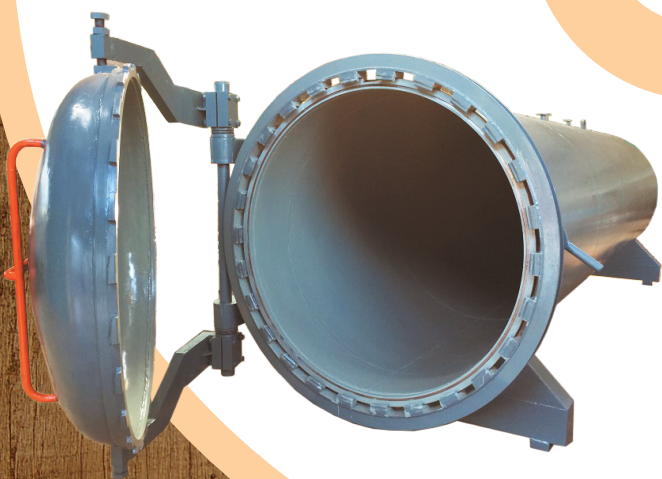




WINSOL
PHYTOTHERMAL SYSTEM

A Complete Wood Drying Solution



CERTIFICATION & MEMBERS



FEDERATION OF INDIAN EXPORT ORGANISATIONS

(Set up by Ministry of Commerce, Government of India)

C-701 / C-702, THE FIRST, B/H, KESHAVBAUG PARTY PLOT, B/H, ITC NARMADA HOTEL, NR. SHIVAJI HIGH STREET, OFF 132 FT RING ROAD, VASTRAPUR, AHMEDABAD-380015

Registration-Cum-Membership Certificate

RCMC NO.: AHD/1392/2021-2022

- 1 Name of Exporter : WINSOL PHYTOTHERMAL SYSTEM
- 2 IEC Number : 3409002898
- 3 Address of
(i) Registered/Head Office : I 153, G I D C, V U NAGAR,
ANAND
Gujarat - 388121
- (ii) Branch Office(s) :
- (iii) Factory(s) : 1. I 153, G I D C, V U NAGAR, ANAND / GUJARAT-388121
- 4 Date of Establishment : 11-08-1978
- 5 Description of goods for which Registered : 1. BAMBOO TREATMENT PLANT, BAMBOO DRYER, ELECTRIC POLE
TREATMENT PLANT, CHEMICAL TREATMENT PLANT
2. WOOD DOOR COLD PRESS
3. WOOD HEAT TREATMENT PLANT, WOOD SEASONING PLANT,
WOOD DRYER, WOOD KILN
- 6 Registration No. : FIEO/AHD/26711/2021-2022/1392
- 7 Registered as : Manufacturer Exporter
- 8 Name of Proprietor : 1. SHRI SHAILESHKUMAR CHAUHAN

This Certificate is issued as per the details of our records and is subject to the Conditions laid down in the relevant scheme of registration of the Federation in terms of Para - of current Handbook of Procedures.

Valid/Renewed upto : 31/03/2023

(Signature of competent officer)
Name : Jayprakash Shyam Sunder Goel
Designation : Deputy Director

Seal
Date of Issue : 23-12-2021

For endorsements, if any please see attached sheet(s)

"RCMC is valid for 5 year term subject to renewal and endorsement by payment of Annual Membership Subscription"

UQSR. Certificate

Universal Quality Standards Registrar has assessed the Quality Management System of:

WINSOL PHYTOTHERMAL SYSTEM

I 153, G I D C, G I D C, V U Nagar, Anand, Gujarat - 388121, India

And hereby declares that the management system of organization is in conformance with:

ISO 9001:2015

For the following scope of activities:

Manufacturing of wood seasoning Plant, Heat treatment Plant, FHAT Plant, ISPM Plant

Further clarification regarding the scope of this certificate and the applicability of quality management system standard requirements may be obtained by contacting the organization

Certificate No. UQSR-2026-WPS

Original Issue Date: 27/01/2021

Expiry Date: 26/01/2022

Current Issue Date: 27/01/2021

Recertification Due Date: 26/01/2024

IAF Code: 18

Issue No. 01

*Validity of certificate is subjected to the continued satisfactory performance during surveillance audit



Authorized By

Certification Manager

UQSR Global Private Limited
Formerly known as

Universal Quality Standards Registrar
www.uqsr.org

For information concerning validity of certificate, you can visit the site: www.uqsr.org

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Impact Factor: 5.924

World Journal of Engineering Research and Technology

Certificate



This is to certify that Article entitled **"EXPERIMENTAL SETUP FOR HEAT TREATMENT CHAMBER TO GET UNIFORM TEMPERATURE WITH MINIMUM TIME"** Manuscript no. WJERT/1780/6/2020, **Shaileshkumar A. Chauhan***, has been published in *World Journal of Engineering Research and Technology* (Volume 7, Issue 1) after getting reviewed by three reviewers.

Editor in Chief
WJERT

Managing Editor
WJERT



FEDERATION OF INDIAN
EXPORT ORGANISATIONS

Set up by Ministry of Commerce, Government of India
ISO 9001:2015 Certified





COMPANY PROFILE

Winsol Phytothermal System is a leading global brand of manufacturing and exporting wide range of Wood Seasoning equipments and plants since 1985. Through considerable 'Research and Development' drills, we have developed Timber Impregnation Plants and Timber Seasoning Kilns with state of the art mechanisms. We offer customized range on various parameters such as material of construction, oxygen transfer efficiency, media migration capability and speed as per clients' needs.

INFRASTRUCTURE

At WES, we have determinedly established highly equipped and eco-friendly infrastructural facilities to cope up with our aim to create machineries with unmatched identity. Our manufacturing unit conceives the most advanced machines such as container, lathe, cutting & material handling machines.

QUALITY

We are an ISO certified company, manufacturing wood treatment plants and machines for decades. We are also registered with DUNS- the mark that makes us different in the field.

We believe "Quality is never an accident; it is always a result of high intension, sincere efforts, intellectual direction, and skill full execution". And to achieve what we believe in, we have established a separated quality control unit where stringent standards are applied to make sure that the Timber Seasoning Plant and Kiln & Wood Treatment Plant are in accordance with international quality norms.

The quality unit is headed by senior professionals who assess the quality of the plants on various parameters including efficiency, performance and fuel consumption. Following the company's Quality Manual, they supervise each stage of production: right from procurement of raw material, manufacturing of plants and machines, till the final dispatch of products to ensure durability and long operational life.

CLIENTELE

After a corporate journey of more than three decades, we can now claim to be the most preferred choice among clients. Our clientele includes many renowned companies from India like Chandan Industries, Mankuva Mankuva, Sankarda, Jayant Packing Ind., Mumbai and Lokhandwala Constrn. Ind. Spreading the wings of qualitative success, we have also extended our domain across the Indian Subcontinent, East/Middle Africa, North Africa and South/West Africa.



VISION

To attain Global excellence by continuously developing and providing the best quality products and services to clients. fulfil expectations of our customers with innovative products Technology and applications.

Continuous enhancement in the product operation and its quality. Try to make all innovative product which can help in wood seasoning segment.

Also focus on the technology which can help the clients with good quality product and high production and easy operations.



MISSION

To be leading company in Forced hot air treatment plant, wood seasoning plant, chemical treatment plant segment.

Products & Services

Having wide range of products & services. Becoming the supplier of choice. Delivering premium products and services. Creating value for our customers.

Automation and Product

To give the best quality product with latest automation technique to easy operation with fast production.

Practices

Making Best Better all the time. Robusting our Processes & System with a future in mind.



Dear Clients,

After spending years of pursuing quality in what we do as Winsol Phytothermal System, I feel privileged to be writing this message as the CEO. To operate in an increasingly competitive world, ensuring high-quality standards has become imperative for the businesses to thrive in the global marketplace. Quality is consistently ranked as one of the top competitive priorities for firms and has become a foundation to the competitive advantage.

In such a time, Winsol Phytothermal System is not a just brand that manufactures a range of Timber Seasoning Plants and Kilns, but over the years, we grew up as an insightful eco-system with solid bonds with its clients. We are always on the move of feeding this eco-system on a heavy diet of quality assurance of industry benchmarks. By incorporating strict manufacturing and providing quality service we strive to satisfy our clients' expectations.

We are among one of the prominent manufacturers of an extensive range of Timber Seasoning Plant and Kiln & Wood Treatment Plant. Our range includes Timber Seasoning Kiln, Timber Treatment (Impregnation) Plant and Vacuum Drying. We supply these heat treatment plants throughout India Manufactured using premium quality raw material, these products can easily withstand extreme working conditions and hence are extensively used in various industries for different applications. Designed with the aid of latest technology, our range is also customized to undertake various processes as per the requirements of our clients. For designing and manufacturing these treatment plants, we have employed with us a qualified team of professionals, which has expertise in dismantling and re-installation. To suit the diverse requirements of our clients, we offer these products in standard as well as customized sizes.

Looking forward, we are dedicated to accelerating the quality standards while abiding to build on the strength of our brand in helping our clients create an additional business value. I am extremely excited to see our clients using these guidelines for their growth.

Let's work together for the state-of-the-art business eco-system.

Yours

-Shailesh Chauhan

FHAT PLANT



What is ISPM-15?

INTERNATIONAL STANDARD FOR PHYTO-SANITARY MEASURES is an International Phyto-sanitary Measure developed by the International Plant Protection Convention (IPPC) that directly addresses the need to treat wood materials of a thickness greater than 6mm, used to ship products between countries.

What does FHAT mean?

Forced Hot Air Treatment plant for wooden packaging material as per ISPM-15 Norms.

Why HT is necessary in wooden packaging material?

Its main purpose is to prevent the international transport and spread of disease and insects that could negatively affect plants or ecosystems. ISPM-15 affects all wood packaging material (pallets, crates, dunnages, etc.) requiring to be debarked and then heat treated and stamped.

Who issues HT certificate?

Ministry of Agriculture, Plant Protection Quarantine and Storage, Faridabad-1.

The beneficial features of WPS heat treatment plant run by wood fired system.

1. No need of steam or Thermic Fluid Boiler, as well as steam or oil pipe lines.
2. No heating transmission loss as there is no circulation of steam or heated oil.
3. The consumption of waste firewood is in small quantity to maintain 45 to 90°C temperature.
4. Capital investment is too less and installation is easy and speedy.
5. There is less maintenance work than the conventional pressurized steam heated kiln with boiler, as in our system firewood is burning by natural thermal system without any pressure.
6. Temperature controlling, humidification, exhaust ducts etc. can automated.
7. Furnace for burning waste-wood is installed inside the chamber and above the plinth level. Two doors are provided in the furnace, one is for feeding the waste wood and the other is for getting fresh air as well as throwing out the ashes. Both these doors are opened outside the chamber. Since this furnace is manufactured as per modern scientific technology, firing of waste wood is perfect and no smoke or fire can be seen outside the doors. Height of chimney is comparatively less.
8. The direct heat of furnace is not effecting the timbers stacked because heat is increased in the chamber by means of latest designed heating system indirectly, which is installed on the furnace inside the chamber. Propeller fans are also installed inside the chamber for forward & reverse circulation of air.
9. Packing woods and wooden sizes for block-boards can be treated in 2-3hrs.
10. This kiln can clean out the ash easily from inside of the furnace junction, and from inside of whole heating system. Entire machinery is made up of fireproof material.

- During monsoon season this HT plant can also season the timber faster than conventional kiln, because this kiln achieves high temperature, so that wet air with moisture of chamber can be venting out of chamber continuously, at that venting time the temperature of chamber can be maintained upto 45 – 90°C. So the drying process will be faster in monsoon also.
- There is a automated heat by-pass technique to solve over-heating problem.
- This kiln is duly equipped with all relevant machinery & instruments as per IS code.
- 2-3rs per pallet cost
- Our wide range of clientele in all major states of India and in many others countries are satisfied and get benefitted with our successful installation of Timber Heat Treatment Plant for years.

The beneficial features of WPS heat treatment plant run by diesel fired system.

- Easy operation
- No need of civil construction
- Complete nut-bolt based plant that can be moved easily from one place to another place
- Less maintenance plant comparative from others
- Sox, NOx, Pollution free
- Available in various sizes, from 50 pallets to 1000 pallets
- Beneficial for pallet manufacturer who have small quantity to treat
- Automation systems, designed to be operated easily by any one
- Automatic maintenance of all data, graphs, records as per ISPM-15 norms
- Separate and easy operational parts in Automation System
- 4-6rs per pallet cost

Specification for Forced Hot Air Treatment plant.

Sr. No.	Particulars	WPS-250 Pallets Wood Waste Fired (Box Panel Type)	WPS-225 Pallets Wood Waste Fired (Box Panel Type)	WPS-200 Pallets Wood Waste Fired (Box Panel Type)	WPS-125 Pallets Wood Waste Fired (Box Panel Type)	WPS-100 Pallets Wood Fired (Box Panel Type)	WPS-50 Pallets Wood Fired (Box Panel Type)
1	Electricity Power - 3 Phase	8.00 HP	8.00 HP	7.00 HP	6.00 HP	3.00 HP	3.00 HP
2	Size of Plant	27'-0" Long x 17'-0" W x 10'-0" Ht. (civil construction)	24'-0" Long x 17'-0" W x 10'-3" Ht. (civil construction)	20'-6" Long x 18'-0" W x 10'-0" Ht.O/O (Box Panel Type GI Sheet)	17'-0" Long x 17'-0" W x 10'-0" Ht. (MS Steel Container)	18'-0" Long x 10'-0" W x 10'-0" Ht. (MS Steel Container)	14'-0" Long x 10'-0" W x 10'-0" Ht. (MS Steel Container)
3	Approx. Wood fire consumption per hour	15 – 20 kg/hr	15 – 20 kg/hr	15 – 20 kg/hr	10 – 15 kg/hr	10-15 Kg/hr	10-15 Kg/hr
	Approx. Diesel consumption per hour	10-12Ltr./Hr	9-10Ltr./Hr	9-10 Ltr./Hr	8-10 Ltr./Hr	6-8 Ltr./Hr	6-8 Ltr./Hr

- A) Computer System with Led Monitor, UPS Backup and HP Colour Inkjet Printer
- B) Digital Moisture Meter and Mercury Glass Thermometer of 1/10th Deviation are supplied with FHAT Plant.

Note: All Above Options are Available with Diesel Burner as well as Electric Heaters.
 You may select your required capacity plant and extra equipments before the final quotation.



FHAT Plant as Per ISPM-15 Norms.
 Made from GI 18smg Sheet



Wood Fired Based FHAT Plant As Per
 ISPM-15 Norms.
 Made From Gi 18smg Sheet



700 Pallets FHAT Plant

TIMBER SEASONING KILN



What is Seasoning?

When a tree is newly felled, it contains about 55% or more of its own weight as water. This water is in the form of sap and moisture. The water is to be removed before the timber can be used for any engineering purpose. In other words, The process of removing this moisture is referred to as seasoning and constitutes one of the most Important steps in converting raw wood into finished products.

This process of drying of timber is known as the seasoning of timber.

Advantage of Timber Seasoning

- Zero risk of fungal decay.
- Reduction in weight.
- Increase in Strength Properties.
- Improved capacity to hold nail and screw.
- High gluing capacity.
- Reduction in moisture content by 8 - 15%.
- Improved electrical and thermal insulation properties.

How to Seasoning Timber?

Timber seasoning by most effective and economic process by:

Wood waste fired furnace seasoning kiln

Or

Indirect heated internal heating system & fan furnace kiln.

The Beneficial Features of Timber Seasoning Kiln

1. No need of steam or Thermic Fluid Boiler, as well as steam or oil pipe lines.
2. No heating transmission loss as there is no circulation of steam or heated oil.
3. The consumption of waste firewood is in small quantity to maintain 45 to 90°C temperature.
4. Capital investment is too less and installation is easy and speedy.
5. There is less maintenance work than the conventional pressurized steam heated kiln with boiler, as in our system firewood is burning by natural thermal system without any pressure.
6. Temperature controlling, humidification, exhaust ducts etc. can be operated easily manually/ automatically.
7. Furnace for burning waste-wood is installed inside the chamber and above the plinth level. Two doors are provided in the furnace, one is for feeding the waste wood and the other is for getting fresh air as well as throwing out the ashes. Both these doors are opened outside the chamber. Since this furnace is manufactured as per modern scientific technology, firing of waste wood is perfect and no smoke or fire can be seen outside of the doors.

The direct heat of furnace is not effecting the timbers stacked for seasoning because heat is increased in the chamber by means of latest designed heating system indirectly, which is installed on the furnace inside the chamber. Propeller fans also installed inside the chamber for forward & reverse circulation of air.
8. Packing woods and wooden sizes for block-boards can be seasoned within 70 – 100 hrs, whereas woods for doors & windows are seasoned within 150 to 200 hrs as described in Indian standard (depends upon local weather conditions).
9. During monsoon season, this kiln can season the timber faster than conventional kiln, because this kiln achieves high temperature, so that wet air with moisture of chamber can be venting out of chamber continuously, at that venting time the temperature of chamber can be maintained upto 45 – 90°C. So the drying process will be faster in monsoon also.

10. This kiln can clean out the ash easily from inside of the furnace junction, and from inside of whole heating system.

11. There is a heat by-pass technique to solve over-heating problem. Over-heat can be by-passed within a moment by operating a simple lever./automatic control.
12. This kiln is duly equipped with all relevant machinery & instruments as per IS code.

13. 16-20rs per CFT cost

14. Our wide range of clientele in all major states of India and in many others countries are satisfied and get benefitted with our successful installation of Timber Heat Treatment Plant for years.

Wood waste fired furnace seasoning kiln - Capacity & cost analysis:

Sr. No.	PARTICULARS	Winsol-300 300 F ³ Cap. 8.4 M ³ Cap.	Winsol-500 500 F ³ Cap. 14.1 M ³ Cap.	Winsol-700 700 F ³ Cap. 20 M ³ Cap.	Winsol-1200 1200 F ³ Cap. 34 M ³ Cap.
1	Stacking Capacity of timber species at different thickness in same Kiln Chamber : a) 1" thk. with 0.75" thk. crosser.	300 F ³	500 F ³	700 F ³	1200 F ³
2	Electricity Power – 3 Phase	6.0 HP	6.0 HP	6.0 HP	12.0 HP
3	Water Connection	0.5" Pipe	0.5" Pipe	0.5" Pipe	0.5" Pipe
4	Civil Constructed chamber with RCC slab, Insulated doors & windows – Overall dimension of 14" thk wall.	16'-6" Long x 15'-3" W x 11'-3" Ht.	19'-6" Long x 17'-3" W x 11'-3" Ht.	25'-6" Long x 17'-3" W x 11'-3" Ht.	36'-6" Long x 17'-3" W x 11'-3" Ht.
5	Approx. Fire-wood consumption per hour.	8 – 10 kg	8 – 10 kg	10 – 15 kg	15 – 20 kg

Insulated panel type wood waste fired timber seasoning kiln

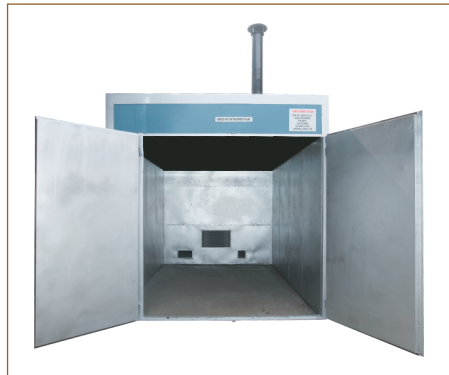
Sr. No.	PARTICULARS	Winsol-100 100 F ³ Cap.	Winsol-200 200 F ³ Cap.	Winsol-300 300 F ³ Cap.	Winsol-500 500 F ³ Cap.
1	Stacking Capacity of timber species at different thickness in same Kiln Chamber : a) 1" thk. with 0.75" thk. crosser.	100 F ³	200 F ³	300 F ³	500 F ³
2	Electricity Power – 3 Phase	3.0 HP	3.0 HP	5.0 HP	5.0 HP
3	Water Connection	0.5" Pipe	0.5" Pipe	0.5" Pipe	0.5" Pipe
4	Civil Constructed chamber with RCC slab, Insulated doors & windows – Overall dimension of 14" thk. wall.	10'-0" Long x 8'-0" W x 10'-0" Ht.	12'-0" Long x 8'-0" W x 10'-0" Ht.	14'-0" Long x 8'-0" W x 10'-0" Ht.	16'-0" Long x 8'-0" W x 10'-0" Ht.
5	Approx. Fire-wood consumption per hour.	5 – 8 kg	5 – 10 kg	10 – 12 kg	12 – 15 kg



100 - 500 CFT Capacity type model



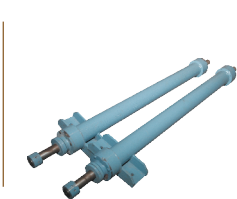
700-1200-1500 CFT Capacity type model



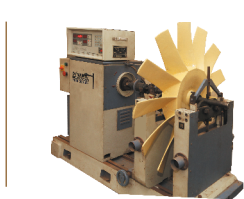
100 - 500 CFT Capacity type model



Furnace-Junction



Blower Housing



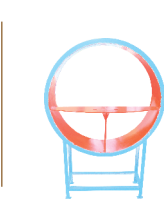
Blower Balancing Machine



Aluminum Blower

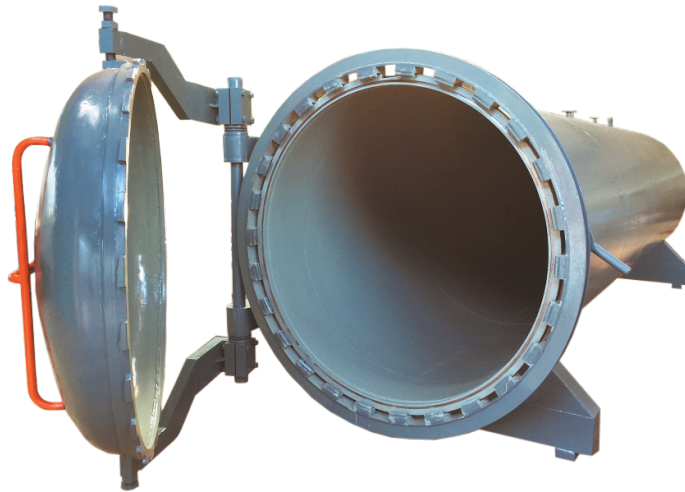


Heat Exchanger



Fan Guard

TIMBER TREATMENT (IMPREGNATION) OR VACUUM PRESSURE TIMBER TREATMENT PLANT



“WINSOL” Timber treatment plant is used for vacuum pressure impregnation of timber with water borne preservatives like CCA, ACC, Boron and others. Operating is easy and labourless. Treatment cycle process is obtained with records of solution strength, timing of vacuum & pressure with average absorption per CFT of preservatives. The plant can be operated for,

- A Pressure Process
- B Vacuum & Pressure or Full Cell or Bethel process
- C Lowry process
- D Reuping process.

Above process can be achieved with the help of operating manual & training.

The Beneficial Features

1. The horizontal pressure vessel placed above the underground constructed storage tank. By this no pump is required to transport the solution from vessel to the storage tank, as it will be done by gravity. It makes the plant very compact which minimizes the land area also.
2. The plant is supplied as a turn-key unit, which is ready for operation immediately after 3-stage installation process:
 - a. leveling on the concrete foundation
 - b. Assembling the ready- made pipings with valves and
 - c. Connection to electricity and water.The installation is carried out within 4-5 hours. The plant can easily be shifted or re-located to another site as & when if required.
3. To minimize the maintenance costs, the plant is equipped with features like
 - All pumps, valves & components are of well-known standard brands
 - Main parts of valves and pumps are made of Stainless steel

- In line, filters in front of all pumps
- All pipings are with flange fitting type.

All these features allow the plant to be operated for decades without major repair works.

4. The plant is manufactured with latest and most suitable design of quick locking door i.e. taper wedge lock designed which is quick operated by rack & pinion and taper ring designed which is quick operated by heavy screw & wing nut. This design prevents to tightening & opening of number of bolts & nuts with spanners as per old Indian designs.
5. The underground RCC concrete tank is working as measuring tank as well as mixing tank. This tank is used for mixing the concentrated preservative chemicals with water by using pressurized air bubbling through numbers of nozzles at the bottom of the tank.
6. This mixes the chemicals with water when prepared new solution as well as per day before starting the process.

Timber Treatment (Impregnation) Plant Capacity And Cost Analysis

1. “WINSOL” Vacuum, Pressure Treatment (Impregnation) Plant having following sizes horizontal pressure vessels with one side openable taper wedge lock system, quick opening door for various capacity per charge, suitable for required vacuum and pressure with vacuum separator tank, exhaust silencer tank, vacuum pump, pressure pump, filling pump,
2. piping with manually operated valves, NRV valves, strainers, safety valves, MS fabricated pumping station frame, lactometer, pressure gauge & vacuum gauge.
3. Plant is suitable for process of pressure - vacuum pressure and alternative pressure cycles.

Extra Equipments At Extra Cost

- 1. Special Treatment (Impregnation) Plant for White Wood species i.e. Beech, Maple, Rubber, with alternative pressure system. These timbers must be treated immediately after cutting of tree with high moisture content.
- 2. Semi-Automatic controlled with pneumatically operated valves by soft touch sensors with timers.
- 3. The plant can be made of any specific length as demanded with the same diameter.
- 4. Internal & Outer tracks and trolley.

Sr. No.	Model No.	Capacity W/o Traully	Size of Vessel (ID X Long)	Reqd. HP
1	WIN-7215	350CFT	72" X 15'-0"	9
2	WIN-7222	600 CFT	72" X 22'-0"	11
3	WIN-7230	700 CFT	72" X 30'-0"	12
4	WIN-8415	500 CFT	84" X 15'-0"	11
5	WIN-8422	800 CFT	84" X 22'-0"	12
6	WIN-8430	1000 CFT	84" X 30'-0"	14

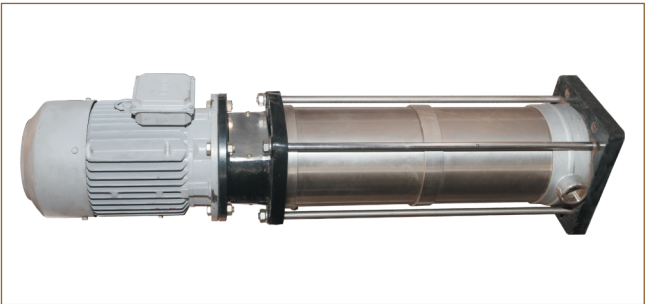
Note: All these models are having Single openable door end, with quick openable, taper wedge locking system.



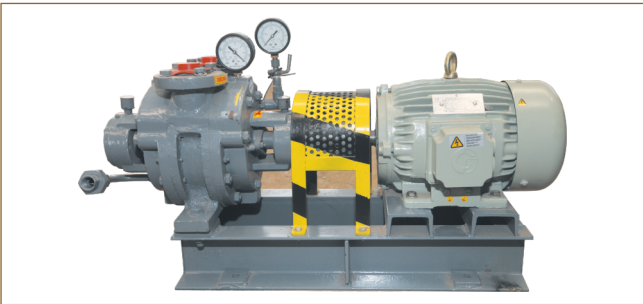
Vacuum Pressure Cylinder with Quick Wedge Lock System



Quick Wedge Lock System Door



Multi Stage Pressure Pump



Vacuum Pump

AUTOMATION OF TIMBER PROCESSING PLANT

We introduce ourselves as one of the leading manufacturer of Automation Panel for ISPM-15 approved FHAT Plant with government inspection and its working successfully many customers of India. We also modify your old panel with our hi-tech and latest Automation Panel with latest Data logging Software.

Through our Automaton Panel you can control and record Temperature & Humidity of your plant. We can also provide you web based data monitor and record from you access your data on mobile and laptop.

We also manufacture PLC based Automation Panel for Wood Seasoning Plant with Auto-Manual system, which control and record Temperature Humidity and moisture of your Plant with Online Digital Moisture Indication. It is also Programmable for any kind of Wood.

PRODUCTS

PID Temp. Controller

SCR Power Controller

Sensors (Thermocouple & RTD)

Windows Based-D.A.S.Software

System Automation & Control Panels

Temp. Scanner, Data Logger

Digital humidity controller

Digital on line moisture controllers

Calibration

We welcome the opportunity of quoting for any inquiries you may have.

AUTOMATION OF TIMBER SEASONING KILN

- A) Touch pane control with programmable for any kind of wood. 15 no. programmes can be stored inside touch panel. All process parameters like temperature, humidity, moisture can be record as per date and time to analyse your treatment. One Temperature controller which operate control valve/heater/burner to control the heating of your chamber. One safety Temperature controller, for annunciation in case of over/under temperature One Humidity Controller which operate humidity window and spray to control the humidity inside the chamber. One 4-channel Moisture Indicator which indicate moisture inside the wood of four different location. Forward time, reverse time and hold time can be setttable from touch panel. All control parameter like temperature, humidity, fan etc. can be control auto as well as manual mode.
- B) Heat Exchangers: Heat Exchangers are made up of seamless pipe finning with high tensile sheet which having high efficiency of heat transfer,
- C) Blower; The air ventilation is provided by reversible fans with high performance level installed in chamber. The fans can perform with the same efficiency and capacity in both direction and at any revolution rate. Each fan has 13 aluminum blades with perfectly symmetrical shape. The aluminum fan 900 mm mountain on shaft of the specially designed with high speed taper rolling bearings,
- D) Damper Actuators: The damper actuator is standard with 9nm torque with corrosion free dampers.
- E) The stainless steel solenoid valve for heating and is resistant to corrosion and long service life.
- F) Three way valve in thermic fluid heating system which saving energy through pass system.



3 Way Operating Valve



Seamless Pipe Heat Exchangers



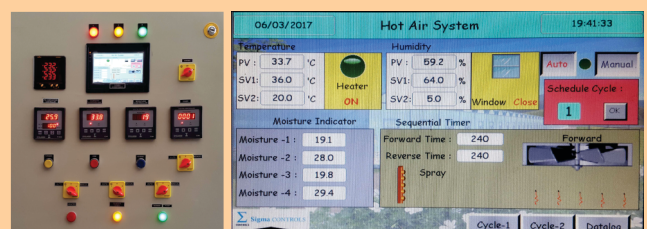
Corrosion Free Humidity Damper



Forward Reverse Aluminum Blower



Automatic Damper Actuator



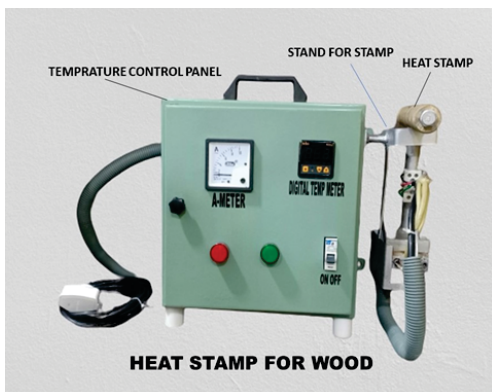
Automatic Control Panel

WOODEN HEAT STAMP

Heat Stamp and Stand

Durable wooden block handle for better grip during stamp. We are also providing heat stamp stand for safety concern to protect person from accident.

- Light Weight (1.7Kg)
- Very easy to handling
- High grade heat resistance base plate
- All in One : Heating stamp + Controller + Sensor + Handle
- Easy to temperature controlling
- 100% Brass Die of 3"LX2"H as per ISPM-15
- Safety: Available with Safety Fuse with On/Off switch
- Use in Any application Leather, Wood, Company Logo etc



Pneumatic Wooden Block Cutting Machine



WPS-150





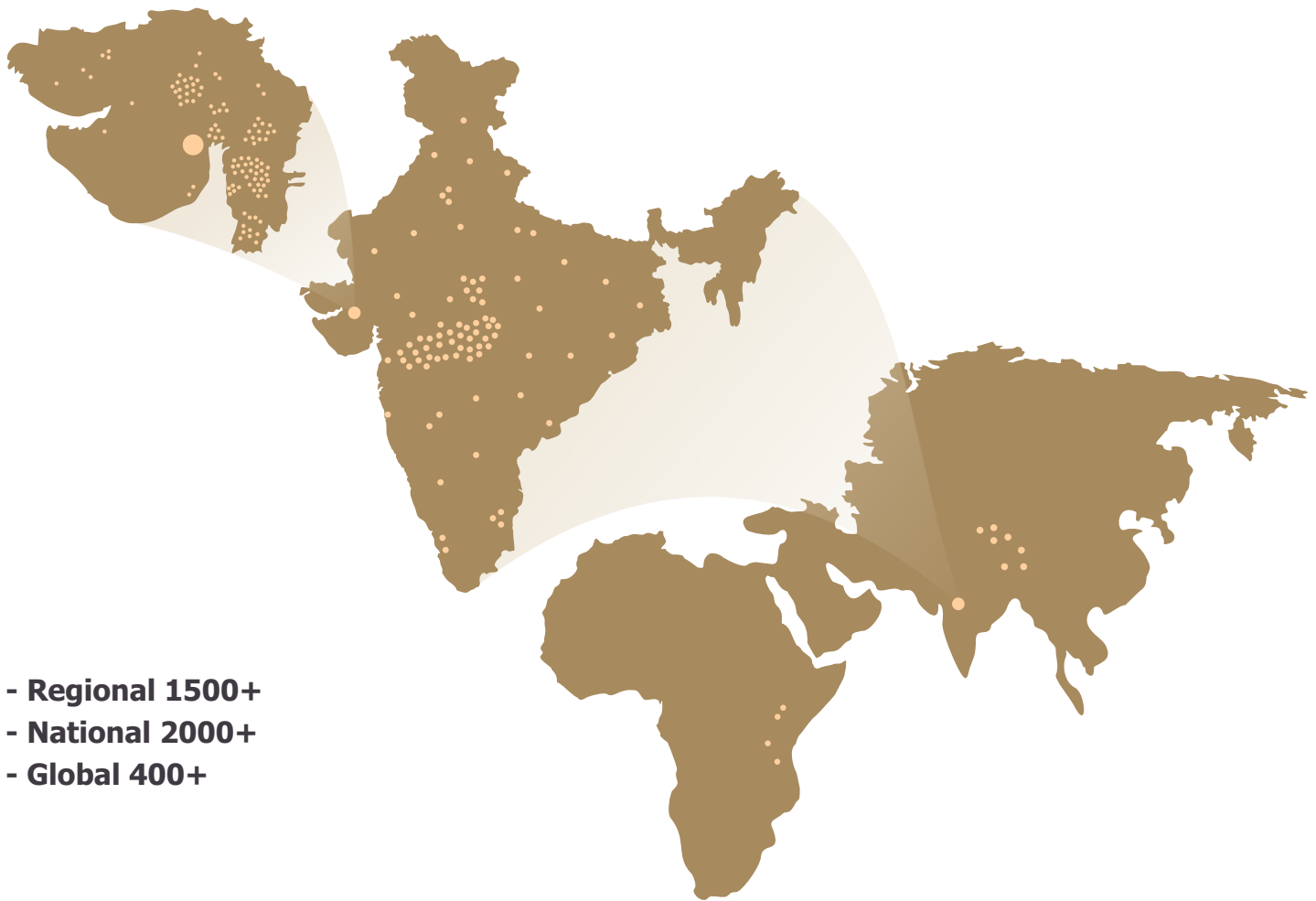
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1. No need of steam or Thermic Fluid Boiler, as well as steam or oil pipe lines.
2. No heating transmission loss as there is no circulation of steam or heated oil.
3. The consumption of waste firewood is in small quantity to maintain 45° to 90°C temperature.
4. Capital investment is too less and installation is easy and speedy.
5. There is less maintenance work than the conventional pressurized steam heated kiln with boiler, as in our system firewood is burning by natural thermal system without any pressure.
6. Temperature controlling, humidification, exhaust ducts etc. can be manually /AUTOMATED operate easily.
7. Furnace for burning waste-wood is installed inside the chamber and above the plinth level. Two doors are provided in the furnace, one is for feeding the waste wood and the other is for getting fresh air as well as throwing out the ashes. Both these doors are opened outside the chamber. Since this furnace is manufactured as per modern scientific technology, firing of waste wood is perfect and no smoke or fire can be seen outside of the doors.

The direct heat of furnace is not effecting the timbers stacked for seasoning because heat is increased in the chamber by means of latest designed heating system indirectly, which is installed on the furnace inside the chamber. Propeller fans also installed inside the chamber for forward & reverse circulation of air.

8. Packing woods and wooden sizes for block-boards can be seasoned within 70 – 100 hrs, whereas woods for doors & windows are seasoned within 150 to 200 hrs as described in Indian standard (depends upon local weather conditions).
9. During monsoon season this kiln can season the timber faster than conventional kiln, because this kiln achieves high temperature, so that wet air with moisture of chamber can be venting out of chamber continuously, at that venting time the temperature of chamber can be maintained upto 45 – 90oC. So the drying process will be faster in monsoon also.
10. This kiln can clean out the ash easily from inside of the furnace Junction, and from inside of Whole heating system.
11. There is a heat by-pass technique to solve over-heating problem. Over-heat can be by-passed within a moment by operating a simple lever./automatic control.
12. Our wide experience of manufacturing & installation successfully for huge numbers of timber seasoning kilns at various places in Gujarat, Maharashtra, U. P., West-Bengal, M. P., Kerala etc. We also include an operation manual and comprehensive training for using all equipment of this kiln as per IS Code.
13. This kiln is duly equipped with all relevant machinery & instruments as per IS code.

Our Regional, National and Global Clients



- Regional 1500+
- National 2000+
- Global 400+



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