



江苏轻石机械有限公司

质量为本 诚信经营



中国 江苏 金湖



金湖县轻石机械有限公司
Jinhu Qingshi Machinery Co., Ltd

C 公司简介 Company Profile

轻石机械有限公司地处江苏省金湖县工业园区，总投资1000万元人民币，公司致力于各种规格型号的定型机、蒸化机、烘干设备的研发生产和销售。

主要产品有：各种规格型号的定型机、蒸化机烘干成套设备以及各种专用产品的设计与生产。并有各种产品的自主知识产权及专利保护。

QSZX系列产品在国内外市场深受广大用户的好评。本公司系列产品保质保量，终身提供售后服务，并且对所售产品实行终身质量跟踪体系。

公司宗旨：质量只有第一没有第二，用户永远是兄弟和伙伴。

Jiangsu Qingshi machinery Co., Ltd is a professional high-tech corporation devoting to manufacture, development, search and sale of products lying in industrial zone, JINHU county of Jiangsu province. Company operates mainly in all kinds of steaming machine (fixing machine), cloth steamer, drying equipment, having a good cooperation with the domestic and international companies, especially QSZX series. Besides that, we have obtained a variety of intellectual properties and patents protection.

We are a powerful corporation with the registered capital of RMB 100 million. Our products are popular in the market. The company grasps the perfect quality control system and examining instrument. The customers have a highly value of our production. We are providing the professional lifelong, fast and high-qualified service for the customer.

Every dollar is 100% committed-Qingshi company has been delivering high quality services to all our customers who could be provided life-long maintenance.

轻石机械有限公司
QING SHI JI XIE YOU XIAN GONG SI

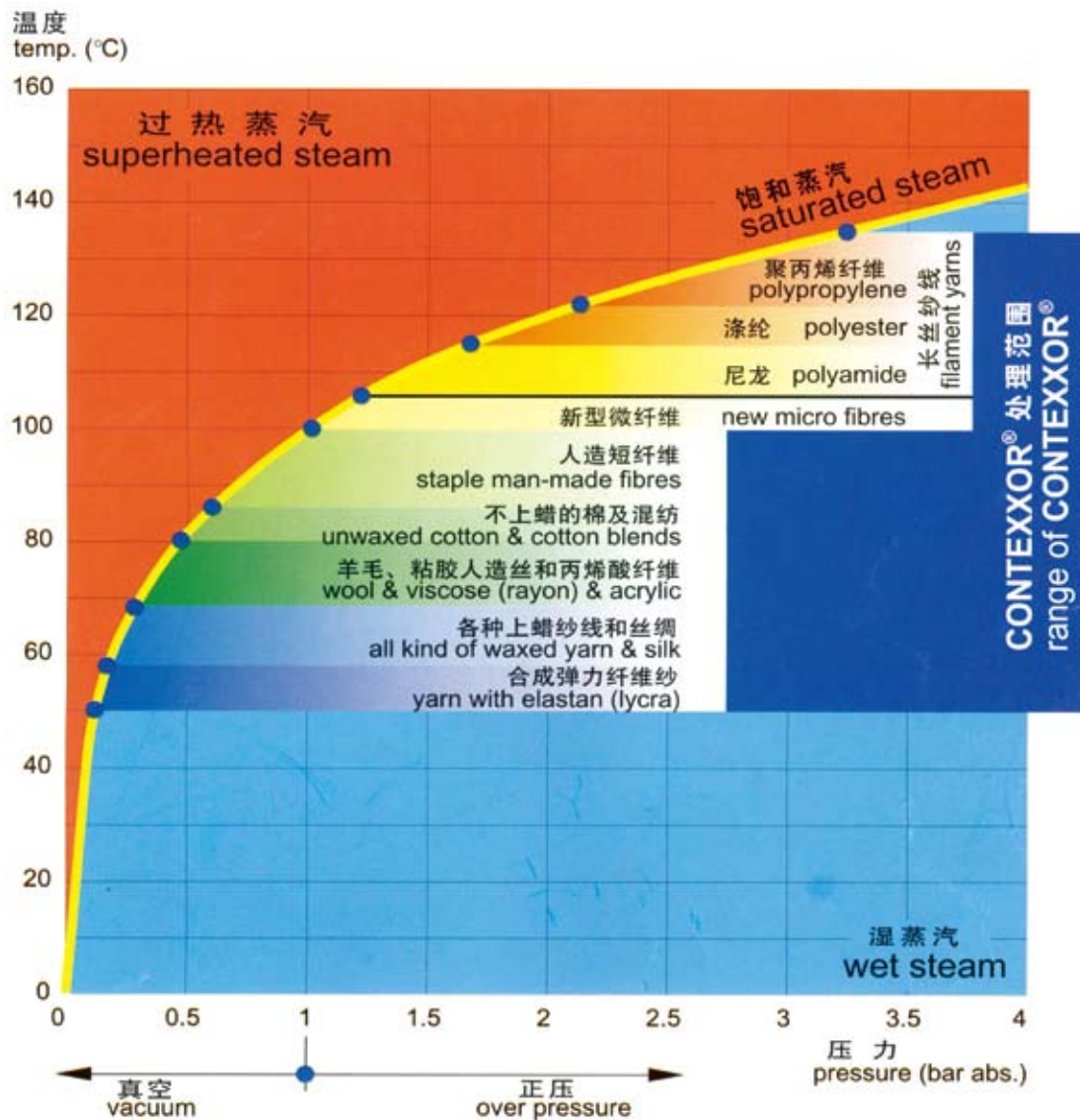
C 公司实景 Company Scene





一、各类纤维的汽蒸温度

Temperature and Pressure for Steaming Various Fibers



蒸汽的魅力

蒸汽的种类，它的渗透能力和温度的控制精度是正确处理纺织品的的基础。

The magic behind steam

The correct treatment of textile products depends on using the right type of steam, through penetration of steam and accurate temperature control.

蒸汽的三种状态

湿蒸汽: 含有可见的水滴，产生的水滴斑点会损坏织物并且是渗透力不充足。

过热蒸汽: 因为干燥的导热性差，并且缺少湿度，所以不适合处理纺织品。

饱和蒸汽: 是透明的，具有最佳的湿气含量，是一种好的热导体，最适合纺织品的调湿和汽蒸。

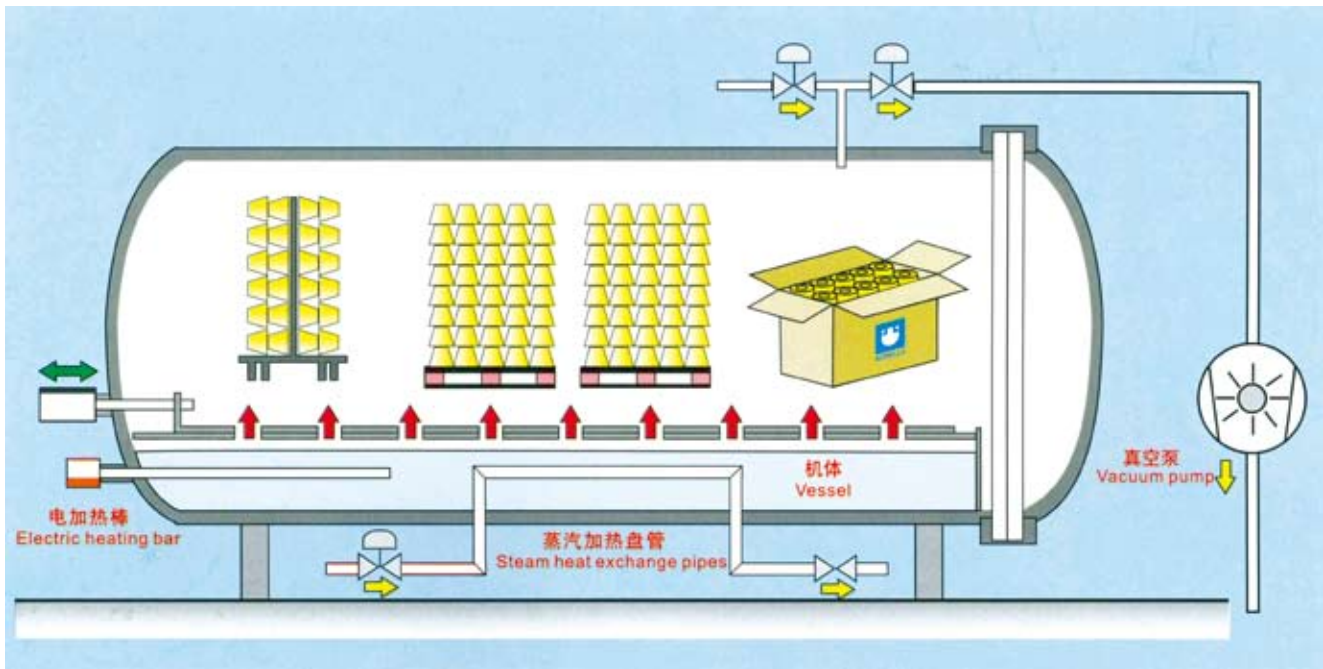
蒸汽的三种状态

Wet steam contains water drops and is visible; it leads to water spots, which damages the textile products and prohibits through penetration.

Superheated steam is dry and therefore a poor conductor of heat. Its lack of moisture makes superheated steam unsuitable for treating textiles.

Saturated steam is transparent, has optimum moisture content and is very good heat conductor. It is most suitable for the conditioning and steaming of textiles.

二、工作原理 Working Principle



Qingshi 汽蒸机的原理

How QINGSHI works

工作原理

第一步

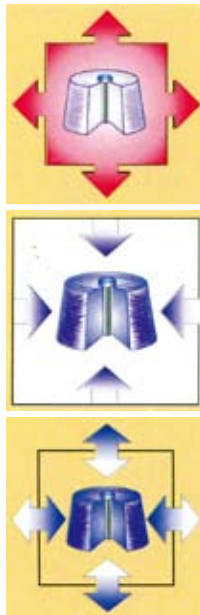
轻石真空装置抽出锥形管纱的所有空气

第二步

低温饱和蒸汽渗透到锥形管纱。

第三步

真空状态及低温饱和蒸汽的共同作用使整个筒子纱包括包装材料完全得到处理。饱和蒸汽所含水分被转移到纱线。纱线的水份分布绝对均匀，达到一致的纱线强度和摩擦值。同时，热处理松弛了捻度。



Working Principle

Step 1:

The QINGSHI vacuum extracts all air from the cone.

Step 2:

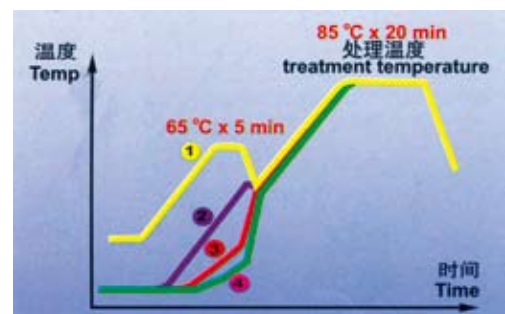
Low temperature saturated steam penetrates the yarn cone.

Step 3:

By changing from vacuum to low temperature saturated steam the entire package including packaging material is thoroughly treated. The moisture content of saturated steam is transferred to the yarn. The moisture distribution through the cone is absolutely homogenous. Uniform yarn strength and friction values. At the same time, thermo treatment relaxes twist.

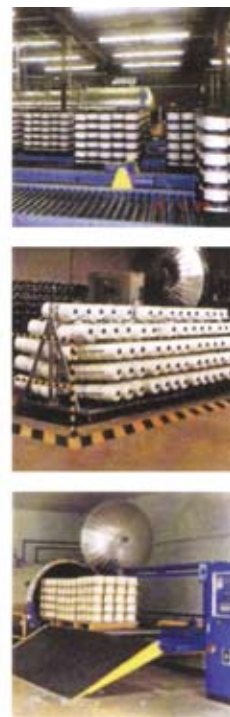
双真空循环的工艺曲线

thermoerature curve for two cacuum cyles



三、QINGSHI优势一瞥

QINGSHI advantages at a glance



蒸汽的魅力

QINGSHI 间接蒸汽系统具有很多优势。决定性的在于此工艺所需要的饱和蒸汽是在汽蒸槽内产生。

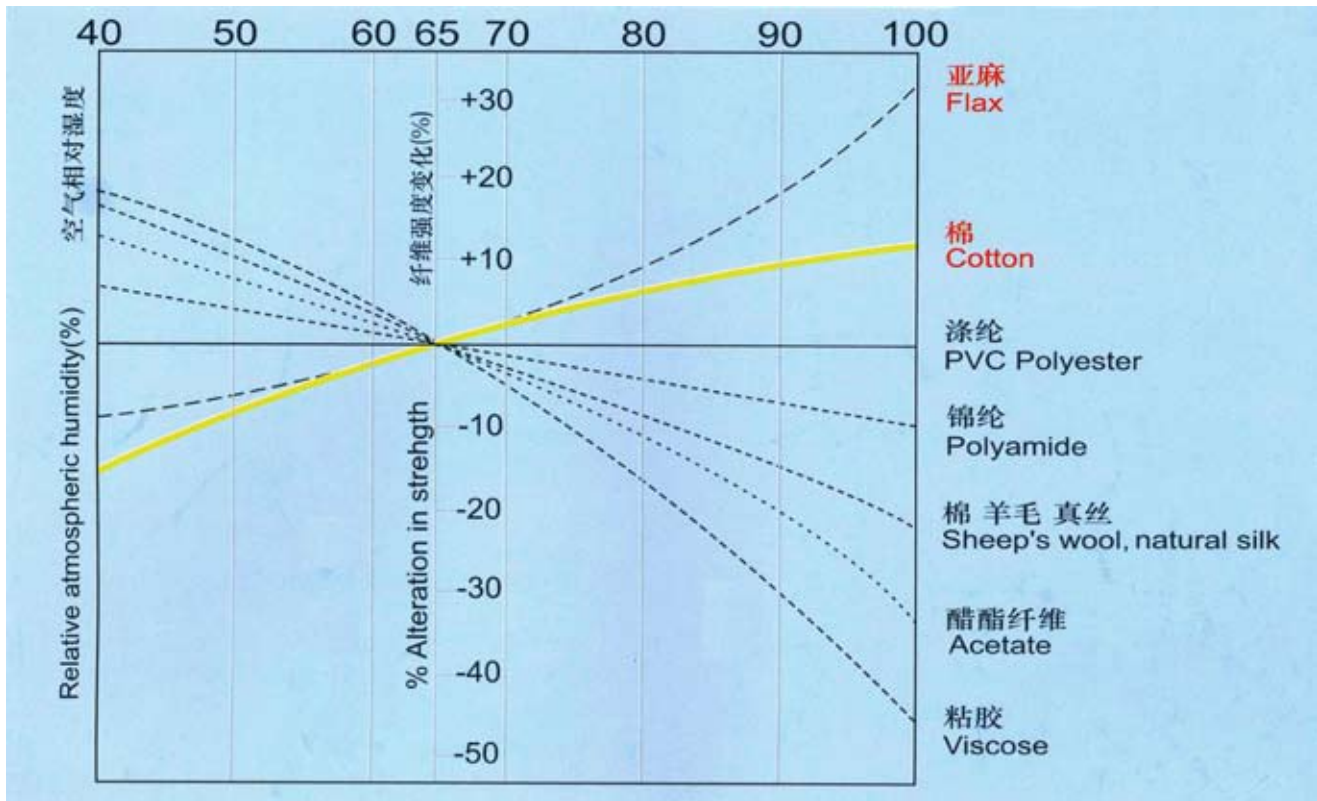
- 由于不会过热，纱线不受损伤
- 可使用廉价的纸筒管
- 可处理各种天然及合成纤维纱、混纺和超细纤维纱
- 适合处理纸箱、小车、运纱箱或货盘装载的纱线
- 绝对饱和蒸汽从50° C到140° C进行调湿
- 无冲击处理、无冷凝斑点
- 均衡的蒸汽渗透和湿气分布
- 无污染
- 灵活选择电加热或蒸汽加热
- 间接蒸汽系统方便回收
- 耗能低
- 回本期短
- 提高效率
- 精确的工艺，良好的重现性及较短的工艺时间
- 更少的附加辅助设备
- 低维修成本

Advantages at a glance

The indirect QINGSHI steam system offers a number of advantages. The fact that saturated steam is produced in the vessel itself makes all the difference.

- No damages of yarns because of no overheating
- Inexpensive paper tubes can be used
- Treatment of yarn from natural fiber, synthetics or blends and micro fibers
- Treatment in carton boxes, trolleys, palletainers or pallets
- Absolutely saturated steam conditioning from 50°C~140°C
- No shock treatment, no condensate spots
- Even steam penetration and moisture distribution
- No contamination
- Electrical or steam heating at your choice
- Recuperation of energy with indirect steam system
- Very low energy consumption
- Short payback time
- Increased efficiency
- Accurate process control, high reproducibility and short process time
- Less additional auxiliary devices
- Low maintenance cost

四、蒸纱的作用 Effects of steaming

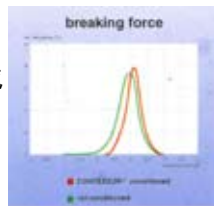


温度与强力曲线

How strength varies with humidity

调湿

棉、麻及其化纤混纺的纱线经汽蒸调湿后，可增加湿度，提高强力和断裂伸长，因而可减少整经和织造断头，提高针织和机织效率。



Conditioning

Conditioning cotton, linen and their blends with synthetic fibers yarn with steam increases the moisture, strength and elongation. So can reduce breaks in warping and weaving, increased knitting

松弛

退绕工序过程中的扭结和缠结会导致纱线断头以及质量的降低。用蒸汽松弛纱线提高了诸如卷绕、加捻、整经、织造等所有后续操作的效率。



Relaxing

Knicking and snarling during the unwinding process lead to yarn breaks and loss of quality. Relaxing yarn with steam increases efficiency in all subsequent operations, such as winding, twisting, waping, weaving and knitting.

热定型

高捻纱、包芯纱以及化纤长丝都需要热定型来稳定捻度。使用QINGSHI 汽蒸工艺，所有纱层都会得到均匀的处理。



Heat setting

Yarns with high twist multiples and also synthetic filaments require heat setting to stabilize the torque. With the QINGSHI steaming process the yarn receives even treatment throughout all layers.

收缩—预缩

一些合成纤维有热收缩的特性。工艺提供了均衡和动态的收缩，使处理后的纱线满足织造及染色的需要。



Shrinking—preshrinking

Some synthetic fibers exhibit thermo-shrinking properties. The process allows even and dynamic shrinkage, thus, the preshrunk yarn can meet the requirements for subsequent knitting/weaving and dyeing process.



五、蒸纱的效果

A summary of steaming effect



提高纱线综合品质

- 增加棉纱断裂强度，尤其是增加弱纱处的强力
- 增加断裂伸长达30%
- 减少纱线毛羽和纤维飞花达40%
- 湿度增加1.5-3%
- 均匀湿润筒之纱
- 去除静电
- 定捻松弛
- 固定而适合的摩擦值
- 改善纱线的退绕
- 手感更柔软
- 均匀的染色亲和力

Improves the quality of yarn

- Increase in yarn break strength of cotton; substantially strengthen the weak point of yarn.
- Up to 30% higher elongation
- Up to 40% reduced lint and fiber fly
- Increase in moisture level by 1.5%-3%
- Consistent quality throughout the packages
- Elimination of electrostatics
- Twistset and relaxed
- Constant favorable friction values
- Improved yarn run-off
- Softer touch
- Better and uniform dye affinity

对后续工序的好处

针织

- 纱线能力和断裂伸长提高，织造效率提高10%
- 纱线定捻定型，起毛起圈高度一致，剪毛平整，制成率提高
- 毛羽飞花减少，布面清晰
- 纱线退绕张力减小，组织均匀，尺寸稳定

机织

- 减少整经断纱达15%
- 提高织造效率达2%以上
- 减少断纱疵

染色

- 预缩定型，减少纱线染色收缩，提高染色均匀度

Benefits in subsequent operations

Knitting

- Up to 10% efficiency increase through increased yarn strength and elongation
- Reduced lint and fly, clear definition
- Stable finished product size through reduced tension and even structure

Weaving

- Up to 15% fewer yarn breaks in warping
- Above 2% increase in efficiency of weaving
- Less faults in the fabric because of filling breaks

Dyeing

- Reduced shrinkage and improved even of yarn through pre-shrinking

六、机型介绍

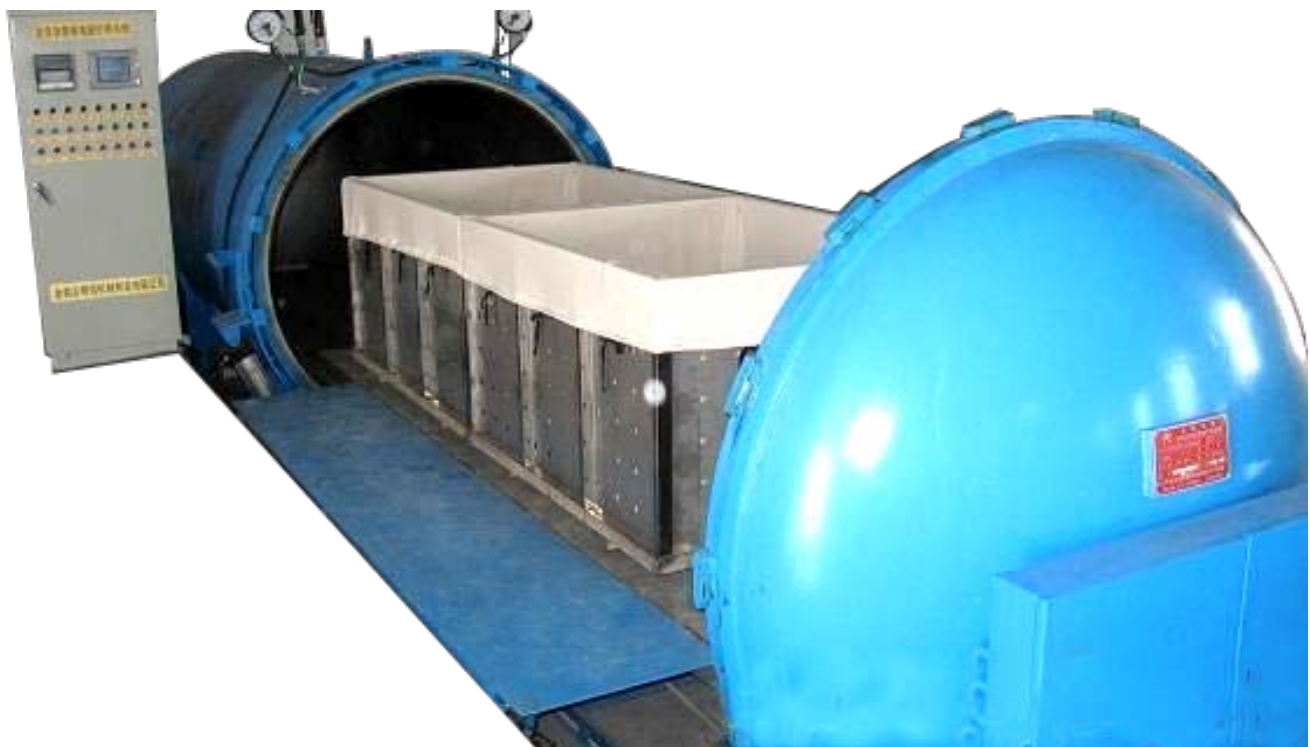
Machine introduction

KSZX/KSZX-D系列常温全自动真空定型快速蒸箱

KSZX/KSZX-D series of low temperature automatic vacuum yarn steaming tankers

序号	型号规格 项目	KSZX-1.2-4 KSZX-D-4	KSZX-1.5-6 KSZX-D-6	KSZX-1.5-8 KSZX-D-8	KSZX-1.5-10 KSZX-D-10
1	设计压力 (MPa)	0.09~0.4	0.09~0.4	0.09~0.4	0.09~0.4
2	设计温度 (°C)	50~150	50~150	50~150	50~150
3	真空度 (MPa)	-0.01~0.08	-0.01~0.08	-0.01~0.08	-0.01~0.08
4	介质	饱和蒸汽	饱和蒸汽	饱和蒸汽	饱和蒸汽
5	加热方式	电、蒸汽	电、蒸汽	电、蒸汽	电、蒸汽
6	容积 (m³)	4	6	8	10
7	总功率 (KW)	4 28	5.5 35	5.5 40	7.5 60
8	设备尺寸 (长×宽×高)	2200×1800×1800	2750×2010×2010	5000×2100×2100	5400×2100×2100
9	设备质量 (Kg)	1600	3200	4100	4600
10	装载量 (Kg)	260	500	800	1000

注：以上机型仅供参考，如需特殊规格可定制。



七、低弹丝定型机

Low stretch yarn stenters

一：材质：筒体用碳钢（Q235B）焊接而成，筒体内用不锈钢皮包胆。外部（5CM）岩棉做保温

二：筒体尺寸内径1.5米，内长9米，可装2600公斤左右。

工作参数：

压力0.35MPa 温度140度 真空-0.07MPa

推荐工作温度132--138度：

工作时间5-7小时（每蒸一缸使用500公斤左右蒸汽）。

三：小车：

A：共配10套，每套可分2台（1台推车，1台挂纱架）。

B：挂纱架采用不锈钢圆管。

C：共8台挂纱架。每台挂纱架可挂112只纱
（注：小推车可以升降调节）

1：打筒机1台

2：支撑管配套900支

四：《真空泵》

A：配有2台2BV5111水环式真空泵。

B：另配2套真空预处理设备（有效的保证真空泵抽出的混合气体的降温：能延长真空泵的使用寿命）

五：控制系统：

自动（PLC）控制系统，电脑数字控制，显示。能保证各项工作参数稳定可靠的工作，温度控制精度小于1度，可对各种工艺参数进行设定，修改，在执行过程中自动检测，温度，气压，真空度，并带有超温保护，超压保护，手动开门安全装置（自动配有开门安全检测装置）。

六：装机配件一套



八、蒸化机 Steamer

一：材质：筒体用碳钢（Q235B）焊接而成，筒体内用不锈钢皮包胆。外部（5CM）岩棉做保温

二：规格型号：

KSZX2.2-15：筒体尺寸内径2.2米，内长3.6米，可装450米左右布。

KSZX2.0-12：筒体尺寸内径2米，内长3.6米，可装300米左右布。

KSZX3.0-40：筒体尺寸内径3米，内长5米，可装550米左右布。（抽湿泵配2BV5121）

1：蒸化机另可配（热转换器）可以选择干湿两种加温

2：可选装湿度显示仪（显示筒体内湿度）

3：顶部可装防冷凝水加热管

三：工作参数：

常压：压力0.095MPa 温度120度 真空-0.07MPa

高压：压力0.3MPa 温度135度 真空-0.07MPa

四：小车：

1：共配两套。

2：挂布架采用不锈钢方管。

3：共两套挂布架。

五：真空泵：

A：配有1台2BV5121抽湿水环式泵。

B：另（高温型）配1套抽湿预处理设备（有效的保证真空泵抽出的混合气体的降温：能延长抽湿泵的使用寿命）

六：控制系统：

自动（PLC）控制系统，电脑数字控制，显示。能保证各项工作参数稳定可靠的工作，温度控制精度小于1度，可对各种工艺参数进行设定，修改，在执行过程中自动检测，温度，气压，真空度，并带有超温保护，超压保护，手动开门安全装置。

七：装机配件（电脑控制仪，装机配件一套）



九、蒸化打样机 Steaming proofer

蒸化打样机

工作温度：140度

直径：40CM 长50CM

A：内胆用不锈钢包衬，有效的防止锈污

B：开门用快开门结构

本产品适用于不同颜色、质地、印花工艺的印花织物试样。将小样品放入试样机内，采用不同的压力、温度和蒸化时间进行试验，选出最佳的工艺参数，然后确定最佳工艺方案，指导蒸化机大批量生产。





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