	0.2	4100
Corn Dental Stick	3.0	4050
Cotton Stalk & Shell	3.0	4252
Groundnut Shell	3.8	4524
Lemon Grass	5.8	4030
Mulberry Stick	2.49	4380
Rice husk	20.65	3950
Saw Dust	1.2	4400
Sugar Cane Leaves	5.0	3996
Sun Flower Stalk	4.3	4300
Sweet Sorghum Stalk	7.4	4100
Tobacco Waste	31.5	2910
Black Wattle	0.9	4707
Paddy Straw	15.5	3436
Mustard Shell	3.7	4300
Barks Wood	4.4	4270
Wheat Straw	8	4100
Soya Bean Husk	4.1	4170
Jute Waste	3	4428
Cashew Husk	20	4100
Palm Husk	4.9	3900
Bamboo Dust	8	4160
Nappier Grass	8.55	4051
Forestry Waste	7	3000
Mustard Stalk	3.4	4200
Wood Chips	1.2	4785
Rice Straw	21.2	3200
Tea Waste	3.8	4237
Sunflower Stalk	4.3	4300

The calorific data shown above are for informational purposes only.





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# WHY CHEAPER IS NOT ALWAYS BETTER!



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