

## 常州三诺机械科技有限公司

CHANGZHOU SINOMAC MACHINERY TECHNOLOGY CO.,LTD

地址:江苏省常州市武进区龙飞路35号

ADD: No.35,Longfei Road,Wujin District,Changzhou City, Jiangsu Province,China

电话 ( Tel ) : +86-519-86056618 传真 ( Fax ) : +86-519-86055518 邮箱 ( Email ) : info@czsinomac.com 网址 ( Web ) :http//www.czsinomac.com

国内服务Domestic service

手机(Mb):+86-138 1368 4353

邮箱 (Email): ming.zhou@czsinomac.com

国际服务International service 手机(Mb):+86-139 1234 2699 邮箱(Email):info@czsinomac.com



www.czsinomac.com





# We provide you with PROFESSIONAL AUTOCLAVES service support!

# INDEX

目录

01	我们 ABOUT US
03	蒸压釜 AUTOCLAVES
05	热压罐 COMPOSITE AUTOCLAVE
09	固化炉 CURING OVENS
11	玻璃釜&夹层生产线 GLASS LAMINATION AUTOCLAVES & CLEAN ROOM
15	硫化罐 THE AUTOCLAVE FOR RUBBER VULCANIZATION
17	灭菌罐 TREATMENT OF MEDICAL WASTE
18	碳化罐 THE AUTOCLAVE FOR WOOD CARBONIZATION
19	建材金 BUILDING MATERIALS AUTOCLAVES
21	服务



# Highest safety **standards**





常州三诺机械科技位于中国压力容器之乡----江苏常州,是中国领先的提供先进蒸压釜解决方案及其控制系统的高新科技企业;我们生产的蒸压釜,其技术处于国内外领先水平,应用场合涵盖复合材料固化、安全夹层玻璃胶合、光伏组件封装、木材防腐碳化处理、橡胶硫化、医废处理等领域。

公司自创建以来,一直致力于蒸压釜及其控制系统的创新,我们的旗舰控制软件TPC系统能满足客户最严格的要求;软件按照航空级别要求设计,可以在复杂情况下满足高性能要求.

我们的目标是成为蒸压釜和控制系统领域的领导者!

SINOMAC is located in the hometown of autoclave, Changzhou, Jiangsu, China. It is a leading high-tech enterprise specialized in providing advanced autoclave solutions. SINOMAC autoclaves with excellent performances are widely used for composites curing, safety glass laminating, PV module encapsulation, wood carbonization, rubber vulcanization, medical waste treatment, and so on.

Since the establishment, we have always devoted ourselves to the innovation of autoclave and its control system. Now our Thermal Processing Control (TPC) software, designed according to aviation level, has been able to meet the most stringent technological requirements and the operating performance is safe and stable.

Our goal is to be a leader in the field of autoclave and control system.





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SINOMAC持续创新确保我们的蒸压釜及控制系统处于领先水平 SINOMAC CONTINUOUS INNOVATION ENSURES THAT OUR AUTOCLAVE AND CONTROL SYSTEMS ARE IN THE LEAD

我们的旗舰控制软件TPC系统功能齐全,可以满足客户最严格的要求并持 续创新。

实现对过程控制的自动,手动或者冗余操作,能接入局域网,进入工厂的 DCS系统,实现集中管理控制。

优化的风道结构,高效的循环风机,卓越的保温隔热系统,智能化的温控 调节,确保温度的均匀性和最大节能。

独立的主、辅冷却系统,提高冷却效率的同时,能实现对冷却梯度精确线 性的控制。

加热系统可采用电加热或者蒸汽和导热油间接加热。

具备机械、电子和软件多重安全连锁保护功能。

辅助设备系统集成控制,如储气罐,空压机,真空系统,制氮机和冷却站

可以提供多种认证标准GB150\ASME\PED\AD, 规格定制。

我们注重外观细节的处理, 追求高端品质。

Our flagship control software TPC systems are fully functional, meet the most stringent requirements of the clients and continue to

It can realize manual, automatic or redundant operation of process control. And can access the LAN, into the factory DCS system, to achieve centralized management control.

Optimized air duct structure, efficient circulation fan, excellent thermal insulation system and intelligent temperature control and regulation, all of these ensure uniformity of temperature and maximum energy saving.

Independent main & auxiliary cooling systems can improve cooling efficiency and achieve accurate linear control of cooling gradient at the same time.

The heating system can be electric heating, steam heating and indirect thermal oil heating.

The autoclave has mechanical, electronic and software multiple security chain protection functions.

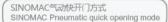
Integrated control of auxiliary equipment systems such as gas storage tanks, air compressors, vacuum systems, nitrogen generators and cooling stations, etc

Provide a variety of certification standards GB150\ASME\PED\AD and specifications customization.

We focus on the appearance details, pursue high-end quality.







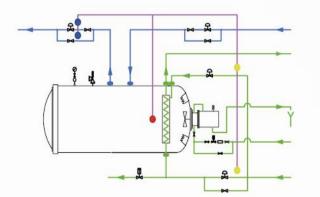


SINOMAC电动吊臂快开门方式 SINOMAC Electric boom quick opening mode

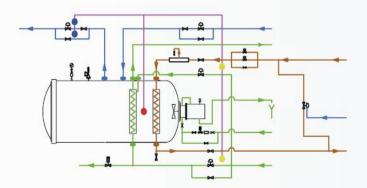


SINOMAC液压快开门方式 SINOMAC Hydraulic quick opening mode





电加热玻璃釜系统原理图 System schematic diagram for electric heating glass autoclave



蒸汽、导热油、天然气间接加热玻璃釜系统原理图 System schematic diagram for indirect steam, thermal oil and gas heating.





# COMPOSITE AUTOCLAVE

SINOMAC是热压罐及其控制系统设计专家



SINOMAC热压罐是一种针对聚合物基复合材料成型工艺特点的工艺设备,使用热压罐成型是制造连续纤维增强热固性复合材料制件的主要方法,适用于先进复合材料结构、蜂窝夹层结构及金属或复合材料胶接结构的成型。具有温度和压力控制精度高、结构安全可靠、系统稳定性好、能耗低、操作和维护简单等优点,能实现模块化和系列化,可满足不同领域、不同工艺和不同规格的需求。

SINOMAC composite autoclave is a kind of process equipment for forming polymer-based composite materials, composite autoclave forming is the main method of manufacturing continuous fiber reinforced thermosetting composite materials, apply to form advanced composite structure, honeycomb sandwich structure and metal or composite adhesive structure. It has the advantages of high temperature and pressure control precision, safe and reliable structure, stable system, low energy consumption, simple operation and maintenance, and can realize modularization and serialization, which can meet the needs of different fields, different processes and different specifications.









# COMPOSITE **AUTOCLAVE**

SINOMAC HAS BEEN THE AUTHORITATIVE DESIGN EXPERT ON AUTOCLAVE AND CONTROL SYSTEM.







## SINOMAC composite autoclave advantages

Advanced thermal process control (TPC) system with reliable performance and complete functions

Unique convection design, balancing and strengthening circulating air flow to ensure uniform temperature in autoclave

Testing temperature uniformity in strict compliance with Boeing and Airbus standards

Heating, pressure, cooling module design, easy maintenance and repair

Equipment Dimensions Multi-specification Custom

Various of manufacturing standards, GB150\ASME\PED\AD,Services global



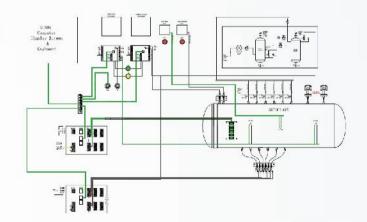
## Highest safety **standards**

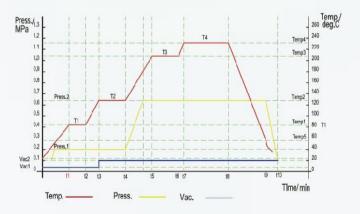
SUCERTIFIED AD2000

#### 技术参数及规格

Technical parameters and specifications

名称/ITEM	设计参数 /DESIGN PARAMETER
工作有效直径/Working Diameter	600-6000(mm)
工作有效长度/Working Length	1000-30000 ( mm )
工作温度/Working Temperature	100-420 ( ℃ )
工作压力/Working Pressure	0.6-4.2 ( Mpa )
真空度/Vacuum Pressure	≤-0.098 ( Mpa )
温度均匀性/Temperature Uniformity	±3.0 (°C)
升、减温速率/Rising and Decreasing Temperature Rate	0-5 ( °C/min )
升、减压力速率/Rising and Decreasing Pressure Rate(bar/min)	0-1 ( bar/min )









# **CURING OVENS**

SPECIAL CURING FURNACE FOR COMPOSITE MATERIALS

#### Sinomac复材固化炉特点:

不加压的热压罐,完全区别于普通烘箱改装的固化炉

工艺要求与控制功能和热压罐一致

严格按照波音和空客标准进行温度均匀性检测

可以定制工作室尺寸和其他选配功能

为复合材料量身定制的工艺控制软件

安全多级用户管理,让生产管理变高效

空气偶控温,产品电偶控温,差值电偶等多种控温模式

智能判断异常电偶,异常真空值,保证每炉产品品质

完整数据记录,零件分析报告

独特模块设计,分区控制,实现产能优化

## Features:

Unpressurized autoclave, completely different from the ordinary oven modified curing oven

Process requirements and control function are consistent with autoclave

Testing temperature uniformity in strict compliance with Boeing and Airbus standards

Customizable working room dimension and other optional features

Process control software customized for composite materials

Secure multi-level user management to make production more efficient

Air couple temperature control, product electric couple temperature control, difference electric couple and other temperature control modes

Intelligent judgment of abnormal couple, abnormal vacuum value to ensure the quality of each furnace product

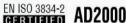
Complete data records, part analysis reports

Unique module design, zoning control, capacity optimization















**AUTOMOTIVE** 



MOTO SPORTS







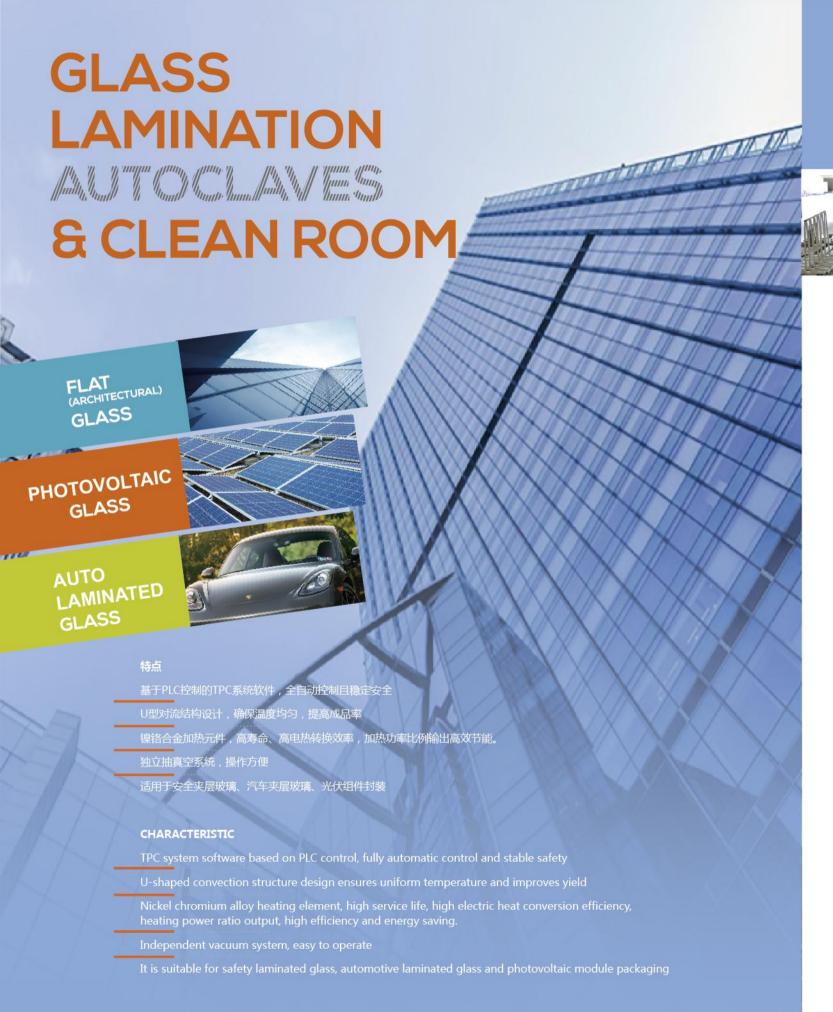


Time-Temperature Curve

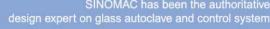
### Technical parameters and specifications

名称ITEM	设计参数 DESIGN PARAMETER		
炉体有效尺寸Effective size	规格定制Custom specifications		
设计工作温度Design/Working temperature	80°C-420°C		
温度均匀性Temperature uniformity (°C)	±3°C		
真空度 Vacuum Pressure	≤-0.098		
升温速率Heating rate	0-5°C		
部件热电偶Component thermocouple	2-12支		





## SINOMAC是玻璃蒸压釜及其控制系统设计专家











型号/MODEL	釜体内径 /Inner Diameter	有效长度 /Working Length	设计温度 /Design Temperature	设计压力 /Design Pressure	最大玻璃尺寸 /Max.Glass Size	加热功率 /Heating Power
SN-BGF1200	1200mm	2000mm	160°C	1.5Mpa	1000X2000mm	54KW
SN-BGF2040	2000mm	4000mm	160°C	1.5Mpa	1600X4000mm	72kw
SN-BGF2660	2650mm	6000mm	160°C	1.5Mpa	2300X6000mm	144kw
SN-BGF2860	2850mm	6000mm	160°C	1.5Mpa	2500X6000mm	162kw
SN-BGF3060	3000mm	6000mm	160°C	1.5Mpa	2650X6000mm	192kw
SN-BGF3080	3000mm	8000mm	160°C	1.5Mpa	2650X8000mm	225kw
SN-BGF3380	3350mm	8000mm	160°C	1.5Mpa	3000X8000mm	270kw
SN-BGF35100	3500mm	10000mm	160°C	1.5Mpa	3150X10000mm	441kw
SN-BGF36120	3650mm	12000mm	160°C	1.5Mpa	3300X12000mm	567lov

★ 其他规格可以定制生产 Other specifications can be customized



12