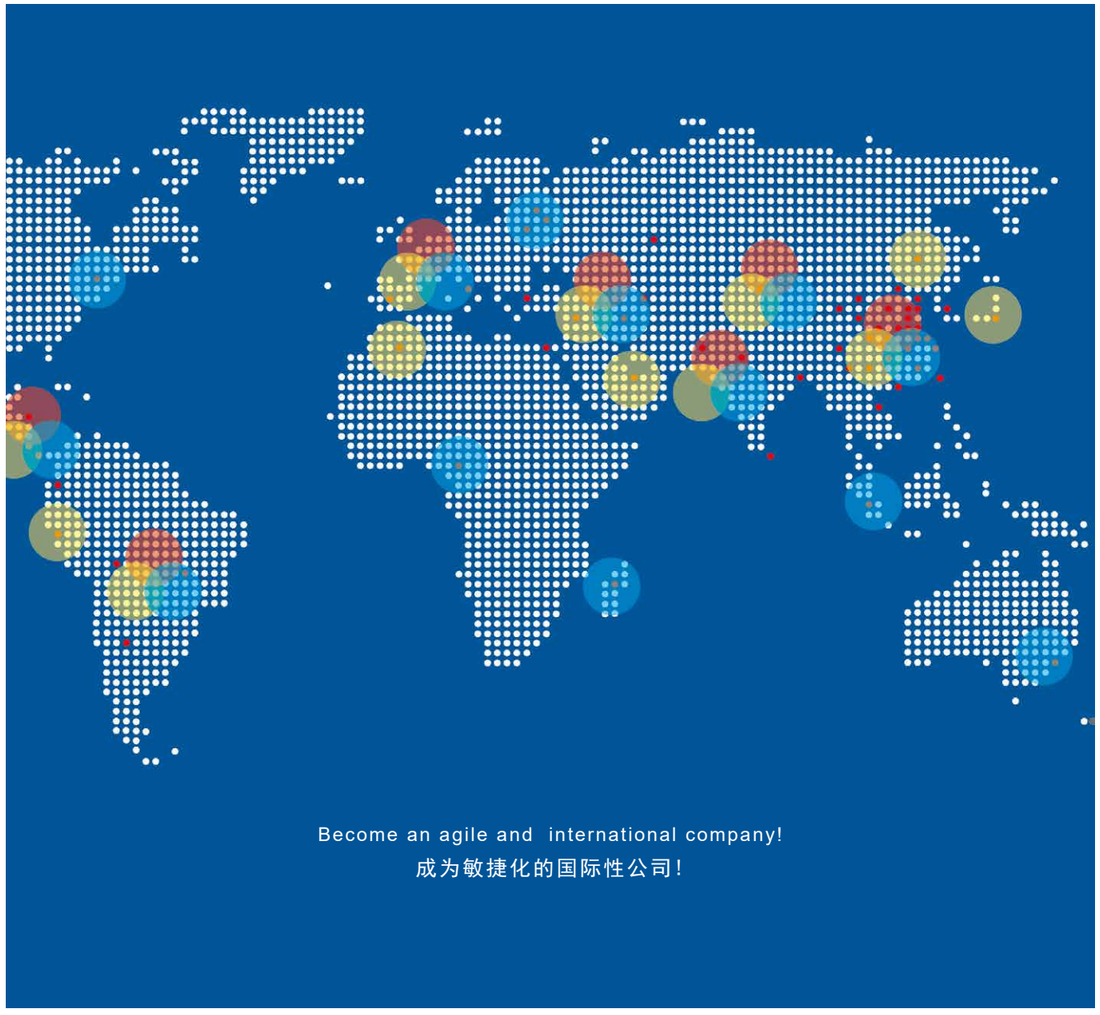

浙江日发纺织机械股份有限公司
ZHEJIANG RIFA TEXTILE MACHINERY CO.,LTD

Add：RIFA Digital Technology Zone, Xinchang Hi-tech Industrial Park, Zhejiang,China(312500)
地址：浙江省新昌县高新技术产业园区日发数字科技园

山东日发纺织机械有限公司
SHANDONG RIFA TEXTILE MACHINERY CO.,LTD

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WEAVING Solutions

织造解决方案

剑杆织机
RAPIER LOOM

RIFA® 日发纺机

关于日发纺机

浙江日发纺织机械股份有限公司成立于2002年，注册资金6948.7万。公司系国家重点高新技术企业，国家机械工业重点骨干企业，国家863计划CIMS工程示范企业，全国CAD应用工程示范企业，国家火炬计划重点高新技术企业，中国纺织机械协会副会长单位。现旗下控股山东日发纺织机械有限公司、安徽日发纺织机械有限公司、浙江日发纺机技术有限公司。

公司以成为“敏捷化的国际性公司”为愿景，以“为用户提供智能纺织装备系统解决方案，并协助用户逐步实现数字化工厂的梦想”为使命，致力于机电行业的“数字科技”，已成为国内外享有高知名度的纺织设备生产企业。二十几年来已成功开发了清梳联、并条机、转杯纺纱机、喷气涡流纺纱机、倍捻机、直捻机、假捻变形机、精密并纱（络筒）机、自动穿经机、喷气织机、喷水织机、剑杆织机、毛巾织机、特种织机、针织圆机、无缝内衣机、袜机、非织造布设备等系列的上百种产品，能够为行业提供纺纱、前准备、织造、非织造四大解决方案，涉及纺织行业的各个领域。产品遍及全国各地，并销往全球30多个国家和地区，在各个行业的市场占有率位居前列。

日发纺机正致力于创造崭新的“数字科技”理念，在未来的整机生产中，建立“人流、物流、信息流”的互动平台，实现科技、环境、制造的和谐统一。铸就“信息化、敏捷化、国际化”的机械制造生产基地。

山东日发纺织机械有限公司系日发纺机全资子公司，致力于研发、制造具有国际水准的各类无梭织机。公司主要产品为系列喷气织机、喷水织机、剑杆织机、毛巾织机、特种织机、针刺、水刺非织造布设备、自动穿经机，三十多年的专业经验使山东日发纺机成长为我国无梭织机的主要研发、制造基地。

About Us

Zhejiang Rifa textile machinery co., ltd. is founded in 2002 with a registered capital of 69.487 million yuan. The company is a China national key high-tech enterprises, a key enterprise of the China national machinery industry,a demonstration enterprise of both China national 863 program CIMS engineering and China national CAD application engineering, a China national torch plan high-tech enterprise, and a vice president unit of China textile machinery association. It now holds three subsidiaries: Shandong Rifa textile machinery co., ltd., Anhui Rifa textile machinery co., ltd. And Zhejiang Rifa textile machinery tech co., ltd.

With the vision of “become an agile and international company” and the mission of “Provide users with intelligent textile equipment system solutions, and help users gradually realize the dream of a digital factory”, Zhejiang Rifa Textile Machinery Co., Ltd. is devoted to the area of “digital technology” in mechanical and electrical industry, and has become a well-known textile equipment manufacturer with excellent reputation at home and abroad. For over twenty years, the company has successfully developed four solutions such as spinning, fibre preparation, weaving and non-woven , including blow-room machine, draw frame, rotor spinning machine, air jet vortex spinning machine, two-for-one twister machine, twister machine for tire cord, false-twise texturing machine, precise winding machine(precise rewinding machine), automatic warp drawing machine, air jet loom, water jet loom, rapier loom, terry towel loom, specific loom, circular knitting machine, seamless knitting machine, hosiery machine and non-woven equipment etc hundreds of machines. These products have been distributed to all areas around China and sold to more than 30 foreign countries and regions with a leading market share in each respective industry.

RIFA is devoting itself to create a whole new theory of digital technology, establishing an interactive platform of “people flow, material flow and information flow”, realizing harmony and unify of science and technology, environment and manufacturing, and aiming to become a manufacturing base of “informatization, agility and internationalization”.

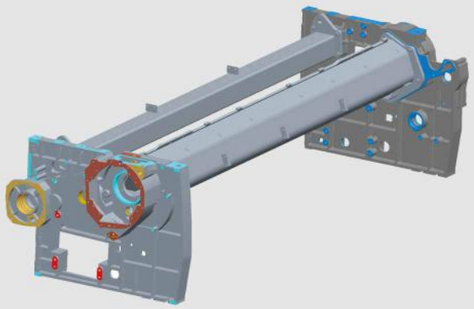
Shandong Rifa Textile Machinery Co., Ltd. is a wholly owned subsidiary of Zhejiang Rifa Textile Machinery Co., Ltd., devoting itself to research and manufacture top grade all kinds of shuttleless looms. air jet loom, water jet loom, rapier loom, terry towel loom, special loom and needle&spunlace non-woven equipment, automatic warp drawing machine. More than 30 year experience has it grown to be the main research and manufacture base of shuttleless weaving machines.

高速剑杆织机
HIGH-SPEED RAPIER LOOM

RFRL90高速剑杆织机是在我司RFTL80高端剑杆毛巾织机的基础上全新设计的一款织机。旨在为市场提供一款能充分集质量、多样性、高效率和可用性为一体的织机。

The new RFRL90 high-speed rapier loom is designed and made newly based on RFTL80 high-speed rapier terry loom, with the aim to provide the market with a weaving machine which finally combines quality and versatility with efficiency and usability of the machine.

高速剑杆织机
HIGH-SPEED RAPIER LOOM

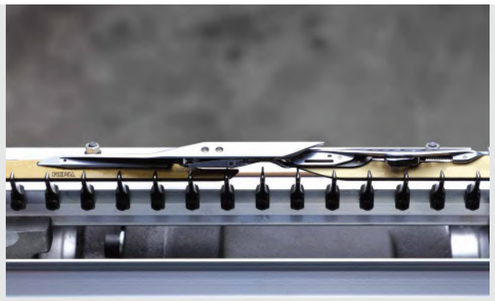


坚固的机架

RFRL90高速剑杆织机的机身为重型框架，能保证织机高速运行下的低振动，并实现更高的速度和织造效率。安装在两侧墙板上的驱动，能够减少织造重磅织物时产生的振动，确保机器在生产过程中的稳定性。且成本和维护费用低。低能耗和高性能，及最小的噪音和振动，这些是RFRL90高速剑杆织机的主要优点。

Sturdy Machine Frame

The RFRL90 high-speed rapier loom benefits from heavy-duty frames, promoting a low vibration pattern at high speed and enabling high speed and efficiency. The solid drive, positioned in main lateral frames, is engineered for extensive control moving masses to consistently process heavy patterns with minimal cost & maintenance. The best balance between consumption and performance and the minimal noise and vibrations are key elements resulting from the legacy of RFRL90.

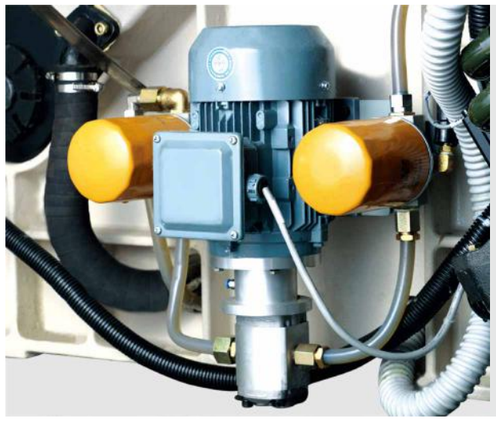


全新引纬系统

RFRL90高速剑杆织机引纬采用独特的空间延伸凸轮直接驱动传剑轮，具有传动链短、结构紧凑、易于维护等优点。引纬方式可根据织物品种不同配备两种结构：单排悬浮导钩和自由无导钩式，满足对各种不同纱线的织造需求。

New Weft Insertion System

The weft insertion system of RFRL90 high-speed rapier loom adopts a unique space extension cam to drive the rapier wheel directly, which has the advantages of short transmission chain, compact structure, and easy maintenance. The weft insertion method can be equipped with two structures according to different fabric types: single row suspension guide hook and free flight hook type, which can meet weaving needs for a variety of different yarns.



润滑系统

RFRL90高速剑杆织机采用集中润滑的方式。润滑机构中采用双过滤器，对润滑油中的杂质起到很好的过滤作用，保障了润滑系统在织造过程中的润滑通畅。整套系统与电控相连接，通过压力保护，确保织机安全可靠地运转。

Lubrication System

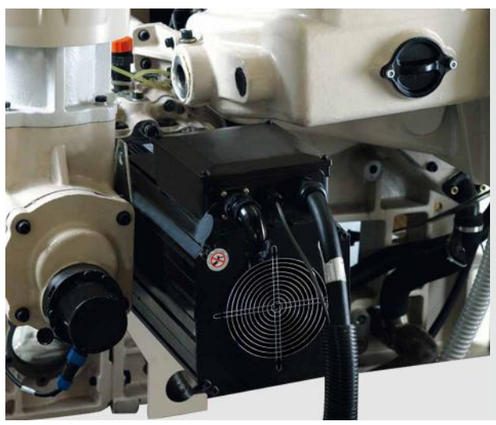
RFRL90 high-speed rapier Loom adopts centralization lubrication. In this system the oil can be filtered completely through double filters. It has a good filtering effect on the impurities of the lubricating oil and ensures the smooth lubrication during the weaving process.This system is connected with electric control system, reliability is assured by pressure protection.

全新选纬器

全新设计，每一根选纬指都有一独立电机控制，模块化配置，可实现4色、8色或12色。每个选纬指由电脑芯片驱动控制，选纬指动作、幅度能有效避免相邻纬纱间的干扰。

New Weft Selector

New design, each weft selection finger is controlled by independent motor , available for configurations for 4, 8 or 12 colors. Each weft selection finger is driven and controlled by the microprocessor. The action and amplitude of the weft selection finger works to eliminate interference with adjacent wefts effectively .



直驱马达

RFRL90高速剑杆织机的主马达采用高效同步永磁伺服电机，织机转速可通过触摸屏方便地设定并能根据织物组织自动调节车速。结构简单，性能可靠，不需要维护和冷却系统，直驱马达能始终确保高性能和低运行成本。

Direct Drive Motor

The main drive of the RFRL90 high-speed rapier loom is based on an efficient synchronous permanent magnet servo motor. The speed of the loom can be easily set through the touch screen, and the speed can be automatically adjusted according to the fabric structure. Simple, reliable, maintenance-free, with no cooling system required, the direct drive motor ensure top performance over time and low cost operation.

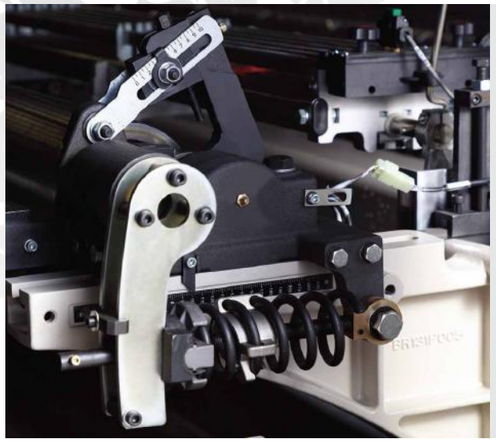
纬纱剪刀多样性

此款织机有两种纬纱剪刀供客户选择使用，这两款剪刀能够满足所有的织造需求。标配的是机械式纬纱剪刀或者旋转式纬纱剪刀，这种剪刀尺寸较小剪纬准确。另外还有一种电子控制的纬纱剪刀，这种剪刀在织造毛巾布方面有巨大的优势，能够满足各种混合纱线的织造要求。

Multiple Choice of Weft Cutters

The RFRL90 offers multiple weft cutter options to fill all the weaving needs. Standard on the weaving machine are the mechanical weft cutter or the rotocut, the weft cutting is precise and optimized due to its reduced dimensions. Other option is electronic weft cutter enables to produce the most refined and elegant terry cloth, allowing to weave a mix of different types of wefts.

高速剑杆织机
HIGH-SPEED RAPIER LOOM



全新后梁机构

RFRL90高速剑杆织机的全新后梁，在后梁端部配有控制张力的压力传感器，能够实现轴管对纱线的压力有一个更好的补偿。同时机械式可调整力臂机构的使用，能够配合电气控制，满足对各种不同纱线的织造需求。

New Back-Rest Roller

The new ground back-rest roller features light weight cylinders and a load cell to control the tension, thus producing less inertial and allowing better compensation of the cylinders on the yarn. Adopts mechanical adjustable arm mechanism to work with electrical control to meet the weaving needs of various yarns.

电子卷取机构

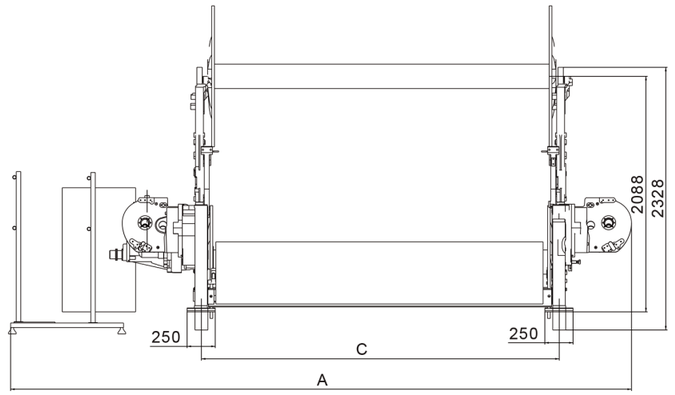
全新加强型电子卷取，通过高灵敏度触摸屏可方便设定纬密，并能实现根据织物组织自动改变纬密度。

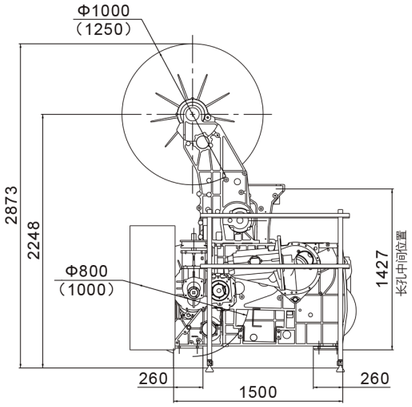
Electronic Controlled Take-Up

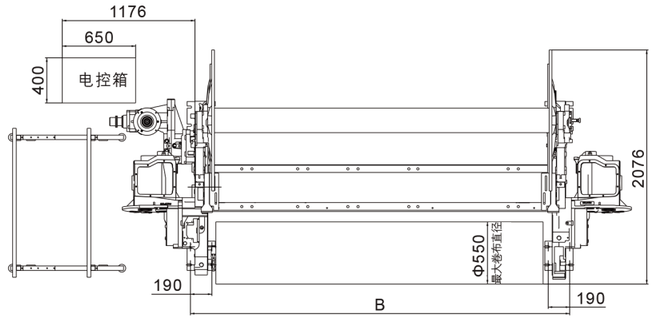
The machine is equipped with an enhanced electronic fabric take up, and the weft density can be set conveniently through the high-sensitivity touch screen, and the weft density can be automatically changed according to the fabric structure.

RIFA 日发纺机

尺寸图
DIMENSIONS







R/S	A	B	C
190	4500	2660	2470
210	4700	2860	2670
230	4900	3060	2870
260	5200	3360	3170
280	5400	3560	3370
300	5600	3760	3570
320	5800	3960	3770
340	6000	4160	3970
360	6200	4360	4170
380	6400	4560	4370
420	6800	4960	4770

本图适用于RFRL90上下双经轴机型，该尺寸仅供参考。RFRL90机型与此图相比除没有上经轴及相关墙板支撑外，其余尺寸与本图相同。具体可根据客户厂房实际情况自行调整。至于其他规格的详细尺寸，请直接向我司咨询。

This picture applies to up-down double beam system of RFRL90 model, the size is for reference only. Compare to this picture RFRL90 model has no upper beam system and related wallboard supports, the remaining dimensions are the same as this picture. It can be adjusted according to the actual situation of the customer's factory. As for the detailed dimensions of other specifications please contact with our company.

技术规格
SPECIFICATION

项目		规格	选配件
筘幅	公称筘幅	190cm，210cm，230cm，260cm，280cm，300cm，320cm，340cm，360cm，380cm，420cm	
	有效筘幅	公称筘幅减0～60cm（190～260cm） 公称筘幅减0～80cm（280cm及以上）	
开口机构		电子提花机	
		史陶比尔电子多臂机（最多20片综框）	
传剑系统		单侧导钩式传剑系统 自由无导钩传剑机构	
经轴		经轴800mm	经轴1000mm或1100mm
引纬		电子选纬器：4色，8色或12色	
纬纱剪刀		机械式剪刀	
		电子式剪刀	
纬密		标配：5-400纬/厘米	
		可编程的自动变纬密应用于多臂机或提花机开口时	
布边		电子辅助布边和纱罗绞边装置	
		机械辅助布边和纱罗绞边装置	
		机械折入边	
停经装置		独立电子型的6列停经架	8列停经架
送经		电子控制送经	
织物卷取和卷布棍		电子控制卷取	
		最大卷布直径：Φ550mm	
		机内卷装装置	机外大卷装
网络接口		以太网接口	
其它任选件		钢筘LED安全光栅	

Item		Specifications	Options
Width	Reed Width	190cm，210cm，230cm，260cm，280cm，300cm，320cm，340cm，360cm，380cm，420cm	
	Working Width	Reed width minus 0～60cm（190～260cm） Reed width minus 0～80cm（280cm and above）	
Shedding		Electronic Jacquard	
		Staubli electronic dobby (up to 20 frames)	
Transfer System		Guided rapiers monorail type hooks Free flight weft insertion	
Warp Beam		Beam diameter 800mm	1000mm or 1100mm
Weft Insertion		Electronic Selector：4，8 or 12 colors	
Weft Cutter		Mechanic filling cutter	
		Electronic filling cutter	
Pick Density		Standard：5-400 picks/cm	
		Automatic weft density variation programmable in dobby and jacquard pattern	
Selvedge		Motorized auxiliary selvedge and leno device	
		Mechanical auxiliary selvedge and leno device	
		Mechanical tuck-in	
Warp Stop Motion		Separate electronic WSM with 6 rows	8rows
Warp Let Off		Electronic controlled let off	
Fabric Take-up and Cloth Roller		Electronic controlled take-up	
		Cloth roller diameter：up to Φ550mm	
		Inbuilt take-up	External batching motion
Connectivity		Ethernet interface	
Other options		Reed LED Lamp	

系列高速剑杆织机
SERIES HIGH SPEED RAPIER LOOMS

RFRL50型高档剑杆织机立足于纺织技术增值的研究,使客户更经济的生产出更好的产品，具备国际上先进主流机型的先进功能。高效的织造、人性化的设计、强劲的打纬力、良好的高速稳定性、先进的电气控制系统、便捷的操作性是该织机的独有特色，整机更高效、更节能、更稳定。其主要特点如下：

- ○ 剑杆织机网络化、智能化程度高，可实现车间机群的集中管理和控制。
- ○ 织机的打纬机构位于织机中间织物下方,利于打纬强劲和高速运转。
- ○ 优化的四轴空间连杆传剑机构，可实现稳定精确的高速引纬织造。
- ○ 织机控制系统采用光纤通讯技术，电机响应快、起停迅速，利于提高织物品质。
- ○ 适应厚重织物打纬力的重型共轭凸轮轮廓曲线等结构的设计，提高了高速打纬结构的稳定性。
- ○ 采用直接转矩控制算法结合伺服控制技术，实现了织机停车的精确位置。

With the advanced functions of the international advanced models, RFRL50 high-grade rapier loom is based on the research of value-added textile technology which enables customers to produce better products economically. The unique characteristics of the loom are efficient weaving, humanization design, strong beating-up force, high-speed stability, advanced electrical control system and convenient operation. In a word, the whole machine is much more efficient, energy-saving and stabler. Its main features are as follows:

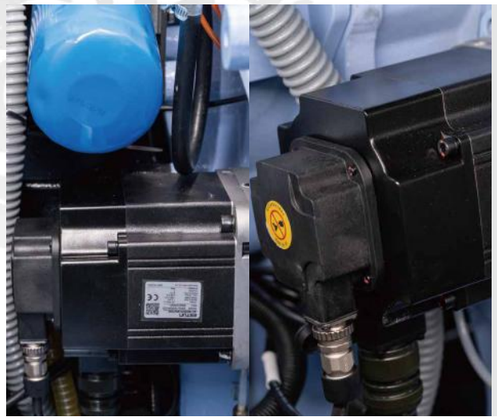
- ○ The rapier loom is networked and intelligent in a high degree which can realize the centralized management and control of machine group.
- ○ The beating-up mechanism of the loom is located under the middle fabric of the loom which is conducive to strong beating-up and high-speed operation.
- ○ The optimized sword transmission mechanism of four-axis space link can realize stable and accurate weft insertion and weaving with high speed.
- ○ The loom control system adopts optical fiber communication technology so that the motor can respond quickly and it is conducive to improve the quality of the fabric.
- ○ The design of the heavy-duty conjugate cam profile curve and other structures adapted to the beating-up force of heavy fabrics improves the stability of the high-speed beating-up structure.
- ○ Using the control algorithm of direct torque, combined with the servo control technology, the precise position of the loom parking is realized.

系列高速剑杆提花织机
SERIES HIGH SPEED RAPIER JACQUARD LOOMS

- ○ 无导钩引纬技术，适应高档高支高密织物。
- ○ 超启动马达技术，动力强劲、节能高效。
- ○ 主电机寻纬技术，适应万针以上大笼头，动作安全可靠。
- ○ 无传统的离合器和皮带，结构稳定，维护费用低。

- ○ Free flight without guide hooks, especially suitable to weave top grade hogh-count & high - density fabrics.
- ○ Adopts super direct motor, strong power and low consumption.
- ○ Pick finding by Main motor, suitable for more than ten thousand hooks jacquard with safety and stable performance.
- ○ Without clutch and belt, structure stability and lower maintenance cost.

系列高速剑杆织机
SERIES HIGH SPEED RAPIER LOOMS

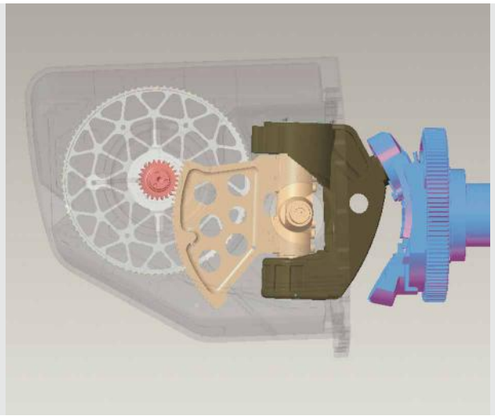


电子卷取和电子送经

电子控制的卷取和送经作为标配安装在织机上，两个伺服马达通过一个集成控制箱实现精准同步，该设计保证了织物的质量，送经及卷取减速装置均直接装于两侧墙板侧面，结构更加简单紧凑。

Electronic Take-up & Let-off

ETU& ELO is a standard configure of RFRL50. Two servo motors are cotrolled by a compositive controlling box, which ensureslet-off and take-up running synchronously. It is a guarantee for quality production.

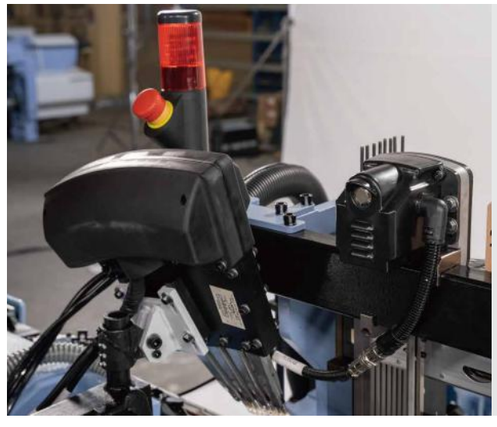


高速引纬系统

引纬系统采用空间连杆结构，并与凸轮轴同轴，它由扇形齿轮带动剑轮往复运动。该系统结构简单稳定，布局合理，受力冲击很小，减少了机构的故障率，提高了织机的使用寿命。

High-speed Insertion System

Insertion system adopts spatial linkages which are concentric with cam shafts; insertion motion is driven by sector gears. This system is simple but stable, avoids most malfunctions and extends the loom life.



先进电子布边系统和电子选纬

由独立的步进马达电子式驱动，电子布边系统装于综框前方，因此所有综框全部用于组织花纹的织造，布边的综平时间及花型在微处理器上进行设定，且可以与地组织的综平时间不同，同时该设定可以在织机运转期间调整，因此可以立即在布面上看调整后的结果。

Advanced Electronic Selvage System and Selector

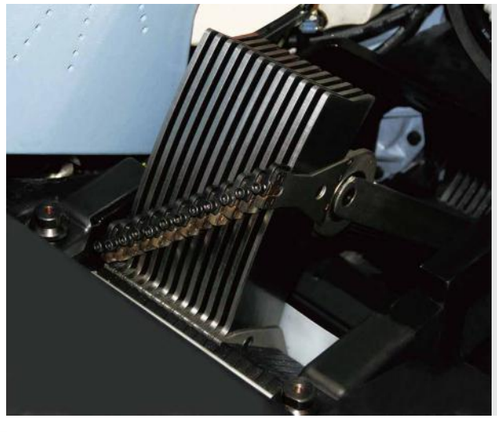
Independent electronic selvage devices with step motors are instalied front of heald frames, so all heald frames can be used for fabric weaving.Shed levelling time and design of selvages can be set on microprocessor.The levelling time can be different to the ground structure of cloth. All the setting can be made duringloom running.

低能耗主马达

采用超启动马达直接驱动织机，优化电机结构，更适合高速特点。可通过触摸屏方便的调整车速，取消主传动离合器及皮带，强力高效的齿轮传动，可降低易损消耗及故障率，减少维护成本。主电机实现全自动找纬，钢筘不动，只有综框运动。电机采用循环油冷却，使用寿命长。

Low Power Consumption Motor

RFRL50 adopts super start motor to drive machine directly, this is very suitable for high speed running. Change speed on touching screen conveniently. Without main drive clutch and belt, dirct drive is more powerful, this can reduce power consumption and maintenance cost. Main motor drives pick-finding automatically. During reversing reed keep stop, only heald frames move. Main motor adopts oil circulation cooling system which can ensure motors a long life.

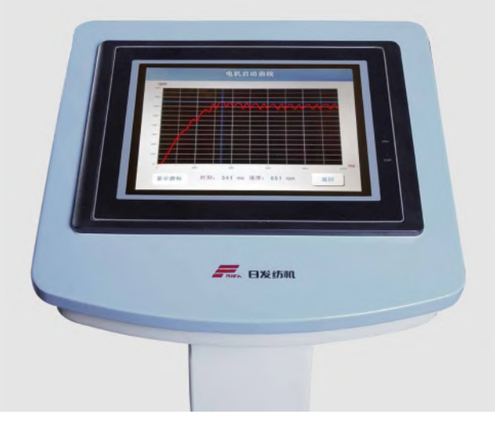


高速开口传动机构

开口动作由超级马达直接驱动积极式电子多臂装置，最多可配20片综框，可满足强劲动力开口,通过CPU和电子调速系统的精确控制，实现织机慢速、寻纬等动作。

High-speed Shedding Transmission

Electronic dobby is driven by super moor directly, max can equip with 20 heald frames, cloth-fell motion is powerul. Slow-motion and pick-finding is cotrolled by CPU and speed control system.



全方位控制 先进电子调速系统

采用10英寸交互式触摸屏的友好界面.可存储多种织物设定参数，微处理器控制织机所有的功能，进行记录、分析并存储所有生产数据。织机转速在操作界面任意设定，调速范围宽，快速启动,准确定位刹车,可实现无级调速。有效减少纱线断头和开车痕,满足不同品种纱线和织物的需要。自动换纬功能的设计，即使发生断纬，织机也不会停下来。平综时间可在一定的角度范围内电子设定,无需机械调整，既能控制织物的风格,又方便调整、提高效率。

Overall Control, Advanced Speed Control System

RFRL50 adopts 10 inch interactive touching screen friendly interface, which can store plenty of parameter settings of cloth. CPU controls all the functions, working records,analyze and store all production data. Loom speed can be set freely on operation interface, speed adjustable range is big, start is fast, brake is accurate, can realize stepless speed change. This can reduce yarn breaks and prevent marks. With automatic weft switch function, even weft breaks loom needs not stop. Shedding levelling time can be set in a certain angle range, mechanical adjustment is not needed, this can well control cloth quality, and also machine is easy to operate.

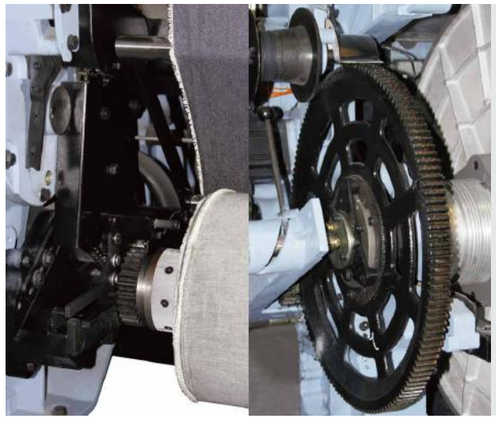
系列高速剑杆织机
SERIES HIGH SPEED RAPIER LOOMS

便捷的快换综框设计

标配调节式综框，综框和开口机构可快速连接，综框高低在综框上方调节，操作方便.更换品种时综框能快速移走，提高了工作效率。

Fast-change Heald Frame

RFRL50 can equip with not only normal heald frames with underneath hooks but also adjusted heald frames. Heald frames and shedding devices can be connected quickly, it is easy to adjust the height of heald frames.



快换织轴 快换卷布辊结构

可配置快换织轴系统,减少换轴时间,提高织造效率。

Fast-change Beam & Cloth Roller

RFRL50 can equip with fast-change beam system, this can save time and increase efficiency.

适应性强的双后梁和双卷取导辊

标配双后梁和双卷取导辊，适合厚重织物的织造。第二根罗拉为模块化设计，在织造轻薄织物时可以从织机上很方便的取下。

Double Back-rest&Take-up Roller

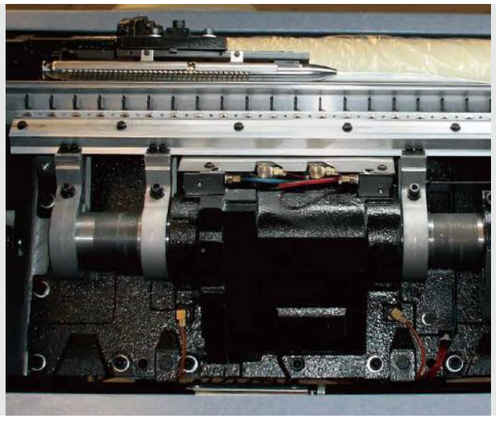
RFRL50 equips with double back-rest and double take-up roller as standard specifications, with this design it can weave high quality heavy fabrics. The second roller is modular in design,it can be removed easily when weaving light fabrics.

可调纬剪　稳定的边撑结构

采用设计更加合理的纬剪机构和边撑结构,安装方便,机械性能更加稳定可靠, 提高了织物的织造品质。

Adjustable Weft cutter; Stable Temple Structure

Adopts more reasonable weft cutter and temple structures, it is easy to install, mechanical performance is more reliable, this can ensure a good weaving quality.

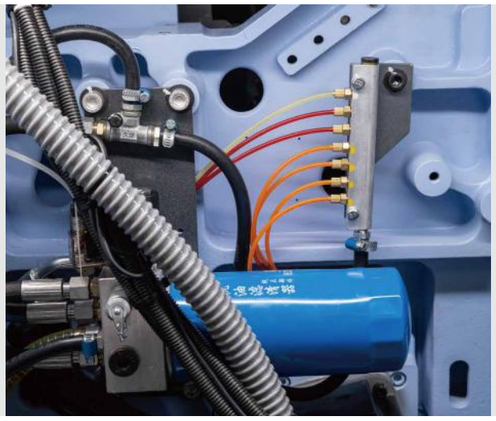


打纬系统

打纬凸轮装置位于织物下方内嵌于胸梁里面,这种设计使得打纬机构的刚性、打纬力和整体运动的平衡性提升,更适合宽幅、高覆盖系数织物的织造,中间铝合金支架使钢筘的直线度更好, 剑头、剑带在行程中能保持良好的直线运动。

Beating System

Beating cams are inbuilt in breast beam underfabric, this design can increase the beating strength and working balance; more suitable for wide width and high cover factor fabrics. The aluminium alloy supports can ensure the reed a good linearity.



集中润滑

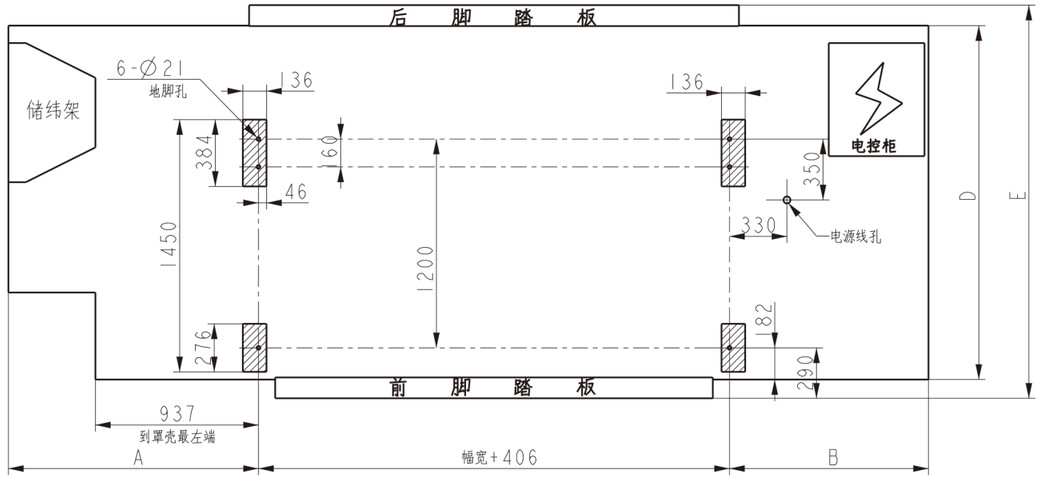
采用单独油泵电机驱动油路， 织机的关键运动部件由专门的润滑管道强制润滑, 确保各运动部件获得良好的润滑。

Center Lubrication

Adopts independent motor to drive oil pump, all the important motion components are forced lubricated by independent pipes.

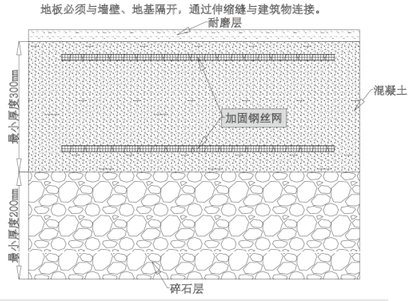
技术规格、尺寸图
SPECIFICATION&DIMENSIONS

项目Item	规格	Spcification
筘幅 Reed width	公称筘幅：190、210、220、230、240、250、280、320、340、360、380cm	Nominal：190、210、220、230、240、250、280、320、340、360、380cm
	幅宽变化（含废边）：+6～-70cm	Width reduction(including false selvage): +6～-70cm
织造范围 Yarn range	短纤：Nm200-Nm3(Ne120-Ne1.8)	Spun yarn：Nm200-Nm3(Ne120-Ne1.8)
	长丝：10dtex～1500dtex	Filament：10dtex～1500dtex
	导钩式或自由飞行式	With guide hooks,or free flight
	经纱:上浆纱、不上浆纱、加捻纱、无捻纱、 混合纱	Warp yarn: sizing yarn, non-sizing yarn, twisted yarn, non- twisted yarn, mixed yarn
织机速度 Weaving speed	设计转速：800转/分	Designed speed：800rpm
	工艺转速：500～650转/分 (依幅宽配置、织物品种而定)	Practical speed：500～650rpm （depend on the width and the fabric type）
	最大入纬率：1520米/分 (依幅宽配置、织物品种而定)	Max insertion rate：1520m/min （depend on the width and the fabric type）
纬纱 Weft	纬纱选择: 1～8色，可同时织造2根纬纱 （根据纬纱品种、规格而定）	Selector:1-8 color, same time may insert 2 picks （According to weft variety and specification）
	储纬:电子储纬器	Accumulator: electronic
	纬剪:机械式	Weft cutter: mechanical
动力Power	采用开关磁阻电机调速系统，节能降耗，性能优越	Switched-reluctance motor speed control system
开口Shedding	电子多臂机(最多20片综框)	Electronic dobby (max 20 shafts)
	电子提花机	Electronic jacquard
打纬Beating	分离筘座、双侧共轭凸轮打纬	Separate sley, both sides conjugate cam
引纬Insertion	双侧空间四连杆引纬	Both sides spatial four link insertion
送经 Let-off	连续式交流伺服电子送经	Continuous alternative current servo electronic let-off
	单经轴	Single beam
	边盘直径：Φ1000mm、Φ800mm	Beam flange dia: Φ1000mm、Φ800mm
卷取 Take-up	连续式交流伺服电子卷取	Continuous alternative current servo electronic take-up
	最大卷布直径Φ600mm	Max cloth roller dia. Φ600mm
	机构纬密范围：4～130根/厘米（ 4～30、6～70、100～130）（具体织造纬密根据纱线规格、织物组织、织机转速、织造环境而定）	Weft density range of mechanism: 4～130 picks/cm（4～30、6～70、100～130）（The specific weft density depends on the yarn specifications, fabric weave, loom speed and weaving environment）
布边 Selvage	绞边装置:电子绞边	Leno device: electronic
	边剪:标配电子式（机械式选配）	Selvage cutter: electronic(options:mechanical)
	边撑：左右独立边撑	Temple: LH & RH independent
润滑 Lubrication	集中油浴润滑+油枪润滑	Centralized + grease gun
停车装置 Stop motion	经停：6列或8列电气触点式停经装置	Warp stop:6 or 8 lines electric touch-type
	纬停：电子式高灵敏压电检测装置，有防双纬功能	Weft stop: electric piezoelectric sensor, with double pick function
	其它：绞边纱、废边纱断头自停	Others: auto stop for selvage yarn
	停车显示：控制面板显示停车原因，多功能4色灯显示	Stop display: show stop reason on screen,multi-function 4 color lights
自动功能 Automatic	自动定位停车/慢速寻纬/织口补偿/调整经纱张力，自动检测/复位/故障显示	Automatic stop at certain angle/low motion pick-finding/cloth fell compensation/warp tension adjustment, auto inspection/reset/fault indication
电气控制 Electric controlling	控制：多功能CPU控制系统，能控制、监控、自动诊断、信息显示	Control: multiple function CPU control system. with functions of control, monitor, auto diagnose, data indication
	显示：触摸屏显示双向通讯，即时调整/设定参数、编程	Display: touching screen with intercommunicaiton, immediate adjustment/parameter setting, programming

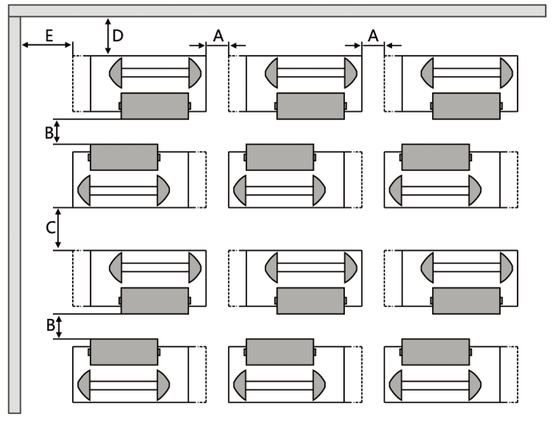


A(垂直筒子架)		B		D(无踏板)		E(有踏板)
2/4/6色	6/8色	多臂机	提花机	经轴 Φ800	经轴 Φ1000	经轴 Φ1000
1437	1937	1143	1156	2031	2034	2260

单位:mm



重量(kg)											
幅宽(cm)	190	210	220	230	240	250	280	320	340	360	380
多臂机	4200	4300	4350	4400	4450	4500	4750	4950	5050	5150	5250
提花机	3900	4000	4050	4100	4150	4200	4450	4650	4750	4850	4950



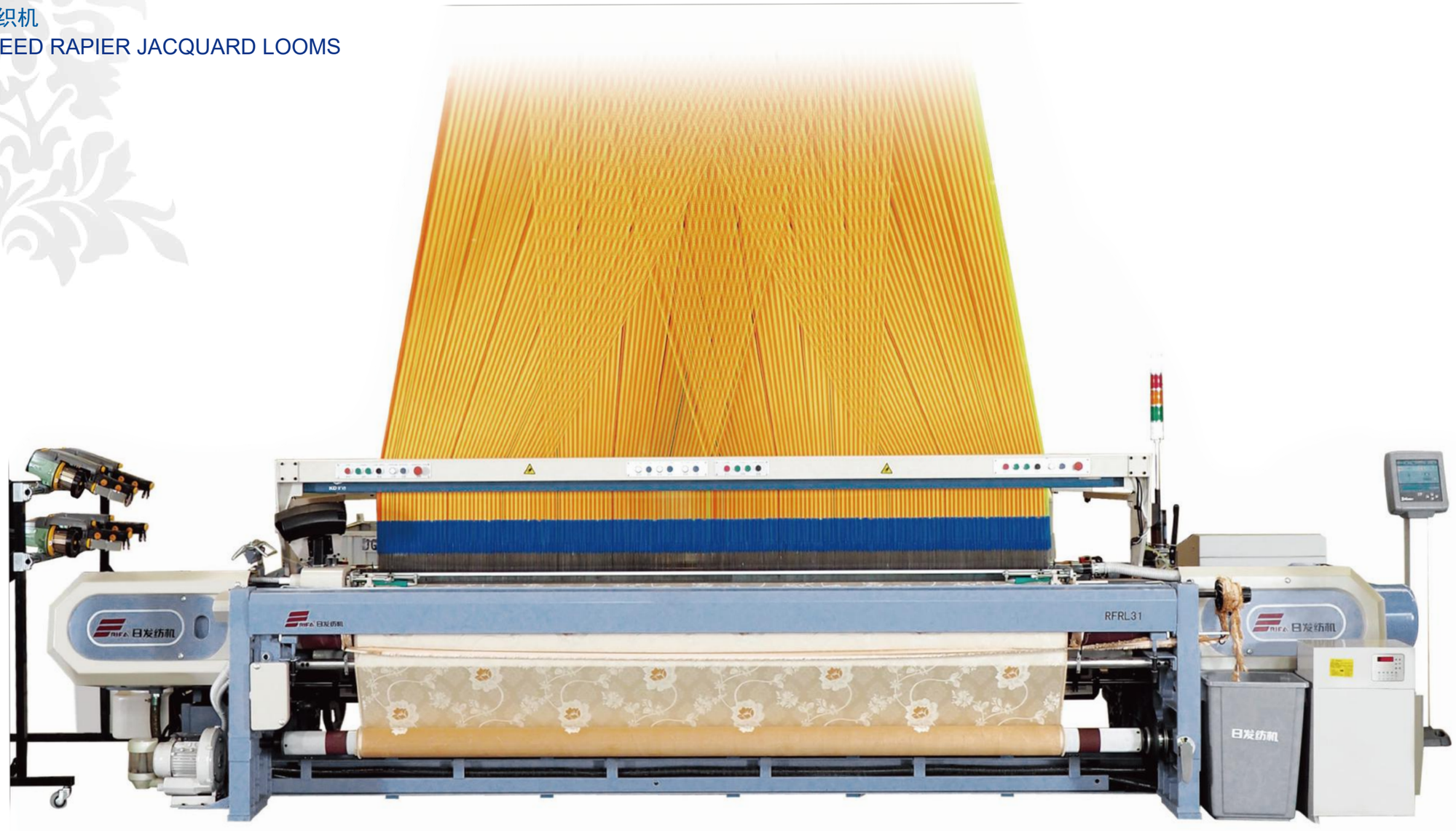
A	600-800
B*(**)	750-800
C	1250-WBΦ800
	1500-WBΦ1000
D	1500-2000
E190cm	2500-3000
E210cm	2700-3200
E220cm	2800-3300
E230cm	2900-3400
E240cm	3000-3500
E250cm	3100-3600
E280cm	3400-3900
E320cm	3800-4300
E340cm	4000-4500
E360cm	4200-4700
E380cm	4400-4900

系列高速剑杆织机
SERIES HIGH SPEED RAPIER LOOMS

我司一直致力于纺织技术增值的研究,使客户更经济的生产出更好的产品。RFRL31节能高速剑杆织机的成功开发便立足于此。 高效的织造、强劲的打纬力、良好的高速稳定性、先进的电气控制系统、便捷的操作性是织机的独有特色， RFRL31秉承RFRL30织机的卓越性能，采用超启动马达直接驱动，由先进的SRD电子调速系统控制， 织物品质好，功率因数高，能耗低，是一款达到国际先进技术水平的高效节能型高档剑杆织机。

Shandong Rifa Textile Machinery Co., Ltd. always devots herself to value-added study for textile technology, helping customers to get better production with economic cost.It is the basic of RFRL31 power-saving high speed rapier loom's successful development. High productivity, powerful beating force, very stable at high speed, advanced electric control system, easy operation are Characteristics of the loom. RFRL31 is developed from RFRL30, adopts super direct motor to drive loom, the speed is controlled by advanced SRD system, can ensure perfect fabric quality and save power, it can reach the international advanced level of high speed rapier looms.

系列高速剑杆提花织机
SERIES HIGH SPEED RAPIER JACQUARD LOOMS



广泛织造, 高效产出

RFRL31是用途广泛的系列高速剑杆织机，最大入纬率1350米/分;筘幅范围达170-380cm ; 可织造各种类型的产品:棉布织物、牛仔布、精/粗纺毛呢织物、人造丝、合成丝、丝绸织物、灯芯绒、呢绒织物,室内装饰用的全棉和混纺织物、亚麻织物,轻薄和中厚工业用滤布、玻璃纤维等织物。

Wide Weaving Versatility High Production

RFRL31 is a high speed rapier loom with wide weaving versatility, filling insertion rates up to 1350m/minute; reed space range 170-380cm ; it is suitable to weave various fabrics such as wool fabric, cotton fabric, denim, corduroy, rayon, synthetic filament, silk, upholster fabric, industrial&percolation fabric filter cloth, linen, glass fiber etc.

新型节能高效动力

RFRL31采用超启动马达直接驱动，取消主传动离合器及皮带，强力高效的直接传动链，极大降低能源消耗及故障率，减少维护成本。

New Type Power-saving Motor

RFRL31 adopts super direct motor to drive loom instead of clutch and belt,high power direct transmission chain can much reduce power consumption, fault and maintenance cost.

数字化自动控制: 应用多核心多总线控制技术，全面实现数字化控制。高性能CPU微处理器管理和监控所有电控单元，实现多种自动化功能: 织口自动补偿、自动寻找织口、张力自动调整、自动控制织边绞边时间、储纬器自动切换、空打纬、网络监控、故障自诊断等。
操作维护快捷方便: 人性化友好操作界面，USB接口，可即时设定、调整各种工艺参数，进行工艺编程。
先进电子调速系统: 织机转速在操作界面任意设定，调速范围宽，快速启动，准确定位刹车，可实现无级调速和织造中的自动变速。有效减少纱线断头和开车痕,满足不同品种纱线和织物的需要。

Digital Control System: Achieve overall digital control through multi-nucleus and multi-bus control technology.Advanced CPU can manage and completely make the machine have multi-autoimmunization functions: cloth fell auto-compensation, auto pick finding, tension auto-adjustment, autocontrol selvage time, auto feeder switch, empty beating,network monitoring,fault self-diagnosis.
Easy Operation: Humanized and friendly interface for customers make operation easy and quick. adjusting various parameters and make technological programme.
Advanced Speed Control System: The speed can be set up at will on panel.Wide speed adjusting range, quick start and accurate brake can realize stepless speed adjusting and automatic speed change during weaving.Which can efficiently reduce stepless yarn breakage and sart mark.

电子多臂•提花开口装置

采用适宜高速的电子多臂机。最多可驱动20片综框。运动精确可靠，承载力大，开口设计合理，利于高速织造。利用RFRL31先进模块化平台的高速提花织机采用加强传动机构,实现大功率超强扭矩传递。

Electronic Dobby & Jacquard Shedding Motion

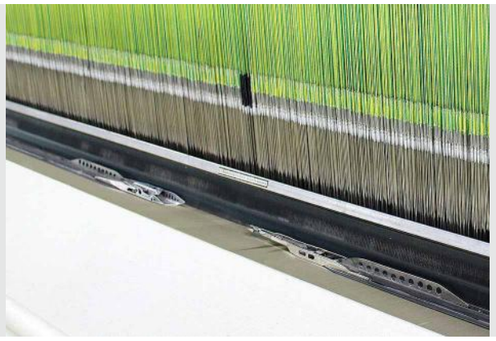
Adopts high speed electronic dobby, it can drive 20 heald frames with accurate and stable performance，Using the advanced modularization of RFRL31 with reinforced transmiassion device,the jacquard RFRL31 can weave top grade jacquard fabrics.

电子绞边•电子选纬装置

由特种转角电机或步进电机驱动，从控制面板进行时间或角度的单独设定，精确控制绞边纱的交叉动作和每个选纬指的动作，有效地控制纬线牵伸，稳定纬纱张力。

Electronic Leno Selvage & Weft Selector

It's driven by special rotation motor or step motor,through panel to set the time for leno motion and false selvage units separately, exactly control weft cross motion, can suit weaving range, and can control tension exactly.



无导钩技术

由“空间曲柄连杆”驱动,具有较优加速度曲线和速度曲线，纬纱交接准确平稳。无导钩引纬，可避免对纱线的任何损伤，特别适用于高档高密织物的织造。

Free Flight Without Guide Hooks

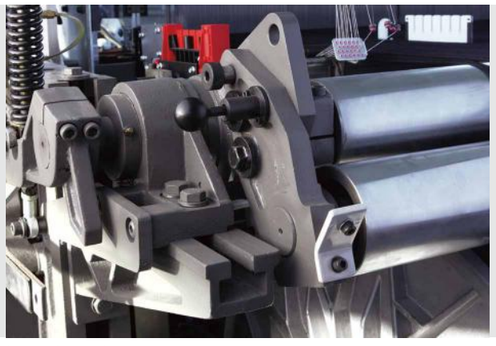
Insertion is driven by "space crank linkage" with better acceleration curve and speed curve, the weft exchange is accurate and stable. The Free Flight insertion system without guide hooks can avoid any hurt to warps, especially suitable to weave top grade high-count & high-density fabrics.

集中润滑系统• 水冷散热装置

采用微电脑控制技术，对高速运转的关键部位进行强制喷淋润滑，提高织机零部件的润滑条件，减少磨损，延长使用寿命，充分保障织机的高速运转。系统配有微细滤油装置以除去所有的杂质，灵敏的压力传感器及控制显示装置能随时监控系统运行状况，保证织机在良好润滑状态下工作。织机可选配水冷散热装置，利用水路循环降低整机温升，提高整机的使用效果。

Centralized Lubrication System: Water Cooling Device

Adopts micro control technology to lubricate the high speed running pivotal parts in forced bath, this can increase the lubrication condition to extend the life of the machines and ensure high speed working. Equipped with oil filter which can remove all impurities,the working condition can be monitored through sensitive pressure sensor and control panel. Water cooling device can be equipped to reduce the machine temperature to ensure working stable.



加强式后梁

加强摆动式后梁，有效平衡织造过程中经纱张力的变化，针对不同张力的织物配有不同的后梁结构。

Centralized Lubrication

Strengthen the oscillating single back rest, effectively balance the change of warp tension. equiping different back rest structures based on different tensions of fabric.

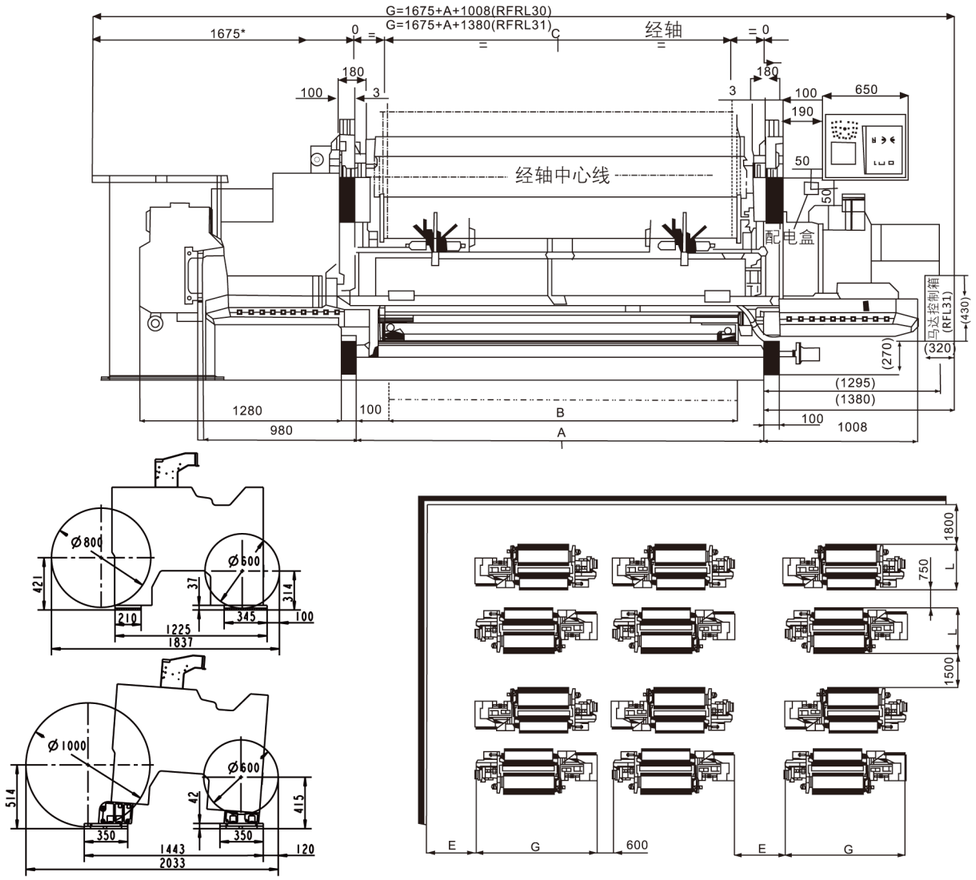
RFRL30 系列高速剑杆织机
RFRL30 SERIES HIGH SPEED RAPIER LOOMS

RFRL30高速剑杆织机是高速织机家族的一员。RFRL30主传动系统由异步电动机驱动高性能电磁离合器，高速启动力矩大、制动性好、运行稳定。

RFRL30 is one of the Rifa high speed rapier looms, RFRL30 adopts asynchronous motor to drive electromagnetism clutch with high speed start and big torque, accurate brake and stable working.

技术规格、尺寸图 SPECIFICATION&DIMENSIONS

项目Item	规格	Spcification
筘幅 Reed width	公称筘幅：170 、190、200、210、220、 230、240、260、290、320、340、360（370）、 380（390、400）cm	Nominal：170 、190、200、210、220、 230、240、260、290、320、340、360（370）、380（390、400）cm
	有效筘幅：公称筘幅减去0～80cm	Working reed width: reduce 0-80cm from nominal width
织造范围 Yarn range	棉及合成纤维纱：500tex(1.2Ne)～5tex(120Ne)	Cotton and man-made fiber yarn：500tex(1.2Ne)～5tex(120Ne)
	粗和精毛纱：680tex(1.5Nm)～10tex(100Nm)	Slub & worsted：680tex(1.5Nm)～10tex(100Nm)
	长丝：10dtex (9Td)～1650dtex (1500Td)	Filament：10dtex (9Td)～1650dtex (1500Td)
	织物重量：20～850克/米 ^{2}	Fabric weight：20～850g/m2
织机速度 Weaving speed	设计转速：700转/分	Designed speed：700rpm
	工艺转速：450～650转/分 （根据织机幅宽配置、织物品种、织造环境而定）	Working speed：450～650rpm （depend on the width and the fabric type）
	最大入纬率：1350米/分 （根据织机幅宽配置、织物品种、织造环境而定）	Insertion rate：1350m/min （depend on the width and the fabric type）
纬纱 Weft	纬纱选择: 4～8色，线性电子选纬器，或步进电子选纬器	4-8 color, electronic selector with linear motor or step motor
	储纬:定鼓存储式电子储纬器	Accumulator: FPD electronic accumulator
	纬剪:机械式	Weft cutter: mechanical
动力Power	传动控制:超启动马达直接驱动或 7.5kW三相异步电机、电磁离合制动器	Driving controlling: super direct motor or main motor controls start or stop through belt and electromagnetism clutch
开口Shedding	高速电子多臂机，最多20片综框，或积极式凸轮开口，最多8片综框	High-speed electronic dobby, 20 shafts max,or positive cam motion (max 8 shafts)
	电子提花机	Electronic jacquard
打纬Beating	双侧共轭凸轮带动筘座	Conjugated cams of two sides drive sley
引纬Insertion	空间曲柄连杆机构，无导钩	Spatial crank system, free flight weft insertion
送经 Let-off	连续式交流伺服电子送经	Continuous alternative current servo electronic let-off
	单经轴、双经轴	Single beam、 twin beam
	边盘直径：Φ1000mm、Φ800mm	Flange dia. ：Φ1000mm、Φ800mm
卷取 Take-up	连续式交流伺服电子卷取	Continuous alternative current servo electronic take-up
	机内卷布Φ600mm，机外卷布Φ1200mm	Cloth roller dia. Φ600mm max.batcher Φ1200mm
	机构纬密范围：2～200根/厘米（具体织造纬密根据纱线规格、织物组织、织机转速、织造环境而定）	Weft density range of mechanism: 2-200 picks/cm （The specific weft density depends on the yarn specifications, fabric weave, loom speed and weaving environment）
布边 Selvage	绞边装置:线性电子绞边，或步进电子绞边	Leno selvage: Electronic selvage with Linear motor or step motor
	边剪:机械式，可选电子式	Selvage cutter: mechanical，options electronic
	边撑：左右独立边撑，可选全幅边撑	Temple: LH & RH individual options full-width
润滑 Lubrication	集中压力供油喷淋润滑、油浴润滑	Centralized pressure bath&oil
停车装置 Stop motion	经停：6列或8列电气触点式停经装置	Warp yarn: 6/8 line electronic contact stop motion
	纬停：电子式高灵敏压电检测装置	Weft yarn: electronic high-sensitive piezoelectricity inspection
	其它：绞边纱、废边纱断头自停	Others: leno selvage yarn and waste selvage yarn break then auto stop
	停车显示：控制面板显示停车原因，多功能4色灯停车显示	Stop display: the panel shows the stop reason, functional 4-color stop lights showing
自动功能 Automatic	自动定位停车/慢速寻纬/织口补偿/调整经纱张力，自动检测/复位/故障显示	auto stop/auto pick-finding/cloth-fell compensation/auto adjust warp tension/auto inspection/replacement/fault showing
电气控制 Electric controlling	控制：多功能CPU控制系统，能控制、监控、自动诊断、信息显示	Controlling: functional CUP controlling system, can control, scout, auto diagnose, information showing
	显示：触摸屏或大液晶屏显示双向通讯，即时调整/设定参数、编程	Display: big LCD screen showing intercommunicaiton, button operation, instant adjustment/parameter set, making programme.



织机规格										
LP	A	B带假边织物		C经轴		E	G		重量（20片拉杆）	
		最大	最小	最大	最小		RFRL30	RFRL31	RFRL30	RFRL31
170	2100	1700	900	1700	910	3300～3600	4783	5155	3650	3900
190	2300	1900	1100	1900	1110	3500～3800	4983	5355	3725	3975
200	2400	2000	1200	2000	1210	3600～3900	5083	5455	3760	4010
210	2500	2100	1300	2100	1310	3700～4000	5183	5555	3795	4045
220	2600	2200	1400	2200	1410	3800～4100	5283	5655	3830	4080
230	2700	2300	1500	2300	1510	3900～4200	5383	5755	3880	4130
240	2800	2400	1600	2400	1610	4000～4300	5483	5855	3930	4180
260	3000	2600	1800	2600	1810	4200～4500	5683	6055	4040	4290
290	3400	2900	2100	2900	2110	4500～4800	6083	6455	4180	4530
320	3800	3200	2400	3200	2410	4800～5100	6483	6855	4360	4710
340	4000	3400	2600	3400	2610	5000～5300	6683	7055	4500	4850
360	4200	3600	2800	3600	2810	5200～5500	6883	7255	4730	4990
380	4500	3800	3000	3800	3010	5400～5700	7083	7455	4870	5130

图例为RFRL30/RFRL31织机的多臂型，仅RFRL31 织机配马达电控箱。本图仅供参考，具体需依厂房和设备实际适当调整。其他机型尺寸及布置图，请见《用户指南》或另行咨询。

The Fig is for RFRL 30/RFRL31 dobby loom, Only RFRL31 Loom is equipped with motor control box. The fig is just for customer's reference, the actual dimension should be adjusted as per the situation of wrokshop. About other dimension, please see User Guide or contact us.

RFTL80 | 织造解决方案

高端剑杆毛巾织机
TERRY RAPIER WEAVING MACHINE

全新积极式毛经后梁罗拉，全新毛经形成单元和全新地经后梁罗拉。以上三个创新装置的设计，使得这款织机的质量得以巨大提升。

New type positive pile back-rest roller, new type loop formation unit and new ground back-rest roller, these new designs can ensure the best quality and functions of this machine.

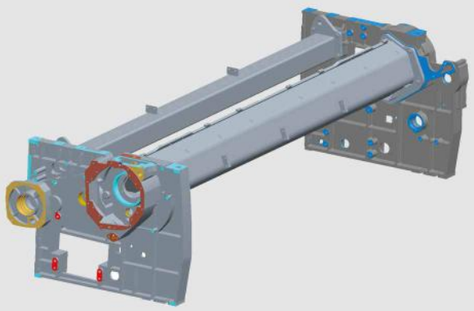
RFTL80高端剑杆毛巾织机是我司全新设计的一款毛巾织机。旨在为市场提供一款能充分集最佳质量、多样性、高效率和可用性为一体的织机。这款织机独特的技术创新在于以下三点：

- ○ 螺杆机构：独一无二的传剑系统
- ○ 直驱马达：便于操作和设置的独特马达
- ○ 创新的传剑系统

The new RFTL80 terry loom has been developed to set a new benchmark in waving terry, with the aim to provide the market with a weaving machine which finally combines utmost quality and versatility with efficiency and usability of the machine.

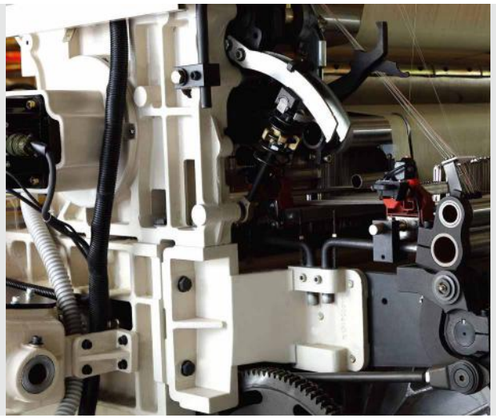
- ○ The Turboprop: a Unique Rapier Drive System
- ○ Direct drive motor
- ○ The Innovative weft Transfer

高端剑杆毛巾织机
TERRY RAPIER WEAVING MACHINE



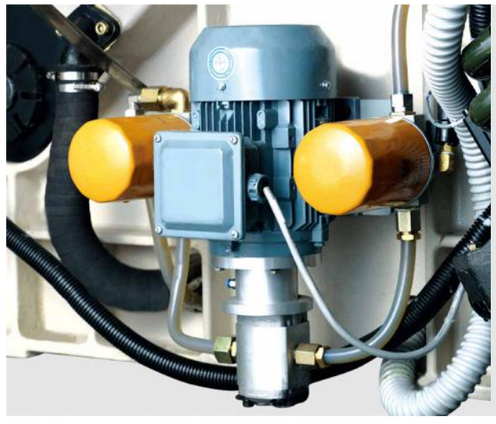
坚固的机架
RFTL80高端剑杆毛巾织机的机身为重型框架，能保证织机高速运行下的低振动，并实现更高的速度和织造效率。安装在两侧墙板上的驱动，能够减少织造重磅织物时产生的振动，确保机器在生产过程中的稳定性。且成本和维护费用低。低能耗和高性能，及最小的噪音和振动，这些都是RFTL80高端剑杆毛巾织机的关键优点。

Sturdy Machine Frame
The RFTL80 terry loom benefits from heavy-duty frames, promoting a low vibration pattern at high speed and enabling high speed and efficiency. The solid drive, positioned in main lateral frames, is engineered for extensive control moving masses to consistently process heavy patterns with minimal cost & maintenance. The best balance between consumption and performance and the minimal noise and vibrations are key elements resulting from the legacy of RFTL80.



全新积极式后梁机构
RFTL80高端剑杆毛巾织机的全新地经后梁的轴管较轻且配有控制张力的压力传感器，因此织造时能产生较小的惯性且让轴管对纱线的压力有一个更好的补偿。毛经后梁机构为积极式，由单一装置操作能不断的优化毛经张力。还可以通过用户界面轻松精确地设定经纱张力。此外，当织造毛巾巾边时还可以设置不同的经纱张力和褶裥效果，且能以非常低的经纱张力织造。另外，毛经后梁罗拉有一个弹簧补偿器能消耗毛经的峰值张力，从而在开口和打纬时对毛经能有一个出色的张力补偿。

New Positive Back-Rest Roller
The new ground back-rest roller features light weight cylinders and a load cell to control the tension, thus producing less inertial and allowing better compensation of the cylinders on the yarn. Pile back-rest roller is positive, being operated through a single device, thus resulting in a consistent optimization of the pile warp tension. Key advantage for the weaver is also the possibility to simply and precisely set the warp tension through the user interface. Moreover, different tension and pleated effect when weaving borders are possible, as well as the opportunity to work with a very low warp tension .And, the pile back-rest roller also has a spring compensation eliminating pile peak tension, thus leading to an excellent tension compensation of the pile warp during the shed opening and the reed beat up.



润滑系统
RFTL80高端剑杆毛巾织机采用集中润滑的方式。润滑机构中采用双过滤器，对润滑油中的杂质起到很好的过滤作用，保障了润滑系统在织造过程中的润滑通畅。润滑系统与电控系统相连接，可以通过显示屏实时监控各润滑点的工作状况。

Lubrication System
RFTL80 Terry Loom adopts centralization lubrication. In this system the oil can be filtered completely through double filters. This system is connected with electric control system, the lubrication condition can be monitored and showed on screen.

全新可移动织物支撑和边撑装置
全新可移动织物支撑使得在毛经形成和打纬时能对落布有更持久的控制，促进毛圈形成提高织物质量。RFTL80高端剑杆毛巾织机的边撑位于织物的上方，能够方便的调整张力，保证了织物布边的张力优化。

New Movable Fabric Support and New Temples Position
The new movable fabric support allows a more constant control of the fabric well during the pile formation and beat-up, facilitating the loop formation and resulting in an increased fabric quality. On RFTL80 the temples are positioned above the fabric, ensuring an optimized fabric sides tension thanks to the possibility to perfectly adjust the tension.

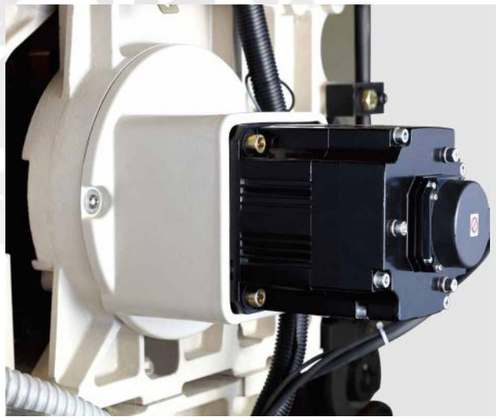
直驱马达
RFTL80高端剑杆毛巾织机的主马达是基于电子驱动及无刷马达技术而设计，可通过触摸屏方便地调节车速。结构简单，性能可靠，不需要维护和冷却系统，直驱马达能始终确保高性能和低运行成本。只需在用户界面上输入想要的设定参数即可轻松调整平综高度。

Direct Drive Motor
The main motor of RFTL80 terry loom is based on an electronic drive and brushless motor technology which provides easy touch-screen adjustment of the machine speed. traditional gearing and mechanical parts have been minimized, providing added value by fewer spare parts and maintenance. Simple, reliable, maintenance-free, with no cooling system required, the direct drive motor ensure top performance over time and low cost operation. Changing the harness crossing is as easy as simple inputting the desired setting through the user interface.

纬纱剪刀多样性
此款毛巾织机有两种纬纱剪刀供客户选择使用，这两款剪刀能够满足所有的织造需求。标配的是机械式纬纱剪刀或者旋转式纬纱剪刀，这种剪刀尺寸较小剪纬准确。另外还有一种电子控制的纬纱剪刀，这种剪刀在织造毛巾布方面有巨大的优势，能够满足各种混合纱线的织造要求。

Multiple Choice of Weft Cutters
The RFTL80 offers two options for he weft cutter to fill all the weaving needs. Standard on the terry weaving machine are the mechanical weft cutter or the rotor-cut which is precise and optimized and, due to its reduced dimensions, ergonomics are improved allowing the operator to easily access the weaving machine.

高端剑杆毛巾织机
TERRY RAPIER WEAVING MACHINE

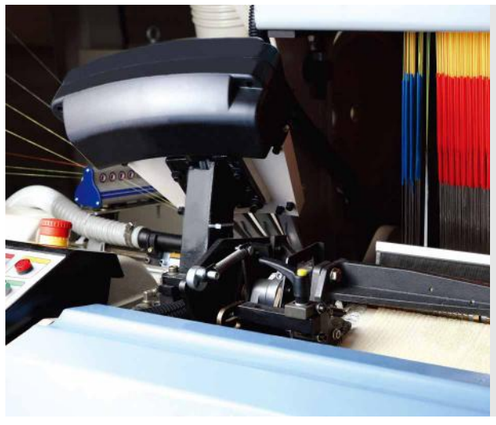


全新的毛经起毛装置

全新的毛经起毛装置是这款织机的关键部分。此装置是由单独的伺服电机驱动，结构设计较紧凑能够提升织机的稳定性并降低成本。这个毛经起毛装置最具创新性的地方在于织物的运动，它能够形成高质量的毛圈。一整套的直杆连接带动了全新的织物运动，这套直杆的动力来源于伺服电机，并且这套直杆直接驱动积极式毛经后梁，在织造时能够保持恒定的地经张力。

New Pile Formation Unit

The new pile formation unit is the key development on this type machine. This unit is driven by a single motor, the device is more compact providing increased machine's reliability and lower operating costs. The star feature of new pile formation unit is the innovative fabric movement which allows a superior quality loop formation. The new fabric movement is generated by a series of rods, which are driven by the single motor. The series of rods also drive the positive pile whip roller to maintain a constant pile tension during the cloth displacement.

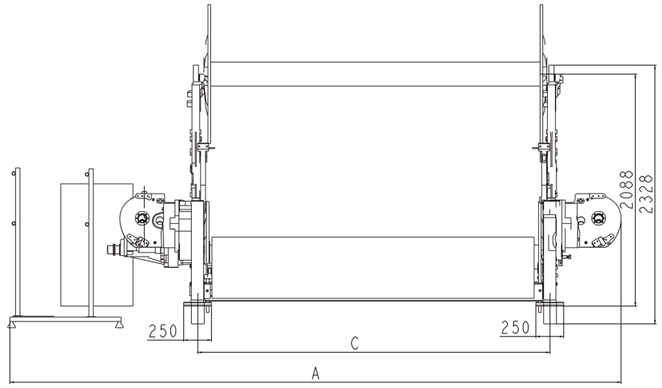


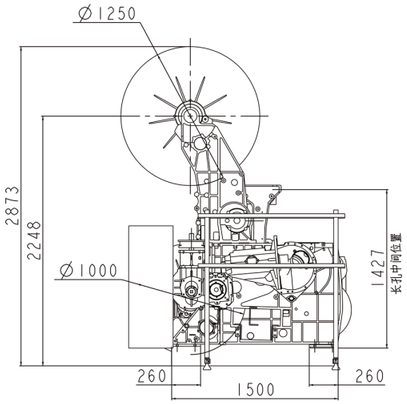
先进的入纬系统

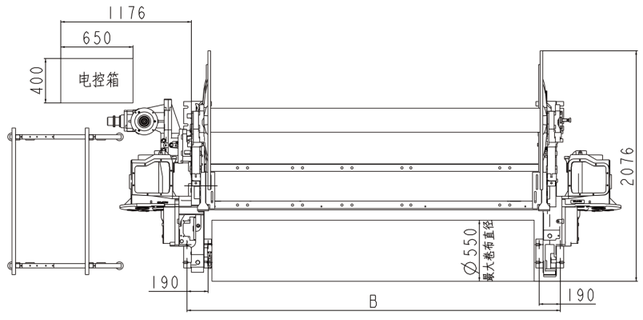
电子选纬器由独立的模块驱动，全程电子控制，可实现2-4-6-8色的模块化扩展，纬纱具有低而稳定的最佳张力。

Electronic Controlled Take-Up

The machine is equipped with an enhanced electronic fabric take up, and the weft density can be set conveniently through the high-sensitivity touch screen, and the weft density can be automatically changed according to the fabric structure.







R/S	A	B	C
190	4500	2660	2470
210	4700	2860	2670
230	4900	3060	2870
260	5200	3360	3170
280	5400	3560	3370
300	5600	3760	3570
320	5800	3960	3770
340	6000	4160	3970
360	6200	4360	4170
380	6400	4560	4370

本图适用于RFTL80机型。该尺寸仅供参考，具体可根据客户厂房实际情况自行调整。至于其他规格的详细尺寸，请直接向我司咨询。

This dimension drawing is only reference for RFTL80 loom.It is only for your reference, you can adjust it by yourself according to factory building. Please contract us to get the dimensions of other looms.