

**TONG HE**



**TH698 系列智能细纱机**

TH698 SERIES INTELLIGENT RING SPINNING FRAME

**高速** *HIGH SPEED*

**高产** *HIGH YIELD*

**高效** *HIGH EFFICIENCY*



TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

专业生产高品质纱线

TONG HE

SPECIALIZING IN THE PRODUCTION OF HIGH-QUALITY YARN

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同和公司是国内唯一一家生产粗纱机、细纱机、粗细联合成套装备的厂家。

同和公司致力于为客户提供纺纱全流程成套、大数据、智能化解决方案。

同和公司致力于全球纺机、纺机牵伸专件的研发、生产和销售。

同和公司致力于全球纺机，是唯一专业、专心、专注、专爱的企业。

Tonghe company is the only manufacturer in China to produce roving, ring spinning frame and BTS.

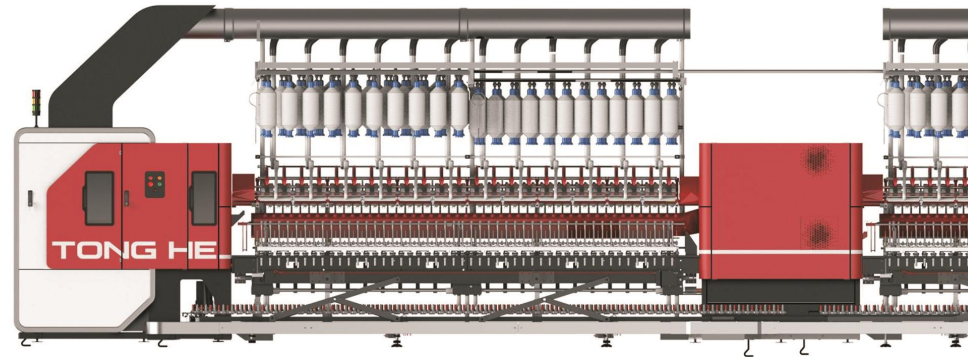
Tonghe company is committed to providing customers with spinning complete sets of the whole process, big data, intelligent solutions.

Tonghe company is committed to the development, production, sales of the global textile machinery and textile machinery drafting parts.

Tonghe company is committed to the global textile machinery, is the only professional, dedicated, concentration and devoted company.

## TH698 系列智能细纱机

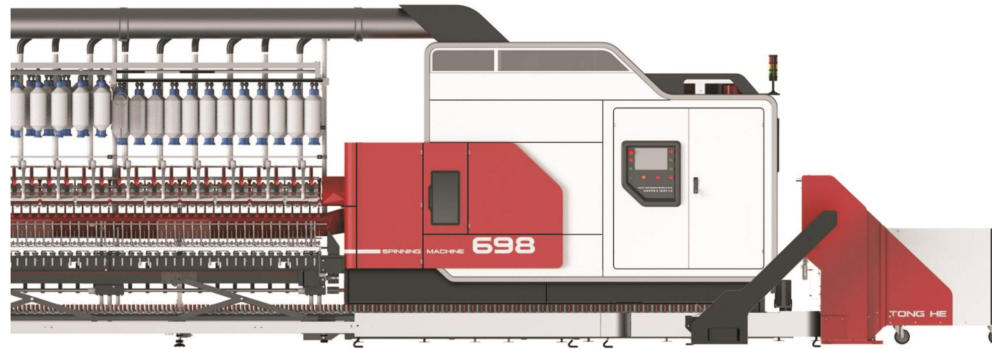
TH698 SERIES INTELLIGENT RING SPINNING FRAME



TH698 系列细纱机是我司在 TH598 系列集聚纺细纱机的基础上，结合全球客户的需求及国内外先进技术而推出的最新高端机型。自 2020 年进入市场，在国内外知名用户历经考验，如安徽华茂、德州华源、湖北德永盛、国外孟加拉银线集团、俄罗斯罗德尼基等，深受用户青睐。整机采用模块化设计理念，环锭纺/集聚纺同一纺纱断面，具备全电子牵伸、积极式电子升降、钢带式集体落纱、高速低风阻专件、锭子传动节能系统、下吸棉负压节能系统等全新技术。TH698 系列细纱机适纺范围广，环锭纺与集聚纺可无障碍互换，从超低支纱到超高支纱，从纺棉、毛、麻、化纤、色纺、混纺、差别化纤维、花式纱线等均有突出表现。该机型最长锭数可达 1824 锭，可满足国内外客户高质、高速、高效、智能化的纺纱需求。

## TH698 系列智能细纱机

### TH698 SERIES INTELLIGENT RING SPINNING FRAME



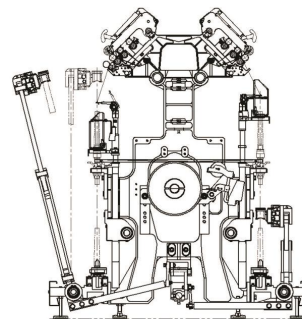
TH698 series ring spinning frame is newly developed as the latest high-end model based on TH598 series spinning frame technology, combined with global customers' demands and world's advanced technology. Since entering the market in 2020, it has been tested by well-known users at home and abroad, such as Anhui Huamao, Dezhou Huayuan, Hubei De Yongsheng, Bangladesh Silver Line Group, Russia Rodniki, etc., which is favored by all the customers. The whole machine adopts the modular design concept, with the same spinning section of normal ring spinning and compact spinning. It has new technologies such as fully E-draft, positive electrical lifting, steel belt type auto doffing, high-speed and low wind resistance special parts, spindle transmission energy-saving system, new suction energy-saving system and so on.

TH698 series ring spinning machine is suitable for a wide range of spinning, normal spinning and compact spinning could be freely interchange, from ultra-low yarn count to ultra-high yarn count, from cotton, wool, hemp, chemical fiber, mangle yarn, blending, differential fiber, fancy yarn and so on all have outstanding performance. The max spindles could reach 1824S, which can meet the needs of high quality, high speed, high efficiency and intelligent spinning of customers at home and abroad.

●通用高速纺纱断面 Universal High Speed Spinning Section

环锭纺和集聚纺同纺纱断面，共用同一中墙板、罗拉座、牵伸传动等零部件，不需更换任何零件，即可无障碍切换，并保证合理的纺纱角度、纺纱长度和纺纱质量，实现高速纺纱。

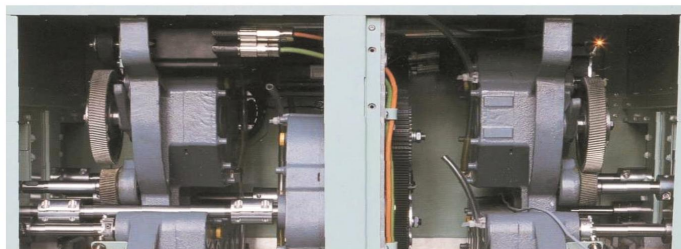
Normal spinning and compact spinning share the same spinning section, and share the same central wallboard, roller stand, drafting parts and other parts. Without replacing any parts, they could be changed without obstacles, and ensure reasonable spinning angle, spinning length and yarn quality, so as to realize high-speed spinning.



●全电子牵伸 Fully E-Draft System

动力传递效率高，润滑保养周期长，三列罗拉由伺服独立驱动，可实现罗拉无级调速，牵伸倍数无级变换，可实现快速工艺切换，操作方便，有效提升生产效率。

High power transmission efficiency, long lubrication and maintenance cycle. Three lines of bottom rollers are independently driven by servo system, which can achieve stepless speed regulation of the bottom rollers and stepless change of draft multiple. It can achieve rapid process switching, convenient operation, and effectively improve production efficiency.



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高速高效运转

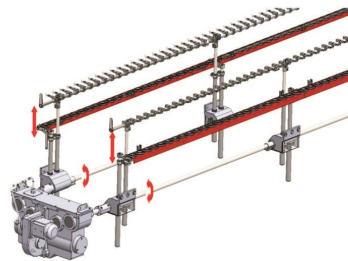
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HIGH SPEED AND EFFICIENT OPERATION

● 积极式电子升降 Positive E-lifting

伺服驱动钢领板导纱板，永久确保钢领板无移位，确保钢领板平稳无顿挫，确保管纱成型一致性好，管纱成形适于高速络筒，降低纺纱千锭时断头。

Servo driven ring rail and guide rail, permanently ensures that the ring rail without translocation, ensures that the ring rail is stable without setbacks, and ensures good consistency in yarn cop forming. The yarn cop is suitable for high-speed winding, reducing yarn breakage during spinning.



● 整机模块化装配 Modular Assembly

机架钢性好

Good rigidity of the rack

稳定性强

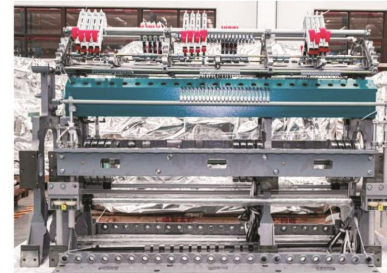
Strong stability

安装快捷

Quick installation

长期高速稳定运行

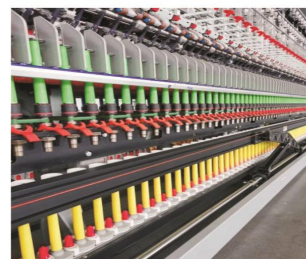
Long term high-speed and stable operation



● 钢带式自动落纱装置 Steel Belt Type Auto Doffing System

采用钢带与托盘相结合的输送结构，集落停车时间缩短为 2 分钟。

Adopting a conveying structure that combines steel belts and peg trays, the doffing time is reduced to  $\leq$  2 minutes.



● 高精密零件 High precision parts

(1) 铝合金滚盘：精密压铸成形，进口设备精密加工，不易磨损，老化，变形，为高速运转提供有利条件。

Aluminum alloy pulley: precision die-casting forming, precision processing with imported equipment, resistant to wear, aging, and deformation, providing favorable conditions for high-speed operation.

(2) 合金钢主轴：搭接方式连接，为高速运转提供有利条件。

Alloy steel main shaft: connected by overlapping method, providing favorable conditions for high-speed operation.

(3) 铝合金整体式罗拉座，精密压铸成形，进口设备精密加工，刚性好，精度高，不积花，稳定性好，有利于高速运行。

Aluminum alloy integral roller stand: precision die-casting forming, imported equipment precision processing, good rigidity, high precision, no accumulation of fibers, good stability, and conducive to high-speed operation.



(1)



(2)



(3)

## TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

### 绿色节能降耗

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GREEN. ENERGY CONSERVATION AND CONSUMPTION

- 全系标配全新二级能效（IE4）高效纺织电机。

Equipped with a new Level 2 Energy Efficiency (IE4) high-efficiency textile motor as standard.

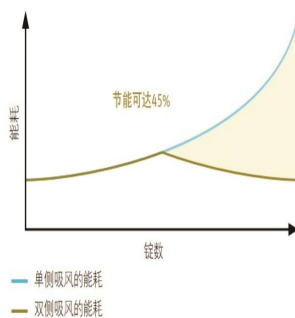
- 双风道节能型吸棉风管结构，向上凸起式抽吸孔，有效降低风道内的风阻，减少内部的嵌花挂花现象，使吸棉风管负压稳定，降低能耗，提高细纱机整体效率。

The dual duct energy-saving suction structure: The upward raised suction hole can effectively reduce the wind resistance in the air duct, reduce the internal inseting phenomenon, make the negative pressure of the suction duct stable, reduce energy consumption, and improve the overall efficiency of the spinning frame.



- 采用头、尾两端工艺吸棉技术，与单侧吸风系统相比，双侧吸风能够以更低的能耗输送相同的风量，可优化整个吸棉负压系统的空气动力学性能。1200 锭长车能耗降低 2 千瓦/小时以上。

有助于节能的双侧吸风



With the new suction technology from both ends, compared to a single side suction system, the new type suction system can deliver the same air volume with lower energy consumption, which can optimize the aerodynamic performance of the entire suction negative pressure system.

## TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

### 智能纺纱系统

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INTELLIGENT SPINNING SYSTEM

- 采用高品质运动控制器，具有顶级处理能力，紧凑的设计结构，高度灵活的扩展能力。  
Adopting high-quality motion controllers with top-notch processing power, compact design structure, and highly flexible extensibility.



- 通过采用分区分段式环锭监测系统对单锭成纱过程进行实时监测。断头检测系统配合智能化系统可对运行条件进行优化，从而节约原料，避免皮辊绕纱，提高生产效率。  
The spinning process of single spindle is monitored in real time by using the partition and segment spindle monitoring system. The breakage detection system with the intelligent system can optimize the operating conditions, so as to save raw materials, avoid the rubber cots winding, and improve production efficiency.
- 拥有速度优化功能，配合单锭检测功能的配合，保证了机器的最大效率。只需在操作界面上设定断头数量极限值，软件系统就会自动控制锭速，将机器控制在纺纱工艺设定的极限范围内运行。  
Equipped with speed optimization function and combined with spindle monitoring system function, it ensures the maximum efficiency of the machine. Just set the limit value of the number of yarn breakage on the operation interface, and the software system will automatically control the spindle speed, and make sure the machine running within the limit range set by the spinning process.
- 利用物联网、互联网技术对纺纱设备的健康状况监测，实现线上的状态感知，健康评估、能耗监测、异常检测，最终实现设备预测性维护，提高设备利用率。  
Utilizing the Internet of Things and internet technology to monitor the health status of ring frames, achieving online state perception, health assessment, energy consumption monitoring, and anomaly detection, ultimately achieving predictive maintenance of ring frames and improving the utilization.

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### 便捷灵活操作

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CONVENIENT AND FLEXIBLE OPERATION

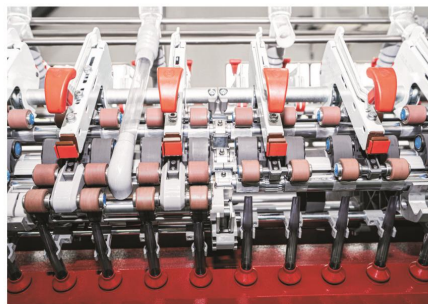
- 人机操作界面简单，显示清晰，仅改变少量参数就可实现设备的调整。

The human-machine operation interface is very simple with very clear display, and ring frame adjustment could be achieved by changing only very few parameters.



- 环锭纺与集聚纺快速切换，不需更换其他零件。

Normal spinning and compact spinning fast switching, no need to replace other parts.



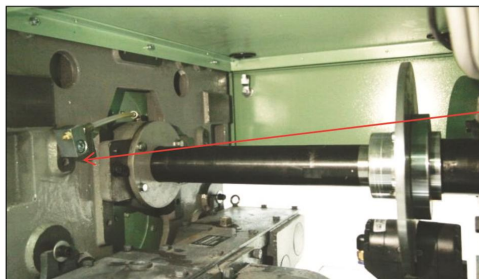
- 纺纱工艺参数可随时记录、存储、调取。

The spinning process parameters could be recorded, stored, and retrieved at any time.

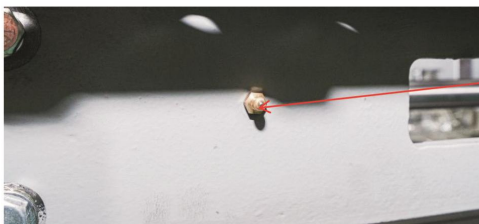


- 采用多点集中加油，无需停机，设备维护更简单。

Adopting multi-point centralized refueling, no need to stop the ring frame, and equipment maintenance is much simpler.



油嘴  
Lubricating Nipple



油嘴  
Lubricating Nipple

- 自动预磨钢领，产量管理统计，管底成型程序可在显示屏上随时调取。

Automatic pre-grinding of ring cups, production management statistics, and bobbin bottom forming program could be retrieved at any time on the operation interface.

- 龙筋安装位置分为三档，可满足 155mm-205mm 的纺纱升降动程。

The installation position of the spindle rail is divided into three levels, which can meet the spinning lifting range of 155mm to 205mm.

## TH698 系列智能细纱机

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### 应用功能扩展

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#### APPLICATION FUNCTION EXPANSION

- ★灵活的纺纱形式，可生产包芯纱、竹节纱、紧密纺、赛络紧密纺等。  
★Flexible spinning forms which including core-spun yarn, slub yarn, compact spinning and siro compact spinning, etc.

- ★可和市场上任何一家可商业供货的络筒机联成细络联型式，纱管在输送过程中无人手接触，既防止管纱受损又释放了人力。



★ It can be connected to any auto winder manufacturer on the market for link coner type. The yarn bobbins won't be touched by hands during the transportation, no any damage of the yarn & also releases manpower.

- ★可量身定制粗细联解决方案，适合所有纺纱厂排列条件以及不同的预算条件。粗纱输送系统降低了人工要求，以无人手接触管纱的输送方式实现快速的粗纱物流，保证纱线质量。  
★Customized bts solutions, suitable for all spinning mills' arrangement conditions and different budget conditions. BTS could reduce manual requirements and achieves fast roving logistics through unmanned hand contact, ensuring yarn quality.

- ★下吸棉自动收集风箱花系统，不需人工掏棉，降低劳动强度，提高细纱机自动化程度。  
★Automatic waste collection of ring frame suction system, eliminating the need for manual working, reducing labor intensity, and improving the automation level of the ring frames.

- ★新二级能效节能电机（永磁同步电机），实现节能3%-5%。  
★ New second-level energy-saving motor (permanent magnet synchronous motor), achieving energy saving of 3% -5%.

注：所有带★内容为可选配置

Note: All contents marked with ★ are optional.

TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

精密生产智造

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PRECISION PRODUCTION INTELLIGENT MANUFACTURE

细纱机的零件自制率达 70%，其中：

罗拉 100%	摇架 100%	集聚纺 100%	轴类 100%
钣金 100%	盘类 100%	套类 100%	铸件大件 100%

The Self-Produced Parts Rate Reaches 70%. Mainly:

Bottom Roller 100%	Top Arm 100%	Compact 100%	Shafts 100%
Sheet Metal 100%	Disc 100%	Sleeve 100%	Casting 100%



进口龙门中墙板自动生产线  
Middle Wallboard Automatic Processing Line  
(Imported Gantry Equipment)



进口龙门大铸件生产区  
Large Castings Processing Area  
(Imported Gantry Equipment)

TH698 系列智能细纱机

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精密生产智造

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PRECISION PRODUCTION INTELLIGENT MANUFACTURE



长向件自动生产线  
Longitudinal Part Automatic Production Line



全自动喷漆生产线  
Fully Automatic Powder Spraying Line

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TH698 SERIES INTELLIGENT RING SPINNING FRAME

精密生产智造

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PRECISION PRODUCTION INTELLIGENT MANUFACTURE



进口卧式加工中心  
Imported Horizontal Machining  
Center



进口立式加工中心  
Imported Vertical Machining  
Center



德国五面体加工中心  
Pentahedron Machining Center

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精密生产智造

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PRECISION PRODUCTION INTELLIGENT MANUFACTURE



日本激光切割机  
Japan Laser Cutting Machine



德国激光切割机  
Germany Laser Cutting Machine



自动折弯机  
Automatic Bending Machine



日本数控冲床  
Japan CNC Punching Machine



日本数控冲床  
Japan CNC Punching Machine



日本钣金生产线  
Japan Sheet Metal Production Line

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TH698 SERIES INTELLIGENT RING SPINNING FRAME

精密生产智造

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PRECISION PRODUCTION INTELLIGENT MANUFACTURE



英国泰勒粗糙度轮廓仪  
British Taylor Roughness Tester



高精度影像测绘仪  
High-Precision Image Mapper



英国泰勒圆度测试仪  
British Taylor Roundness Tester



显微硬度计  
Microhardness Tester



德国蔡司三坐标测量仪  
Germany Zeiss Three-Coordinate Measuring  
Instrument



万能工具显微镜  
Universal Tool Microscope

TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

主要技术参数

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MAIN TECHNICAL PARAMETERS

锭距 Spindle Gauge(mm)	70
锭数 Spindle Qty.	1008、1200、1632、1824(常规锭数 Normal spindles)
钢领直径 Ring Diameter(mm)	35、36、38、40、42、45
筒管长度 Bobbin Length(mm)	180、190、200、210
适纺线密度 Spun Yam Count(Tex)	常规规格: 16-120Ne Normal Supply: 16-120Ne
适纺纤维 Spun Fiber	棉、棉型化纤的纯纺或混纺 Cotton And Cotton Type Chemical Fiber
牵伸型式 Drafting	三罗拉, 每节 8 锭 Three-Line Bottom Roller. With 8 Spindles Per Staff
集聚纺牵伸 Compact Drafting	四罗拉, 网格圈, 每节 8 锭, 上短下长皮圈 Four-Line Bottom Roller. With 8 Spindles Per Staff. Double Apron (Top Short And Bottom Long)
牵伸倍数 Drafting Multiple	10-120(常规锭数 Normal Supply)
锭子型式 Spindle type	铝套杆锭子 Aluminum Plug Type
锭速 Spindle Speed (Rpm)	正常纺纱速度可达 23000rpm Normal Running Speed Could Be Up To 23000 Rpm
锭子传动 Spindle Driving	四锭式 Each Tape For 4 Spindles
捻度 Twist (t/m)	330 ~ 2800
捻向 Twist	Z 捻、S 捻、Z/S 捻
粗纱卷装 Roving Package(mm)	135 × 320、152 × 406(max)
主电机功率 Main Motor Power(kw)	37、45、55、65、75、90
集聚纺负压风机功率 Compact Motor Power(kw)	5.5、7.5、11、15
选配件 Optional Parts	气圈环、清洁器、自动落纱、粗细联、细络联、理管箱 Balloon Ring, Ohtc, Auto-Doffing, Bts, Link Coner, Bobbin-Sorting Box

TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

主要尺寸参数

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MAIN DIMENSIONAL PARAMETERS

TH698 系列细纱机地脚平面图

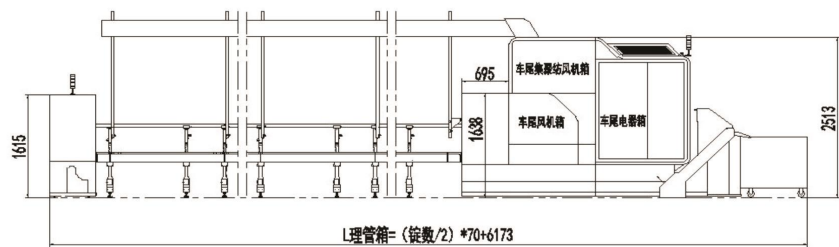
TH698 Series Ring Spinning Frame Foundation Drawing

TH698 长车系列 (48 锭递增)

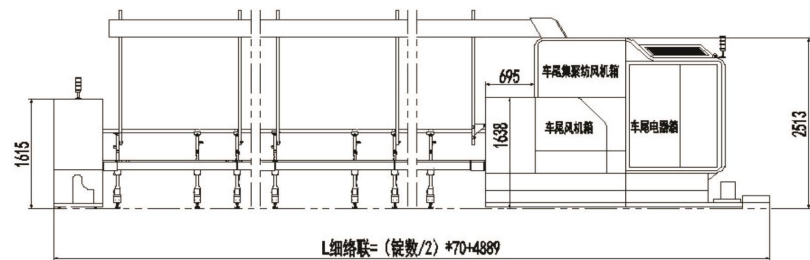
TH698 Long Ring Spinning Series (Increasing By 48 Spindles)

锭数	816	864	912	960	1008	1056	1104	1152	1200	1248
理管箱型 L	34283	36413	38093	33773	41453	43133	44813	46493	48173	49853
细络联型 L	33449	35129	36809	38489	40169	41849	43529	45209	46889	48569

(1) 全自动理管箱 Bobbin Sorting Box Type



(2) 细络联 Link Coner Type



## TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME

### 主要尺寸参数

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MAIN DIMENSIONAL PARAMETERS

TH698 系列细纱机地脚平面图

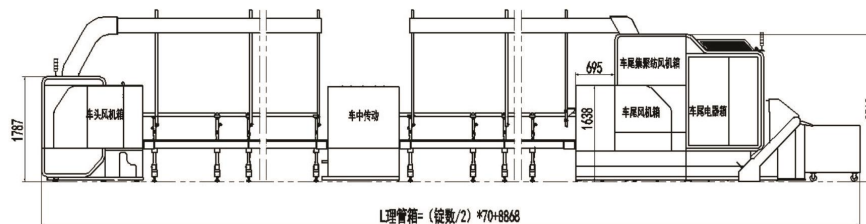
TH698 Series Ring Spinning Frame Foundation Drawing

TH698 超长车系列 (48 锭递增)

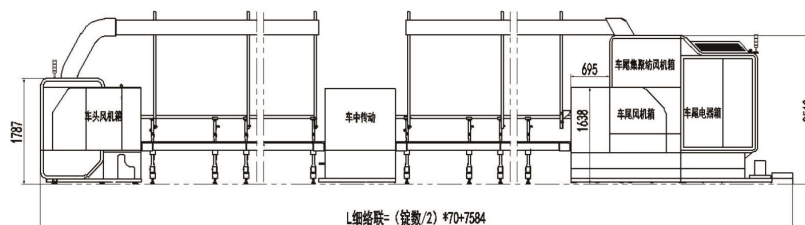
TH698 Super Long Ring Spinning Series (Increasing By 48 Spindles)

锭数	1440	1488	1536	1584	1632	1680	1728	1776	1824
理管箱型 L	59268	60948	62628	64308	65988	67668	69348	71028	72708
细络联型 L	57894	59664	61344	63024	64704	66384	68064	69744	71424

(1) 全自动理管箱 Bobbin Sorting Box Type



(2) 细络联 Link Coner Type



**TH698** 系列智能细纱机

**TH698 SERIES INTELLIGENT RING SPINNING FRAME**



TH698 系列智能细纱机

TH698 SERIES INTELLIGENT RING SPINNING FRAME



让全球纺织厂都爱上同和产品

LOVE TEXTILE, LOVE TONGHE

同和纺织机械制造有限公司

Tonghe Textile Machinery Manufacture Co., Ltd

地址：中国江苏常州经济开发区兴东路 198 号

Add: NO.198 Xing Dong Road Economic Development Zone,  
ChangZhou City, Jiangsu, China

邮编 P. C: 213025

总机 Company: 86-519-88406666      86-519-88401388

营销部 Sales Dep : 86-519-88405688      86-519-88400578

传真 FAX: 86-519-88405666      86-519-88401618

电子信箱 E-MAIL: [tonghesales@throller.com](mailto:tonghesales@throller.com)

网址 Website: [www.throller.com](http://www.throller.com)



技术参数如有变更，恕不另行通知

Technical parameters are subject to change without prior notice.

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