

咨询和售后服务——伙伴关系

ADVISORY AND AFTER-SALES SERVICE PARTNERSHIP RIGHT FROM THE WORD "GO"

- 为确保我们所提供的设备正是贵公司所需要的，我们的技术人员将专门分析您的具体情况——认真考虑您的干燥要求，您的能源供应情况，您的有效场地等，之后我们将拟定一个适合您的方案。请与我们联系，我们将非常高兴地拜访您或欢迎您来我们总部及工厂参观！
- To make sure that we offer you only the solution that is just right for your firm's needs. We analyse your situation-having regard to your drying requirements, your energy-supply situation and the space you have available-and drew up a carefully made-to-measure offer for you. Just give us a call, or write to us, we will be pleased to come and visit you, or to welcome you to our factory and company.



公司总部 (Company)

地址 (ADD): 南京林业大学南林大厦 1009 室

☎ 025-85427513/85421544

传真 (FAX): 025-85436286 | 网址 (HTTP): www.xinandrying.com

E-mail: market@xinandrying.com

制造工厂 (Factory) 地址 (ADD): 江苏省江阴市徐霞客镇

☎ 0510-86534890

传真 (FAX): 0510-86913581



 **XINAN DRYING**
星楠干燥

为了您的成功 我们将做的更好！

We will make better for your success !

南京林业大学干燥技术研究所 | 江苏星楠干燥设备有限公司

Institute of Technology of Nanjing Forestry University | Jiangsu XINAN Wooddrying Systems CO.,LTD

OVERVIEW OF XINAN

星楠概况

- 江苏星楠干燥设备有限公司是实力雄厚的专业制造木材干燥设备的实体，依托于南京林业大学木材干燥技术研究所，是集产、学、研为一体的现代化高新技术企业，早在 2003 年就通过了 ISO9001-2000 国际质量认证体系和 CE 认证。公司技术力量雄厚，多名具备博士、硕士学位的专家，长期致力于木材干燥工艺和设备以及控制系统的研究、应用，荣获多种国家奖项和荣誉，持有多项发明专利和实用新型专利。公司总部设在南京，制造工厂地处中国经济发达的江苏省江阴市徐霞客镇。



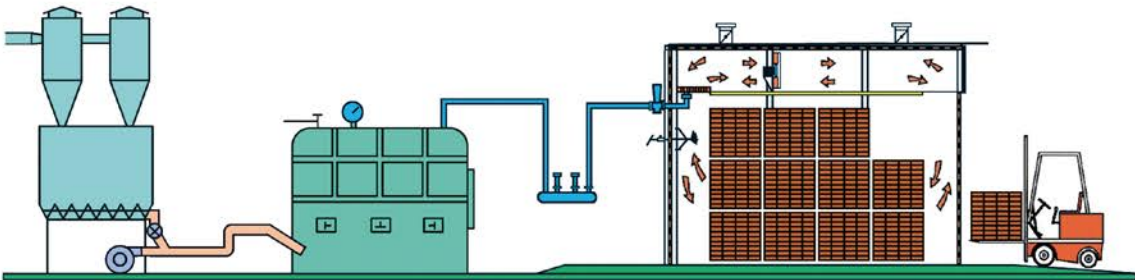
- Institute of Drying Technology of Nanjing Forestry University - Jiangsu XINAN Wooddrying Systems Co., LTD specialize in scientific research and equipment production in wood drying. XINAN closely cooperates with Nanjing Forestry University and combines production and scientific research. The corporation is staffed with experts with years of experiences in wood drying and dedicated to research, production and customer service. The corporation has been awarded with a variety of prizes and patents. It is headquartered in Nanjing, the capital city of Jiangsu Province and factory is located in Jiangyin, a developed city in Jiangsu Province.
- With the elites in wooddrying, XINAN been making ceaseless efforts to improve wood drying technology and equipments with its experts and experiences and will always do its best for wood processing industry all over the world.



XINAN CONVENTIONAL WOOD DRYING SYSTEMS

星楠常规木材干燥系统

- 木材加工废料经收集至料仓集中
 - 木废料经排料器定量地由螺旋输送机输送至燃烧炉燃烧
 - 产生的蒸汽、高温水、导热油或炉气输送至干燥窑供热
-
- The wood waste produced in the machining process is collected and stocked in the silo
 - The wood waste is transported by screw conveyer from excretive valve to the boiler
 - The steam or hot water or hot oil or gas from the boiler is sent to the kilns for heating



• 星楠根据您的要求，可以为您提供整个系统的设计制造安装

XINAN can provide the entire wooddrying system to meet your requirements

型 号	材 积	干燥窑净尺寸	材堆尺寸	装机功率
Model	Capacity(m³)	Dimension of Kiln(mm)	Dimension of stack(mm)	Power (kw)
XN 2 0	20	4300×4800×4800	4000×3000×3600	6
XN 3 0	30	4300×5600×4800	4000×4000×3600	6
XN 4 0	40	4300×6600×5600	4000×4600×4400	9
XN 5 0	50	6400×6000×5600	6000×4000×4400	9
XN 6 0	60	6400×6600×5600	6000×4600×4400	9
XN 8 0	80	9000×6600×5600	8000×4600×4400	15
XN100	100	9000×8600×5600	8000×6600×4400	15
XN120	120	10500×8600×5600	10000×6600×4400	18
XN150	150	13500×8600×5600	12000×6600×4400	21
XN200	200	15800×8600×5600	12000×6600×4400	27

CONVENTIONAL WOOD DRYING KILNS

常规木材干燥窑

- 使用全自动、半自动或手动控制系统
 - 窑体可分为全铝合金窑体或土建壳体
 - 窑门为对开或吊挂式，高度密封，开启轻便、灵活
 - 进料方式为叉车进料或轨道小车进料
 - 加热介质为蒸汽、高温水、导热油、炉气或电
-
- Automatic, semiautomatic or hand-operate control system
 - Kiln body can be all-aluminum or concrete and brick structure
 - The folio doors and hanging doors are highly airtight and flexible to close and open
 - The handing of wood is completed by forklift or the sliding vehicle with floor rail
 - Energy source of wood drying kilns can be steam, hot-water, hot-oil, gas, or electricity



- 全铝合金干燥窑的内外壁板采用铝合金板，保温材料采用离心玻璃棉或岩棉，立柱和桁架采用异型铝合金型材。

All-aluminum kiln body is composed of covering panels, insulation layers, columns and trusses. Both inner and outer covering panel are made of aluminum panel. Insulation layer is made of fiber glass or rock wool. The column and truss is made of special shaped aluminum.



- 特别针对俄罗斯等国家的寒冷地区，窑顶厚度达250mm，能承受300-400kg/m²的雪载，窑体墙壁厚度150mm，保证在-30~-50℃环境温度下正常工作。

To meet the cold climate in Russia, the thickness of the kiln roof is up to 250mm which can with stand the snow load of 300-400kg/m². The thickness of the kiln walls is 150mm, which can guarantee the normal operation during the temperature of -30~-50℃.



WOOD THERMAL MODIFICATION SYSTEM

木材高温热处理设备

- XNH系列木材高温热处理设备是南京林业大学干燥技术研究所、江苏星楠干燥设备有限公司借鉴欧洲高温热处理设备的先进制造经验，结合国内工艺要求自主研发的，并在2006年率先在国内推出第一套炭化设备。星楠公司持有四项与此设备相关的专利，现已生效。
- XNH系列木材高温热处理设备有全铝或全不锈钢焊接组装的窑式和碳钢-不锈钢复合的罐式两种结构可供选择。
- XNH wood thermal modification system is developed by Institute of Drying Technology of Nanjing Forestry and Jiangsu XINAN Wood Drying Systems Co., LTD based on careful study of existing high temperature heat-treated equipment abroad. The first thermal modification equipment in China is produced by XINAN in 2006. XINAN have 4 patents about the equipment now.
- XNH wood thermal modification system has two structures: all-aluminum assembled kiln and carbon steel and stainless steel composite cylinder.



窑式炭化设备
XNH All-aluminum assembled Kiln



罐式炭化设备
XNH Bimetallic Cylinder

• XNH干燥窑技术参数

Main Technology Coefficient of XNH Series

型号 Model	材积 Capacity(m³)	干燥窑净尺寸 Dimension of Kiln(mm)	材堆尺寸 Dimension of stack(mm)
全铝组装窑式 (All-aluminum assembled kiln)			
XNH-TS16	16	4500×4400×5000	4000×2400×3200
XNH-TS18	18	4500×4600×5000	4000×2700×3200
XNH-TS25	25	6600×4400×5000	6000×2400×3200
XNH-TS28	28	6600×4600×5000	6000×2700×3200
XNH-TS33	33	8600×4400×5000	8000×2400×3200
XNH-TS35	35	8600×4600×5000	8000×2700×3200
碳钢-不锈钢复合罐式(carbon steel and stainless steel composite cylinder)			
XNH-CS4	4	Φ 2200×4000	4000×1200×1500
XNH-CS6	6	Φ 2200×6000	6000×1200×1500
XNH-CS8	8	Φ 2200×8000	8000×1200×1500
XNH-CS15	15	Φ 2800×8000	8000×1800×2000

• 窑式炭化设备的特点

Advantages of XNH All-aluminum Assembled Kiln

- 星楠公司自主研发的全自动控制系统，控制精确可靠
- 采用高效风机，确保热处理均匀
- 炭化热处理温度在160 ~ 230℃之间可调
- 独有安全系统
- 全铝合金或全不锈钢壳体，超厚保温，防渗制作安装
- Automatic control system researched and developed by XINAN. Precise and reliable control guaranteed.
- Fans with high efficiency to make thermal uniform.
- Temperature can be adjusted between 160℃ and 230℃ as thermal modified system.
- Unique security system.
- All-aluminum alloy or stainless steel kiln housing, ultra-thick, penetration preventer.

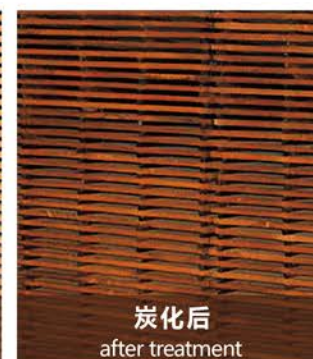
• 罐式炭化设备的特点

Advantages of XNH Bimetallic Cylinder

- 进口德国控制仪表，确保控制精确可靠
- 增加介质循环装置，确保热处理均匀
- 根据炭化工艺要求，温度在160 ~ 230℃之间可调
- 碳钢-不锈钢复合罐体，经济性强、保证强度、经久耐用
- Controlling instrument made in Germany to ensure precise and reliable control
- Circulating air to make thermal uniform
- Temperature can be adjusted between 160℃ and 230℃ according to the requirement
- Bimetallic (Carbon steel and stainless steel) shell with economical efficiency, durability and intensity



炭化前
before treatment



炭化后
after treatment

炭化前后木材对比
Normal kiln-dried timber and heat-treated timber



不同处理温度木材炭化颜色
The color of heat-treated wood at different treatment temperature

FAST DRYING KILNS FOR SOFT WOOD

XVT针叶材快速干燥窑



- 针叶材快速干燥窑是利用新西兰快速干燥新西兰松的经验，与新西兰合作开发的软材干燥设备，首批三套60m³的星楠XVT快速干燥窑2004年建于江苏太仓。该设备适用于部分软材的快速干燥。
- The first 3 XVT fast drying kilns in Taicang Jiangsu, China produced by XINAN in 2004 use the drying technology of New Zealand Pine from New Zealand . This type kiln is very fit for softwood drying.

● 针叶材快速干燥窑技术参数

Main Technology Coefficient of XVT Series

型 号	材 积	干燥窑净尺寸	材堆尺寸	风机(台)	风 速	最大热功率	年干燥量
Model	Capacity/(m³)	Dimension of kiln/(mm)	Dimension of stack/(mm)	Fan(set)	Velocity(m/s)	Thermal power/(104Kcal/h)	Drying quantity /year
XVT	60	13400×5000×7120	12000×2500×3800	4	5	120	9500
XVT	80	17400×5000×7120	16000×2500×3800	5	5	160	11400
XVT	100	21400×5000×7120	20000×2500×3800	7	5	200	15700

- 注：年干燥量以干燥40mm厚辐射松、初含水率为120%、终含水率为10%、年工作日为11个月、干燥周期50小时计算，并不包括冷却时间。

Note: the drying quantity per year is calculated by the 40mm thick Radiate Pine, with initial moisture of 120% and ending moisture of 10%. The drying time per cycle is 50 hours, not including the cooling time. The working time is 11 months per year.

DEHUMIDIFICATION WOOD DRYING KILN

除湿干燥窑

- XNC 系列除湿干燥窑是采用清洁能源 - 电为能源的木材干燥设备，适用于中小规模木材加工企业，用于干燥初含水率较低的难干材和木制品加工过程中半成品的平衡处理，较常规干燥节能约 40% 左右。
- XNC Series Dehumidification Drying Kiln dries the timber using dehumidifying method with the electric power. The equipment utilizes high temperatures dehumidifier, and the operating temperature can reach up to 70℃. It is a good fit for the hard wood timber with less initial moisture content or intermediary wood products that is usually high in moisture to balance the manufacturing process. The equipment can reduce energy about 40% compared to conventional drying equipment.



● 除湿干燥设备特点

Advantage of Dehumidification Drying

- 采用全自动/半自动控制系统
- 窑体可分为全铝合金窑体或土建壳体
- 可以直接采用清洁能源-电为主要能源，避免锅炉供热的环保问题
- 选用进口压缩机，高效耐用
- Automatic and Semi-automatic Control system
- All-aluminum alloy or Masonry kiln housing
- Energy source is Electric, Clean and Environment friendly
- High efficiency and durable Compressor

型 号	材 积	干燥窑净尺寸	材堆尺寸	风机(台)	除湿量/ (Kg/h)	装机功率
Model	Capacity/(m³)	Dimension of kiln/(mm)	Dimension of stack/(mm)	Fan(set)	Dehumidifying power	install power(KW)
XNC-10~15	10~15	3600×5500×3500	2000×4000×3000	2	12	6+3.5+12
XNC-20~25	20~25	4300×4800×4800	4000×3000×3600	2	16	6+5.5+24
XNC-30~40	30~40	4300×6600×5600	4000×5000×4400	3	25	9+6.5+36
XNC-50~60	50~60	6400×6600×5600	6000×5000×4400	3	30	9+7.5+48

Vacuum Drying Kiln

真空干燥窑

- XNZ系列真空干燥窑是我司针对难干材种干燥和薄板干燥设计的真空木材干燥设备。该设备可以保证硬阔叶材厚板的干燥质量、缩短干燥时间，也可以保证薄板的干燥平整度。

- XINAN'S XNZ series vacuum drying kiln is tailored especially for thin veneer and types of wood that is hard to dry. XNZ series vacuum drying kiln is made of carbon steel - stainless steel clad cabinet . The thermal media of the kiln is hot water which can be provided by steam, hot oil, electricity and etc, with rapid heating speed and high thermal efficiency.



● 真空干燥设备特点 Advantage of Vacuum drying

- 星楠公司自主研发的触摸屏全自动控制系统
- 采用铝制热板接触加热，干燥的木材平整
- 设备设计合理、真空度高
- 轨道小车进出，方便生产操作
- 采用碳钢-不锈钢复合箱体，经济耐用
- Automatic control system with touch screen
- Heated by the aluminum plant, the lumber is smooth
- High vacuum degree
- The rail trolley is convenient
- The Carbon-Stainless Steel housing is economical and durable



型 号	设备内尺寸 (mm)	装材尺寸 (mm)	真空泵功率 (KW)	加热板层数
Model	Inside Dimension of kiln	Dimension of stack	Power of the pump(KW)	Layer of the heating plate
XNZ-4F	5500×1600×1400	4000×1400×1280	9	24
XNZ-6F	7500×1600×1400	6000×1400×1280	11	24
XNZ-10F	9500×1600×1400	8000×1400×1280	15	24
XNZ-15F	9500×2200×1800	8000×2000×1680	17	31

INDIRECT-FIRED HEATING WOOD DRYING KILNS

炉气间接加热干燥窑



- 炉气间接加热干燥是以木材加工剩余物——刨花、锯屑、边皮、料头等为燃料，在炉内充分燃烧生成炉气。通过换热器加热窑内湿空气，从而加热和干燥木材。

The principle of indirect-fired heating system is similar to steam heating system. The combustion gas from burning wood residue is guided into gas pipes. Then the heat is transferred to circulate air in the kiln to dry the timber.



型 号	窑内净尺寸	木材实积	装机功率
Model	Dimension of kiln(mm)	Capacity (m³)	Power (KW)
XNL—10	4300×3000×3000	10	6
XNL—20	6300×4000×3000	20	6
XNL—30	6300×5000×3000	30	9
XNL—40	6300×6000×3000	40	9

- 温度、湿度、含水率检测可采用 XN-TM2000 温湿度含水率检测仪来实现。

Temperature, relative humidity in kiln and moisture content of wood can be measured and displayed on the monitor of XN-TM2000.

KILN CONTROL SYSTEM

干燥窑控制系统



- (进口) 全自动控制系统 Automatic control system

XINAN星楠公司的全自动控制系统采用意大利HOLZMEISTER公司生产的M800B、M828等系列产品。控制仪内部预存80个标准干燥程序，支持个性化编程方式。配合专用软件和计算机联网，可以通过计算机对干燥窑进行远程控制。

XINAN automatic controller uses HOLZMEISTER, such as M800B and M828.

HOLZMEISTER series is stable and supports individual programs. About 80 drying programs can be used by the operator for wood drying. Heating, conditional venting and the running direction of the fan are automatically controlled to ensure good drying effect. Wood drying in the kiln can also be controlled by connecting HOLZMEISTER series controller to PC via special software.

- (国产) 全自动控制系统 Automatic control system

XN-Q10全自动控制系统是星楠公司自主研发推出的最新木材干燥控制系统。用户可根据需要选择全自动或半自动运行模式。该系统采用高清晰LED液晶显示屏，内置30个木材干燥基准，并可再增加30个基准。多个人机对话界面，窑内木材干燥工况一目了然。该系统具有断电记忆、异常状态报警等多种功能，并可以通过计算机实现对最多64套设备的集中控制。

XN-Q10 automatic drying control systems is latest invention of XINAN. The user can select automatic or semi-automatic mode of operation according to their needs.

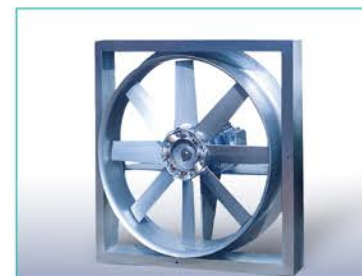
The system uses high-definition LED LCD display, with 30 built-in wood drying programs, with the capacity to add another 30 programs. With the interactive interface, the user will know the wood drying conditions at a glance. The system can regulate the temperature and humidity in the kiln by the implementation of each device according to the built-in drying program, making wood drying more economical and reliable. The system has the memory of power failure, the alarm of abnormal state and other functions, and can centralized control up to 64 sets of equipment through the computer.

KILN SPARE PARTS

干燥窑零部件

- 风机 / Circulating fan

- 引进德国技术，机翼型非扭曲叶片，由铝合金精密压铸
- 科学的动、静平衡处理，风量大、风压高，正反运行风量相等
- 电机是出口免检的耐高温防潮电机，“H”级绝缘，IP55保护
- The circulating fan is made of aluminum alloy adopting technology from Germany.
- The fan features big air volume and high air pressure, and can run clockwise and counter-clockwise.
- The motor is waterproof, high temperature-resistant and exempted from customs check.



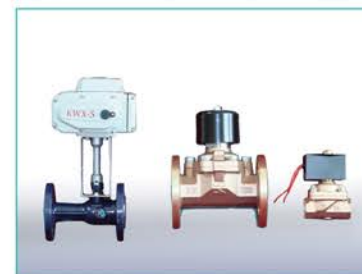
- 散热器 / Heating coil

- 钢铝复合轧制翅片管
- 重量轻，气流阻力小，耐腐蚀，热效率高
- 设计合理、安装方便、快捷
- The coil uses stainless steel - aluminum bimetallic ribbed pipes.
- The coil is light weight, less resistant to the steam, anticorrosive and high thermal efficiency.
- It is also reasonably designed, fast and easy to install.



- 电动阀和电磁阀 / Electric valve

- 电动阀门为国产或德国或日本制造
- 体积小、控温效果好、性能优良、运行可靠
- 精确调节温度升降，控制蒸汽量，免除能源浪费
- The electric valve is made in Japan, Italy, and Germany.
- It features small volume, high reliability, accurate control of temperature, and is efficient in heat-controlling and energy saving.



- 温度、湿度、含水率检测 / Temperature, relative humidity and moisture content

- 每座窑内有2个温度、2个EMC(或更多)、6个含水率监测点
- 含水率探针为不锈钢制作，接插件为进口配件，确保测量准确
- 数据传输采用特制耐高温导线，传送不受干扰
- Six pairs of moisture content probes, 2 or more pairs of temperature and 2 EMC probes in every kiln.
- The probes are made of stainless steel and joints are imported to ensure accurate measurement.
- Signals are transported through special high temperature-resistant cables.



- 排湿电机 / Vent motor

- 0°~90°可控角度扭转，根据窑内湿度实现多级控制
- 自动、手动外部切换
- 韩国或瑞士制造，性能优良，运行可靠，扭力达16NM
- The motor can be turned 0 to 90 degrees based on humidity inside in the kiln.
- Automatic and manual operation can be switch outside of the kiln.
- Made in Korea or Switzerland with superior performance and high reliability. The twisting torque can reach 16NM.



HOTWATER BOILER WITH WOODWASTE AS A FUEL

燃木废料热水炉

13
14

XINAN
DRYING



- XINAN星楠公司结合木材加工企业加工木废料多，处理又比较麻烦的特点，研制开发了以木废料为能源的工业热水炉供热系统，供热给木材干燥、烤漆、车间采暖等，该系统具有节能，节约投资，运行费用低，安全可靠，热效率高、环保性能好，温度稳定、用途广泛的特点。
- XINAN developed hot water-heating system using wood residue as fuel to supply heat for wood drying, paint drying, workshop heating, etc. This system is safe and reliable, and features energy and capital saving. It has wide usage, high thermal efficiency, generates zero pollution and keeps temperature stable.

● 热水循环系统 / Hot water circulating system

- 热水炉中的高温水由循环泵泵入散热器，回水压入热水炉。
- 多窑同时供热时，由总管分配供热；多座干燥窑均不需供热期间，旁通管上的阀门自动打开。
- 热水炉设有膨胀槽，通过膨胀槽中水位变化，来解决循环水胀缩问题。
- The heated water is purged from boiler to the heating coil, and comes back after heat exchanging.
- The general tube is in charge of dispatching heat when several kilns need to be heated simultaneously.
- The inflation tank is placed in the boiler. The problem of inflation of water can be solved through changes of water level.

● 木废料自动进料系统 / The Automatic Screw Transporting System

- 该系统进料速度可调节，均匀地将料仓中的木废料送入热水炉内保证废料在炉膛内充分，高效燃烧。
- 对于较大尺寸的加工剩余物，可用手工方式从加料口加入。
- The feeding speed can be adjusted evenly sending the waste to the boiler to ensure complete combustion.
- The large pieces of wood waste can be putted into the burning chamber through the boiler door by hand.

● 热水锅炉型号 Types of The Water Boilers

热水炉 Hot water boiler	可供干燥材积 Capacity of wood can be dried(m³)	热功率 Thermal power(MW/h)
CDZG 0.35 - 95/70 - M	60 - 100	0.35
CDZG 0.70 - 95/70 - M	150 - 200	0.70
CDZG 1.05 - 95/70 - M	200 - 300	1.05
CDZG 1.40 - 95/70 - M	300 - 400	1.40
CDZG 2.10 - 95/70 - M	400 - 600	2.10
CDZG 2.80 - 95/70 - M	600 - 800	2.80



浙江东阳炭化窑 China



广东饶平除湿平衡设备 China



俄罗斯干燥设备 Russia



乌克兰干燥设备 Ukraine



江苏靖江干燥设备 China



法国铝合金干燥设备 France



江苏金港干燥设备 China



非洲加纳干燥设备 Africa



日本不锈钢炭化设备 Japan