

# P2

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Flexible. Reliable. Efficient.

灵活 · 可靠 · 高效 ·

### Design, engineering and production by one single supplier

DORNIER is the reliable partner for all requirements relating to any aspect of the production of application-specific weaving machines for manufacturing high-quality fabrics. Whether a system family consisting of rapier and air-jet weaving machines or a customized turnkey complete line: DORNIER plans, designs and builds everything in-house.

### History

The world-renowned aircraft manufacturer Dornier began building textile machines after the Second World War. The reason for this change of direction: The Allied Forces had prohibited the company from building airplanes in Germany. In 1950, Lindauer DORNIER GmbH was founded in what remains the company's headquarters at Lindau-Rickenbach by Peter Dornier, son of the famous aviation pioneer Claude Dornier. The first fruits of the search for a new field of activity there were shuttle weaving machines. But soon afterwards, Lindauer DORNIER GmbH also began making specialty machines, including dryers for the cardboard, paper and construction panel industry. In the mid-1960s, film stretching lines for the packaging and plastic film industry and textile finishing machines for tubular knit goods were added to the product portfolio.

The rapier weaving machine, developed in 1967, and the air-jet weaving machine introduced in 1989 represented the most significant milestones in the company's rise to become Germany's only weaving machine manufacturer of international standing. The end products made on our weaving machines comprise extremely high-performance fabrics for airbags, carbon fabrics for composite structures and aramid fabrics for fire-resistant or bullet-proof applications. But equally for the finest silk fabrics, intricate Jacquard items and ultrafine worsteds, the DORNIER system family offers the ideal tool. In 2014 we founded the DORNIER Composite Systems® product line to continuously deliver new answers for the challenging demands of the dynamic composite industry in the form of innovative production lines for semi-finished composite products of all kinds.

### 由专一供应商进行设计、构建和生产

多尼尔作为可靠的合作伙伴，可提供满足各种需求的生产高质量织物的专用织机。无论是剑杆织机、喷气织机组成的织机系列还是定制的交钥匙生产线均由多尼尔自主规划、设计和构建。

### 历史

世界著名的飞机制造商多尼尔在第二次世界大战后开始制造纺织机械。重新定位的原因是：盟军禁止该公司在德国制造飞机。1950年著名航空先驱Claude Dornier的儿子Peter Dornier在该公司位于林道-维康巴赫的总部建立了林道尔·多尼尔有限公司。在新领域的第一个研究成果是有梭织机。不久，林道尔·多尼尔有限公司开始制造特种机械，包括纸板、纸张和建筑板材行业的干燥机。上世纪六十年代中期，多尼尔产品系列加入了用于包装和塑料薄膜工业的薄膜拉伸生产线及圆筒针织品的后整理机器。

1967年开发的剑杆织机和1989年问世的喷气织机，是多尼尔公司成为德国唯一一家具有世界知名度的织机制造商的重要里程碑。我们织机的最终产品包括用于安全气囊的极高性能织物、用于复合结构的碳纤维织物以及用于防火或防弹应用的芳纶织物。同样最好的丝绸面料，精致的提花织物和超细精纺毛料，多尼尔系列织机都是不二之选。2014年，我们推出获得专利的多尼尔复合材料生产线，以各种半成品复合材料产品的创新生产线的形式，不断为动态变化中的复合材料行业的挑战性需求提供新的解决方案。





# INNOVATIVE BY TRADITION

## 人间正道是沧桑： 传统与创新

### “Made in Germany”

Weaving machines by DORNIER are “Made in Germany”. A high production depth demonstrates the strength of the company’s in-house value creation. It enables us to offer our customers the highest possible quality, durability and flexibility for efficient, process- reliable and scalable manufacturing of fabrics.

### “德国制造”

多尼尔织机是“德国制造”。深厚的制造业底蕴展示了公司内部价值创造的实力。它保证了我们能够为客户提供高质量、耐用、高效灵活、工艺可靠和可扩展的织物制造。



### Quality creates value: individual serial production

No two machines are exactly alike; each one is designed, developed and built specifically for its intended purpose in close consultation with the customer. Even so, all machines have something in common: high economy, quality and reliability are standard.

### 质量创造价值：个性化批量生产

没有两台机器是完全相同的，每一台都是在与客户密切协商的基础上专门为其预期目的而设计、开发和制造的。即便如此，所有机器都有一个共同点：高经济性、高质量和可靠性是标准配置。





# THE DORNIER SYSTEM FAMILY: RAPIER AND AIR-JET WEAVING MACHINES

## 多尼尔织机系列: 剑杆织机和喷气织机

### Outstanding range of application

The DORNIER system family consisting of rapier and air-jet weaving machines is based on an exceptionally robust machine frame and equipped with standardized electronics. So operating and maintenance personnel work on standardized machine structures despite differing insertion systems. The structural modular principle reduces component variation and maintenance effort. Accessories and spare parts are largely interchangeable, saving money and minimizing storage requirements.

### 适用范围广

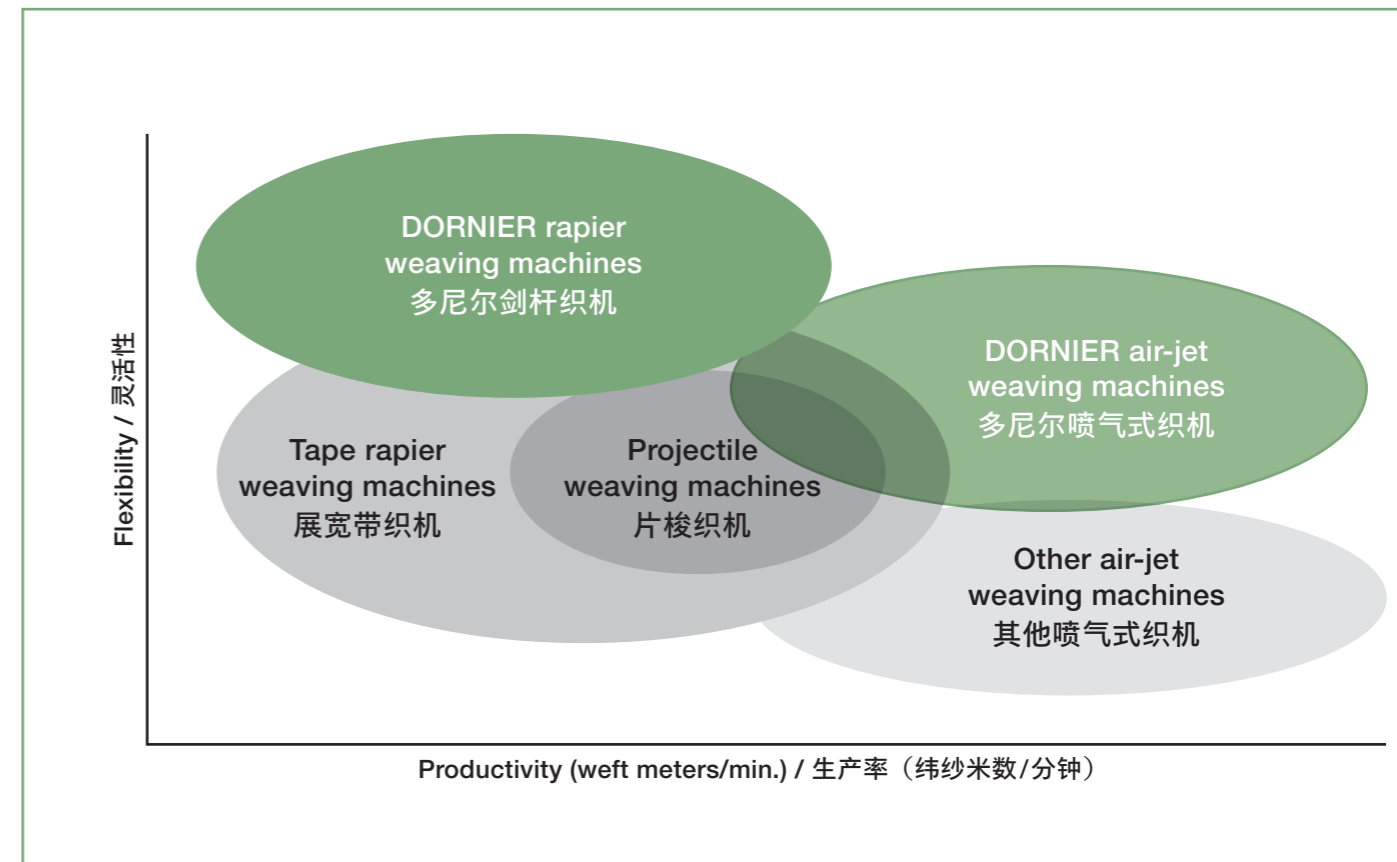
多尼尔织机系列由剑杆织机和喷气织机组成，基于非常坚固的机架，并配备了标准化的电子设备。因此，尽管引纬系统不同，但操作和维护人员仍在标准化的机器结构上工作。结构模块化原理减少了组件变化和维护的工作量。辅件和备件在很大程度上是可互换使用，从而节省了资金并最大限度地减少了库存。

### Identical elements for all machines:

- DORNIER ErgoWeave® Dialog Panel
- FT control and drive concept
- Electronical components for main control
- Selvage formation device
- Access to customer portal myDoX®
- Connectivity
- Electronic Warp Let-off (EWL)
- Electronic Cloth Take-up (ECT)

### 适用于所有机器的相同元件:

- 多尼尔 ErgoWeave® 对话框
- FT 控制和驱动概念
- 用于主控的电子元件
- 布边装置
- 访问多尼尔客户门户网站myDoX®
- 联接
- 电子送经装置 (EWL)
- 电子卷取装置 (ECT)



### A standard for productivity and flexibility

The high production speed of the DORNIER weaving machines with consistent end-to-end process reliability ensures maximum productivity. Due to their exceptional flexibility, the machines can efficiently manufacture large and small product batches from safety textiles to wool – a competitive advantage for the customer.

### 生产率和灵活性的标准

多尼尔织机高效的生产速度和一致的工艺可靠性确保了最大的生产率。由于其卓越的灵活性，这些机器可以有效地生产从安全用纺织品到羊毛织物等大批量或小批量多品种产品，这是客户的竞争优势。





# FUTURE-ORIENTED CUSTOMIZED SOLUTIONS: DORNIER P2 RAPIER WEAVING MACHINE

## 面向未来的定制解决方案： 多尼尔P2剑杆织机

### From fine to heavy – the most flexible rapier weaving machines in the world

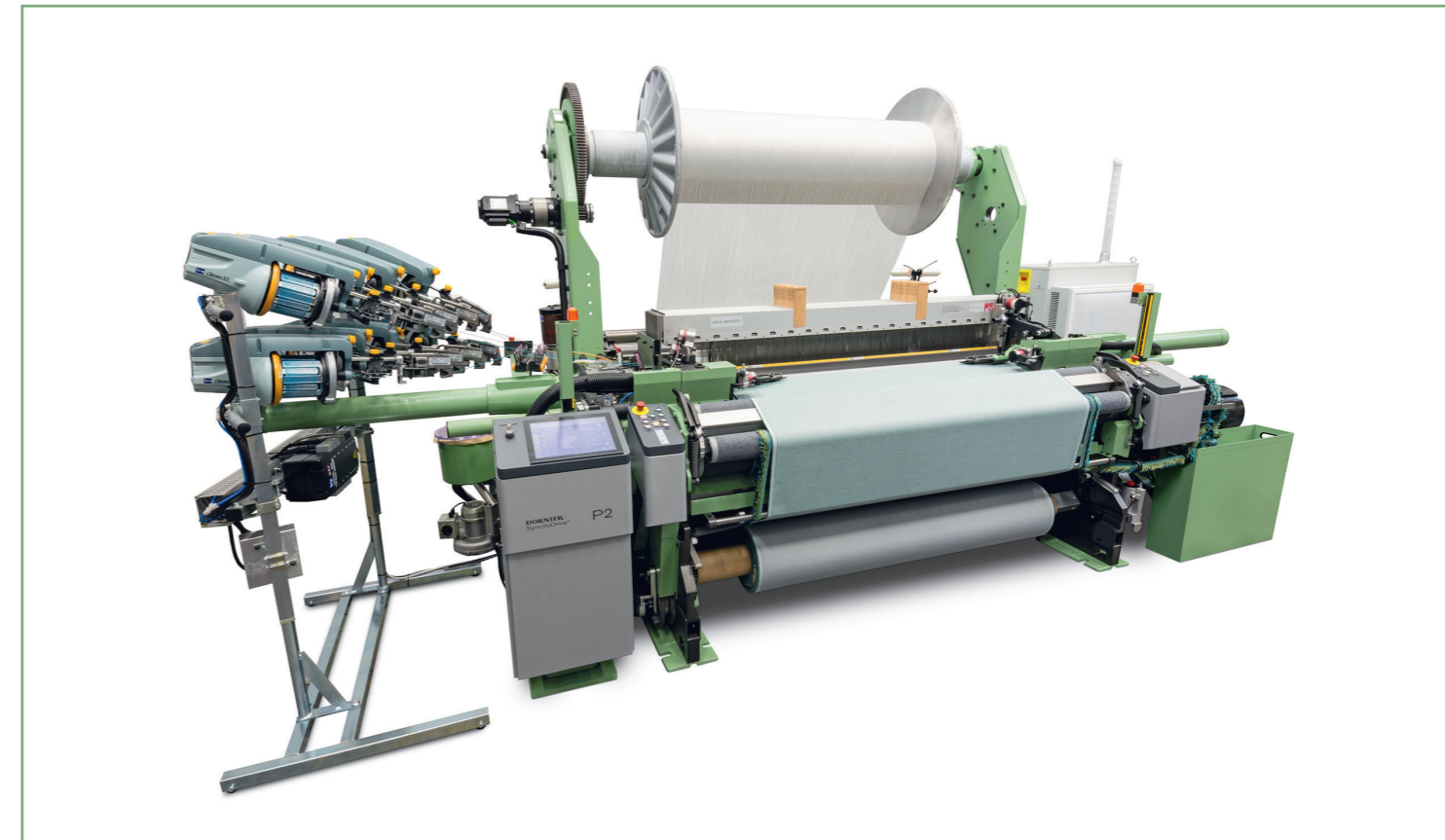
It is the result of almost seven decades of expertise in developing, constructing and building weaving machines: the P2 rapier weaving machine. Clothing, home textiles or technical textiles made from glass, carbon or aramid – the P2 is the ideal weaving machine for manufacturing fabrics of the highest quality reliably and efficiently. Ease of operation, unsurpassed process reliability and maximum productivity are the hallmarks of the most versatile rapier weaving machine in the world.

Whether it is used with shedding devices such as cam motion, dobby (up to 24 shafts) or Jacquard machines (up to 30,000 lifting hooks) or in combination with the EasyLeno® leno system developed by DORNIER, with up to 16 filling thread colors, the P2 is the ideal tool for creative, flexible, precise production of fabrics of all kinds in nominal machine widths from 150 to 540 cm. The machine features many patented functions and components, including the innovative color selector and feed system DORNIER DisCoS®. The spectrum of possible applications for the P2 ranges from high-quality silks to furniture coverings to women's apparel and also to filter, coating, carbon, aramid and glass fiber meshes from maximum titer yarns for technical applications. With its ideal shed geometry and frame rigidity, high productivity, maintenance-free drive and efficient positive center transfer, the P2 delivers maximum flexibility and production reliability, enabling into cost-effective textile production. Above all, the shed geometry optimized for technical textiles and the many other patented machine functions and components such as the DORNIER MotoLeno® or DORNIER AirGuide guarantee outstanding process reliability for the modern weaver.

### 从精细织物到重型织物—世界上最灵活的剑杆织机

这是近70年来在研发和制造织机方面的专业技术的结晶：P2剑杆织机。服装面料，家用纺织品或由玻璃纤维，碳纤维或芳纶制成的技术纺织品 - P2是可靠和高效地生产最高质量织物的理想织机。操作简便、工艺可靠、生产率最高是世界上最通用的剑杆织机的标志。

无论是与凸轮机构，多臂（最多24片综框）或提花机（最多30,000针）等开口装置一起使用，还是与多尼尔EasyLeno®简易纱罗系统一起使用，最多16色选纬，P2都是创新、灵活、精确生产各种织物的理想工具，机器标称幅宽从150到540厘米。该机器具有许多获得专利的功能和组件，包括创新的选色器和喂入系统DORNIER DisCoS (DCS)。P2的可应用范围从高品质丝绸到家具装饰面料，女装面料以及产业用过滤材料，涂层布，碳纤维，芳纶或最粗的玻璃纤维网格布。机架刚度的提高，提高了生产率，免维护驱动以及更高效的积极式中央交接，提供了最大的灵活性和生产可靠性。最重要的是，针对产业用纺织品优化的梭口几何形状和许多其它申请有专利的机器功能和部件（如DORNIER MotoLeno®或DORNIER Air-Guide®）保证了现代织布机的工艺可靠性。



### The P2 rapier weaving machine at a glance

- Modular machine concept in basic (TKN/TGN) and reinforced versions (TGV, TGP)
- 75 % more rigid center module in frame construction with optimized force flow configuration
- Optimized filling transfer with open shed weft insertion and improved shed geometry
- Intelligent Fast-Ethernet control combined with DORNIER ErgoWeave®
- Maintenance-free DORNIER SyncroDrive® main drive
- Innovative weft insertion with DORNIER DisCoS® and DORNIER DoPPIO®

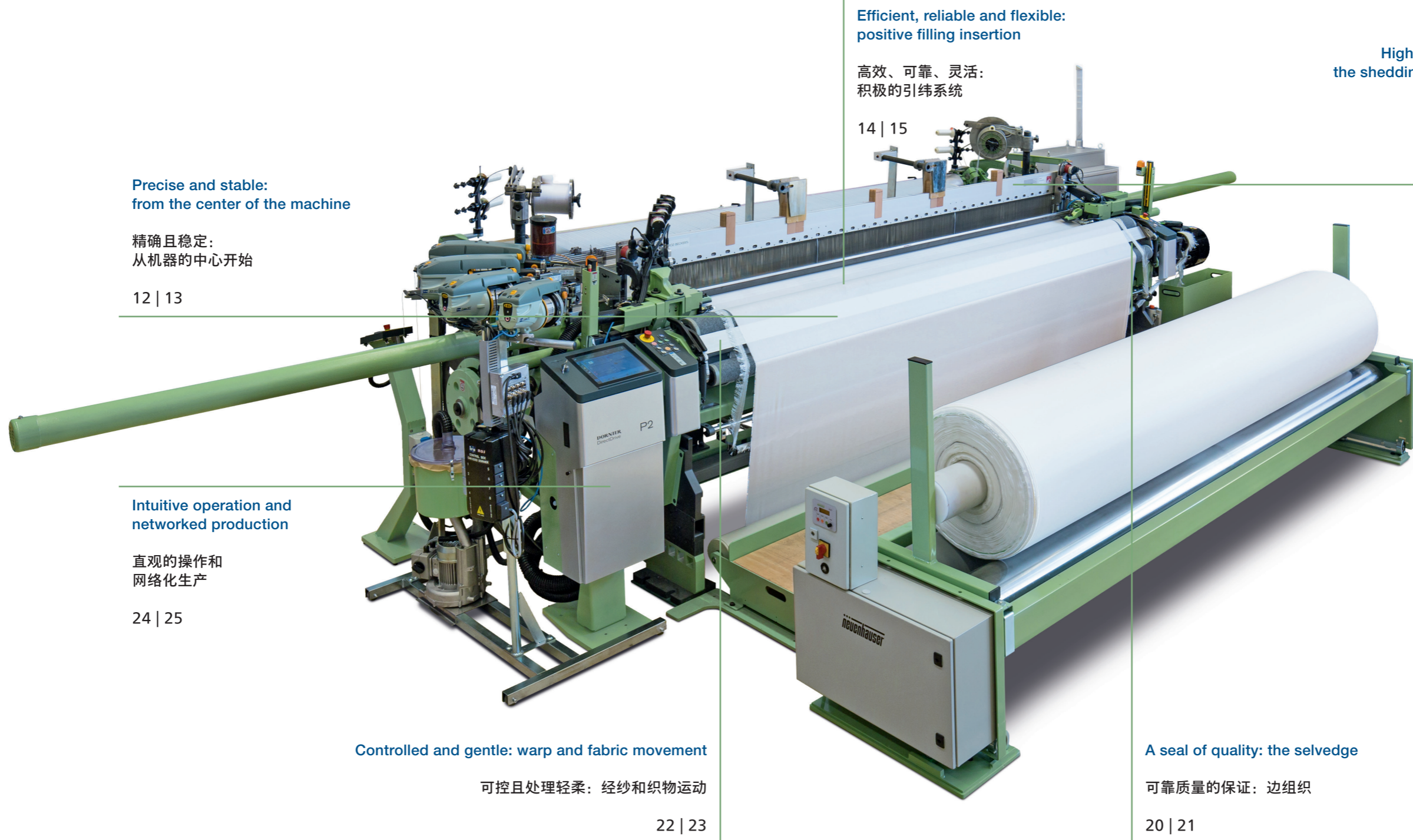
### P2剑杆织机概览

- 标准型号（TKN/TGN）和增强型号（TGV、TGP）的模块化机器概念
- 机架结构中的中央模块的刚性提高了75%并优化了受力分配
- 全开口引纬和改进的梭口几何形状优化了积极中央交接
- 与多尼尔ErgoWeave®相结合的智能快速以太网控制
- 免维护的多尼尔SyncroDrive®同步驱动
- 创新的多尼尔DisCoS®和多尼尔·DoPPIO®



# ROBUST TECHNOLOGY, INTELLIGENT DESIGN: THE P2

## 强大的技术, 智能的设计: P2



Precise and stable:  
from the center of the machine

精确且稳定:  
从机器的中心开始

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Efficient, reliable and flexible:  
positive filling insertion

高效、可靠、灵活:  
积极的引纬系统

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High application diversity:  
the shedding geometry of the P2

织造品种多样:  
P2的梭口几何形状

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Intuitive operation and  
networked production

直观的操作和  
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Controlled and gentle: warp and fabric movement

可控且处理轻柔: 经纱和织物运动

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A seal of quality: the selvedge

可靠质量的保证: 边组织

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Direct Link: Industry 4.0 / 直接链接: 工业4.0

Fast-Ethernet-Technology / 快速以太网技术



# PRECISE AND STURDY: THE MACHINE CENTER

# 精确且牢固: 从机器的中心开始

## Modular base concept: Sturdy construction and precise reed movement

The stable, modular design of the machine featuring a 75 % more rigid center module in frame construction, ensures an optimum flow of forces in the P2. The compact, ergonomically optimized rapier weaving machine is available in three performance classes: In the basic configuration (TKN/TGN) reed beat-up forces up to 23 kN are possible; the reinforced versions offer up to 37 kN (TGV) and 50 kN (TGP) depending on the reeded width. Fabrics ranging from most delicate garments to heaviest technical textiles can be produced with equal reliability.

## The main gearbox: Safety through precision

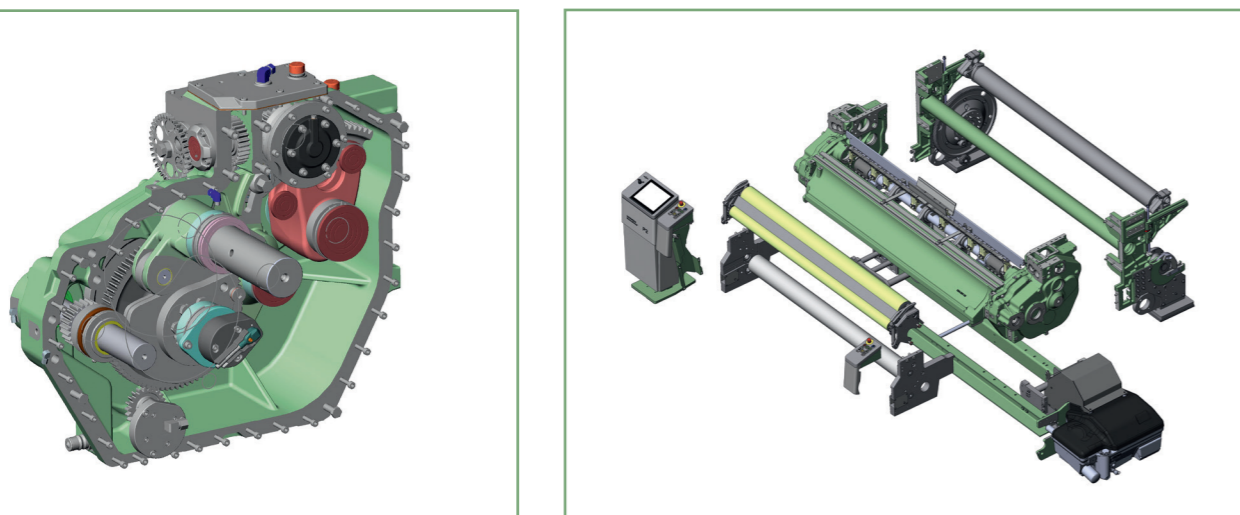
Two synchronously operating high-precision gearboxes (manufactured entirely in-house) are located on both sides of the P2 rapier weaving machine for optimum filling insertion and reed beat-up. They guarantee efficient rapier and reed motion even at speeds up to 600 rpm. Permanent circulating oil lubrication provides high performance and low maintenance, thereby ensuring a long service life for the gearboxes.

## 模块化框架结构概念：牢固的结构和精确的钢筘运动

稳定且模块化设计使得织机在框架结构中的中心模块较之前提升75%的刚度，确保了P2织机的最佳力学结构。从最精致的服装到最重的技术纺织品，织物都以同样的可靠性进行生产。紧凑且符合人体工程学的剑杆织机有三种性能等级：标准型的TKN和TGN，钢筘打纬力可达23kN；加强型的TGV和TGP可提供最高 37 kN 和 50kN 的打纬力。从最精致的服装面料到厚重紧密的工业技术织物，都可以在多尼尔各机型上可靠地生产。

## 主变速箱：安全且精确

完全由多尼尔自主制造的两个同步运动的高精度齿轮箱位于机器的两侧，以实现最佳的引纬和打纬动程。即使在高达 600转/分钟的速度下，也能保证剑杆和钢筘的高效运动。持续循环的润滑系统提高了织机的性能，减少了养护，延长了齿轮箱的使用寿命。



## High-performance, durable and low-maintenance: The DORNIER main drives

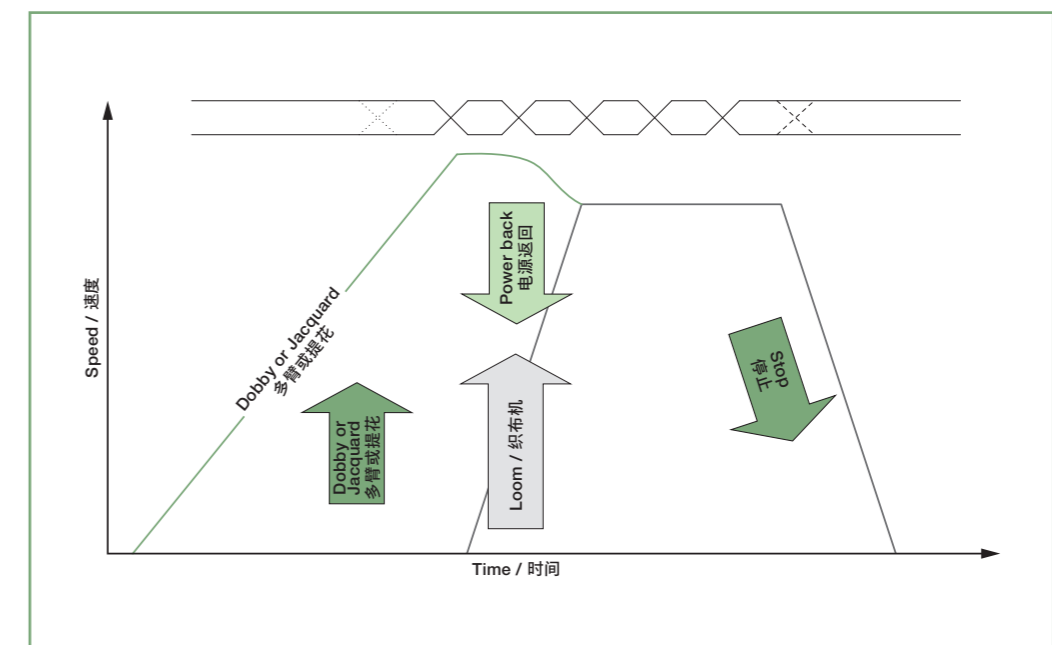
Minimal speed variations and simple operation: The durable DORNIER main drives rely on leading edge technology to deliver ideal production conditions and maximum insertion performance. Automatic Start Mark Prevention (ASP) guarantees optimum start-stop behavior.

The patented DORNIER SyncroDrive® with intelligent control allows extremely low speed fluctuations with up to 24 shafts and for large-size Jacquard machines. Shed closing timing is electronically adjustable during machine run and is stored with the article data. DORNIER SyncroDrive® thus enables reproducible production and supports intuitive production parameter optimization. DORNIER DirectDrive® is the ideal main drive concept for high-performance rapier weaving machines with cam motion or DORNIER EasyLeno®.

## 高性能、耐用、低维护：多尼尔主驱动

最小的速度偏差和简单的操作：多尼尔耐用的主驱动依靠领先的技术提供理想的生产条件和最大的输送性能。自动防开车痕（ASP）可确保最佳的开车-停车性能。

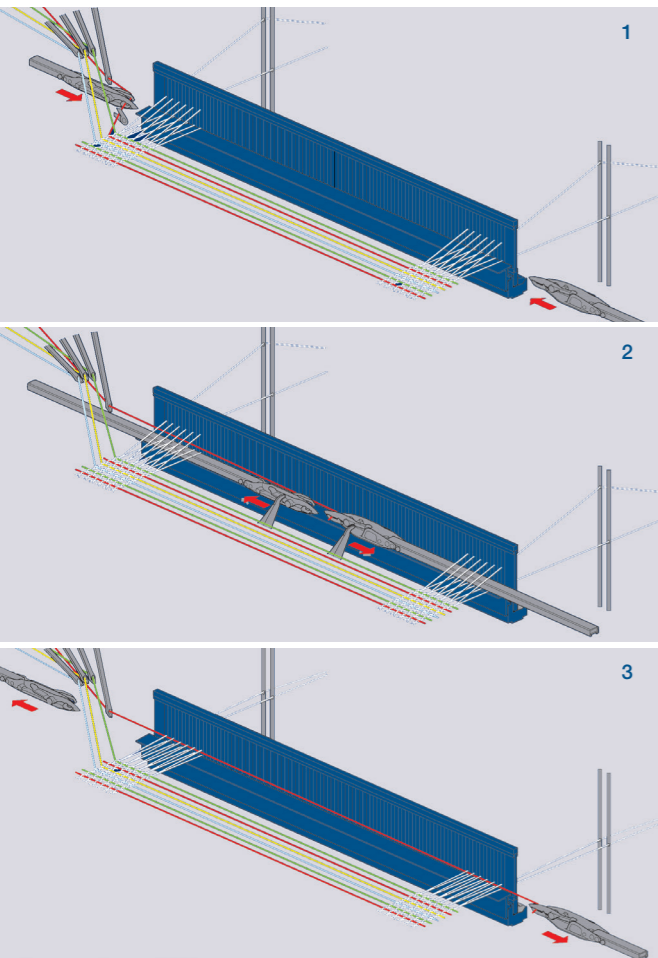
获得专利的多尼尔SyncroDrive®同步驱动具有智能控制功能，即使在综框数量达到24片 或大针数提花机时，也能实现极低的速度波动。在机器运行期间，梭口闭合时间可通过电子方式调节，并与织物数据一起存储。因此，多尼尔 SyncroDrive®同步驱动可实现重复的生产，并支持直观的生产参数优化。





# EFFICIENT, RELIABLE AND FLEXIBLE: POSITIVE FILLING INSERTION

高效、可靠且灵活：  
主动引纬系统



## DORNIER filling thread insertion: the superiority of a proven system

The operating principle of positive center transfer by DORNIER is similar to passing the baton in a relay race: The left-hand (LHS) rapier grips the yarn presented by the filling selector with an open clamp; the clamp then closes immediately while scissors cut off the filling at the fabric side. The rapier then moves to the center of the weaving shed to transfer the thread to the right-hand (RHS) rapier. This active transfer is controlled positively, which means that the rapier clamps are each opened briefly for the thread transfer. However, the LHS rapier does not release the filler thread until the thread is securely clamped in the RHS rapier. The thread is then transported to the right-hand fabric side. There, the rapier clamp releases the thread after it has been firmly secured by the catch selvedge. The weaving shed remains open throughout the entire insertion phase. The transfer of filling thread from one rapier to the other takes place up to ten times per second.

### Positive center transfer in 3 steps

1. The LHS rapier picks up the filling thread on the left side.
2. In the middle of the fabric, the thread is transferred to the RHS rapier.
3. Once the thread is secured, it is transferred to the right-hand side of the shed, where it is released.

## 多尼尔引纬系统：历经验证的优越系统

多尼尔积极式中央交接引纬系统的工作原理类似于在接力赛中传递接力棒：左剑头的剑夹打开，从选色针中提取纱线，剑夹闭合后，纬纱剪在布边处剪断纱尾。在完全控制下，纬纱在梭口中央由左剑杆积极传递给右剑杆。整个过程积极可控，也就是说每一次剑夹都是在确认纬纱被接纱剑头完全夹持住以后才短暂打开释放纬纱的。接下来，纱线被运送至右侧布边，在确认纱线被废边完全绞住后，右侧剑夹才松开。整个引纬过程中，梭口始终处于全开口状态。这种纬纱从一个剑头被交接至另一个剑头，最终完成引纬的过程在每一秒钟内都会重复发生十次之多。

### 积极式中央交接系统分三步：

1. 送纱剑头在左侧提取纬纱
2. 在织物中间位置，纬纱被交接至右侧的接纱剑头
3. 当纬纱被牢牢地夹持后，引至梭口的右侧再松开

## Support systems for intuitive operation

Several support systems are designed to assist the operating personnel in the weaving process. Automatic Package Switching (APS) increases efficiency in the weaving mill. The Start Weaving Assistant (SWA) significantly facilitates optimization of machine parameters for new articles.

### 便于直观操作的支持系统

设计的辅助系统可在织造过程中对挡车工进行协助。自动纬纱筒子切换（APS）可提高织造厂的效率。启动织造助手（SWA）有助于优化新织物的机器参数。自动纬纱修复（AFR）减少了机器停机时间，因此对于进一步提高运行效率至关重要。

## Extra options for increasing material efficiency

DORNIER DuoMix and DORNIER DuoColor waste reduction devices substantially enhance material efficiency and reduce manufacturing costs, especially for expensive weft materials.

### 提高原料效率的额外选项

对于使用特别昂贵的纬纱材料，多尼尔DuoMix和多尼尔DuoColor节边装置可大大提高原料的使用效率并降低织物成本。





# UNIQUE: THE ELEMENTS OF FILLING INSERTION

# 独特性： 引纬元件

## Complete control: Filling yarn brakes and weft monitoring

The highly dynamic systems for monitoring and controlling weft tension and the reliable filling yarn scissors enable highly efficient weaving operation. With Electronic Filling Control (EFC) and Electronic Filling Scissors (EFS), machine parameters can be stored with the article data. This allows a high level of reproducibility and short setup times.

## Precise yarn feed

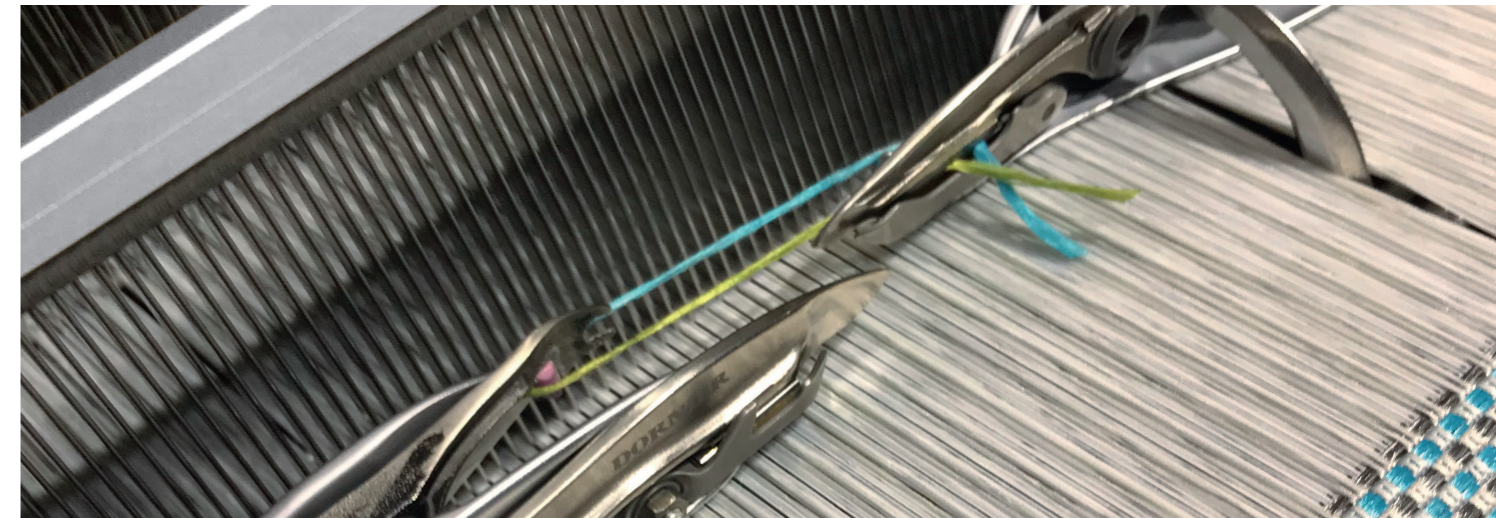
With the Electronic Color Selector (ECS), yarn presentation is carried out with multiple precisely controlled filling selector needles. The smooth motion profile allows gentle yarn presentation with reduced yarn tension peaks. The presentation sequence is freely programmable and the single motor steps are monitored continuously. The innovative DORNIER DisCoS® color selection and presentation system enables all filling colors to be processed in a precise pinpoint feed with a single color selector disk. The system is highly compact and excels through its outstanding accessibility.

## Unsurpassed: Universal rapier technology

Filling insertion with the DORNIER P2 rapier weaving machine is controlled at every stage, thus making it possible to process an extraordinarily wide variety of yarn types and counts. The range runs from fine silk yarns and monofilaments via glass rovings to the coarsest fancy yarns. The yarn count range of the universal rapiers extends from 7 den to 4500 tex. The innovative DORNIER DoPPIO® rapier head is the ideal solution for double weft insertion.

## Precisely monitored: DORNIER AirGuide

With the DORNIER AirGuide system, the rapiers slide contact-free on an aerostatic bearing. An integrated temperature monitoring system allows automatic process control and provides a high degree of processing reliability. The system minimizes maintenance cost, reduces personnel workload and significantly increases operating efficiency.



## 完全控制：纬纱张力器和纬纱监控

用于监测和控制纬线张力的高动态系统和可靠的纬纱剪刀可实现高效的织造操作。通过电子纬纱张力器（EFC）和电子纬纱剪刀（EFS），机器参数可以与织物品种数据一起存储。这让高水平的可重复生产和较短的织机设置时间成为可能。

## 精确的呈纬

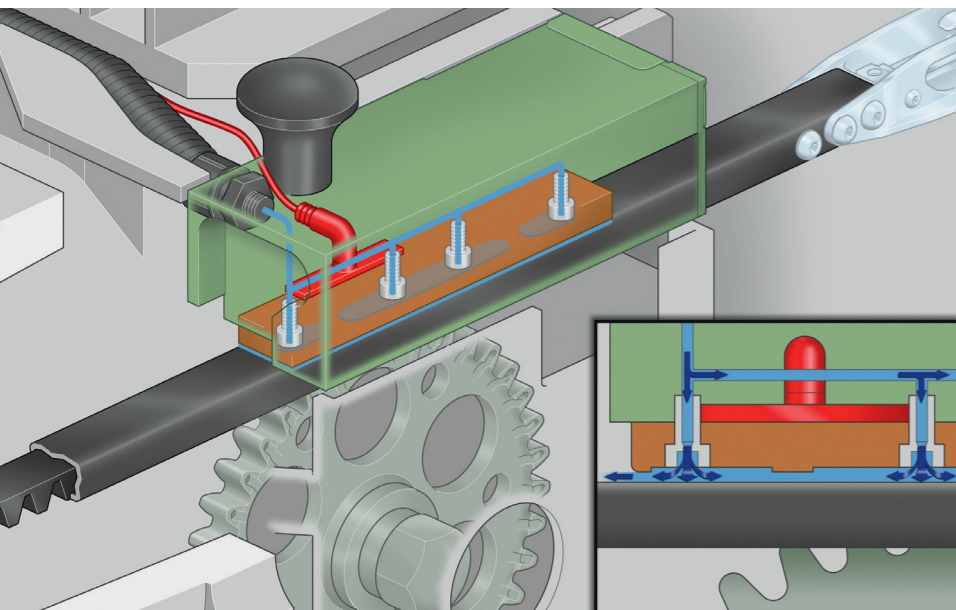
使用电子选色器（ECS），呈纬通过多个精确控制的选纬指来实现。降低张力峰值，获取平滑的运动曲线，使纬纱在整个呈纬过程中得到柔和处理。呈纬顺序可自由编程，并连续监控单个电机的步进。创新的多尼尔 DisCoS®选色器和呈纬系统使所有纬纱都可以通过单个选色盘进行精确地处理。该系统结构紧凑，呈纬点精准，操作简便而更显优势。

## 无与伦比：通用剑头技术

多尼尔P2剑杆织机能控制引纬的每个阶段，从而可以处理大范围的纱线类型和粗细支数。产品范围从细支真丝，单丝到玻璃纤维粗纱，再到最粗的花式纱。通用剑头的纱支适用范围从7旦到4500特克斯。创新的多尼尔 DoPPIO®剑头是平行引双纬的理想解决方案。

## 精确监控：多尼尔AirGuide气垫式导剑装置

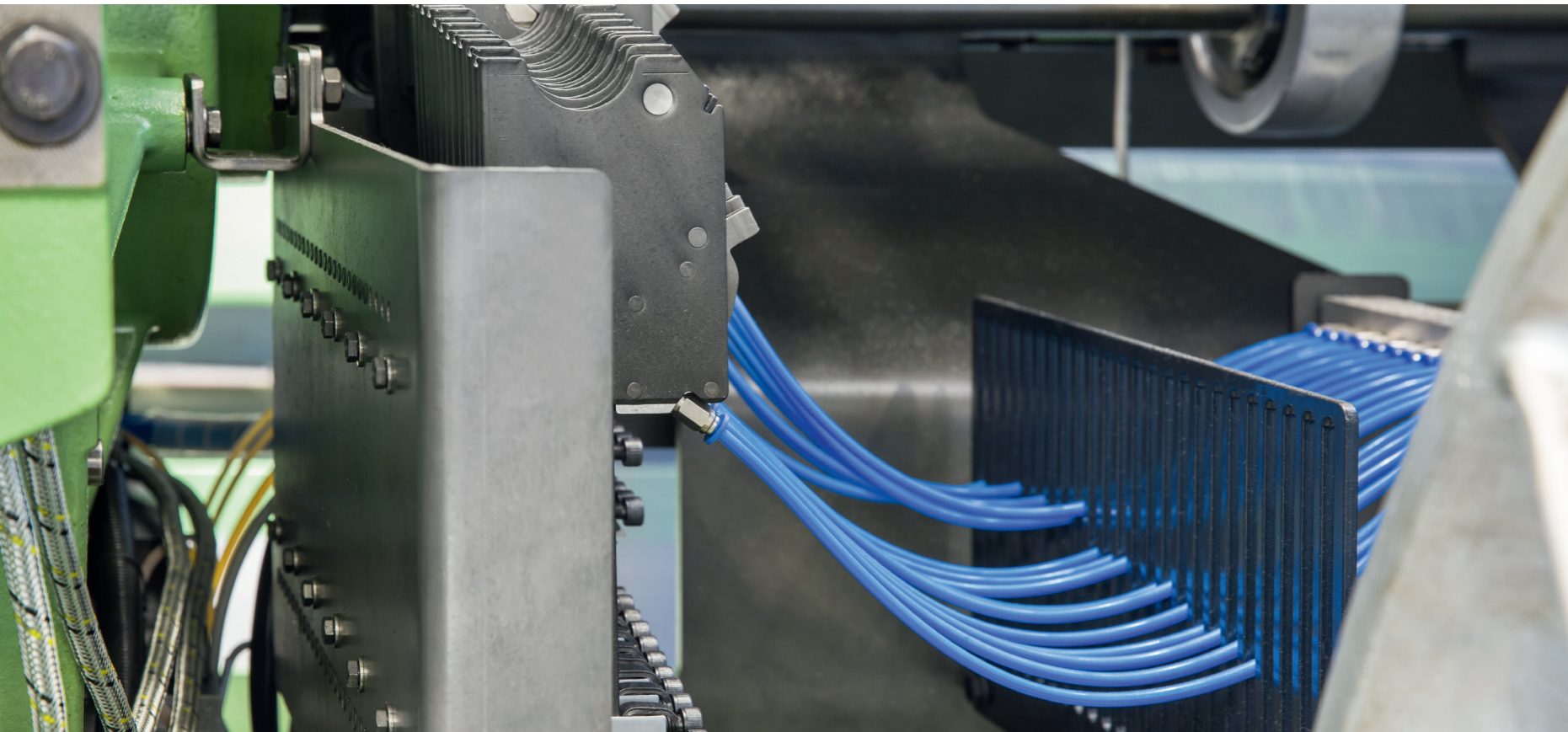
使用多尼尔AirGuide气垫式导剑装置，剑杆在平稳的气垫状态下无接触滑动。集成的温度监控系统对温度实行自动监控，以提供可靠的引纬。该系统最大限度地降低了维护成本，减少了人员工作量，并显著提高了操作效率。





# WIDE RANGE OF APPLICATIONS: SHEDDING OF P2

## 织造范围广泛： P2织机的梭口



### At the center of the weaving process: The P2 shed geometry

The P2 shed geometry is the basis for the geometrical arrangement of all machine components involved in shedding and weft insertion. The user can easily set the ideal shed geometry for each specific product.

### Sturdy, low-maintenance shaft drive

DORNIER AutoLub automatic circulating lubrication guarantees a long service life for the undermotion elements, even under heavy loads. Pneumatic Shaft Lock (PSL) considerably reduces setup time at article changes.

### 织造工艺的核心：P2 的梭口几何形状

P2 的梭口几何形状是涉及开口和引纬的所有机器部件几何布置的基础。用户可以轻松地地为每个特定织物设置理想的梭口几何形状。

### 牢固且低维护的综框驱动

多尼尔AutoLub自动循环润滑保证了综框的下传动装置的使用寿命，即使在重载工况下也是如此。气动综框锁紧系统（PSL）大大减少了更换织物品种时所需的设置时间。

### Shedding devices for a wide range of applications

In all performance classes, the P2 is available with electronic dobby or cam motion. In addition, the standard configurations (TKN/TGN) are compatible with DORNIER EasyLeno® for manufacturing leno fabrics and with Jacquard machines for producing highly complex weave patterns. In selected applications, DORNIER Open Reed Weave (ORW) technology enables additional patterning options and warp yarn orientations.

### 适用于各种织物的开口装置

各型号的P2织机中，均可配备电子多臂或凸轮开口机构。此外，标准型号TKN和TGN可与多尼尔EasyLeno® 简易纱罗装置兼容，用于织造纱罗织物。如配备提花机，可用于织造高度复杂的织物图案。在特定的应用中，多尼尔开放式钢筘织造技术（ORW）可实现织物图案的叠加和不同的经纱走向。



# A SEAL OF QUALITY: THE SELVEDGE



## DORNIER MotoLeno® and DORNIER MotoEco

DORNIER MotoLeno® can handle different filling densities and fabric constructions. It considerably reduces warp end breaks in the selvedge zone and forms a stable frame for subsequent finishing. As an alternative, the modularly designed and patented DORNIER MotoEco double-disk leno is available. It ensures an intensive binding with very short yarn ends, thus reducing waste. No additional shafts are required for selvedge and catch selvedge.

## 多尼尔MotoLeno®和多尼尔MotoEco

多尼尔MotoLeno®绞边装置适用于各种纬密和组织结构的织物。布边的经纱断头大大减少，并为后道织物整理提供稳定的边结构。作为替代方案，也可以使用模块化设计的多尼尔MotoEco双圆盘绞边装置。它能够紧锁短小的纱头，从而减少浪费。无需额外的综框用于布边和废边。

## Perfect selvedges with programmable binding: Catch Selvedge Device (CSD)

The low-maintenance DORNIER Catch Selvedge Device (CSD) is freely programmable for shed closure timing and binding sequence. It is an ideal catch selvedge solution, even for high thread counts and tensions.

## 具有可编程交织的完美废边：废边装置（CSD）

低维护的多尼尔CatchSelvedgeDevice（CSD）废边装置可以对梭口闭合时间及交织顺序自由编程。即使对于高支数和高张力经纱它都是理想的废边解决方案，



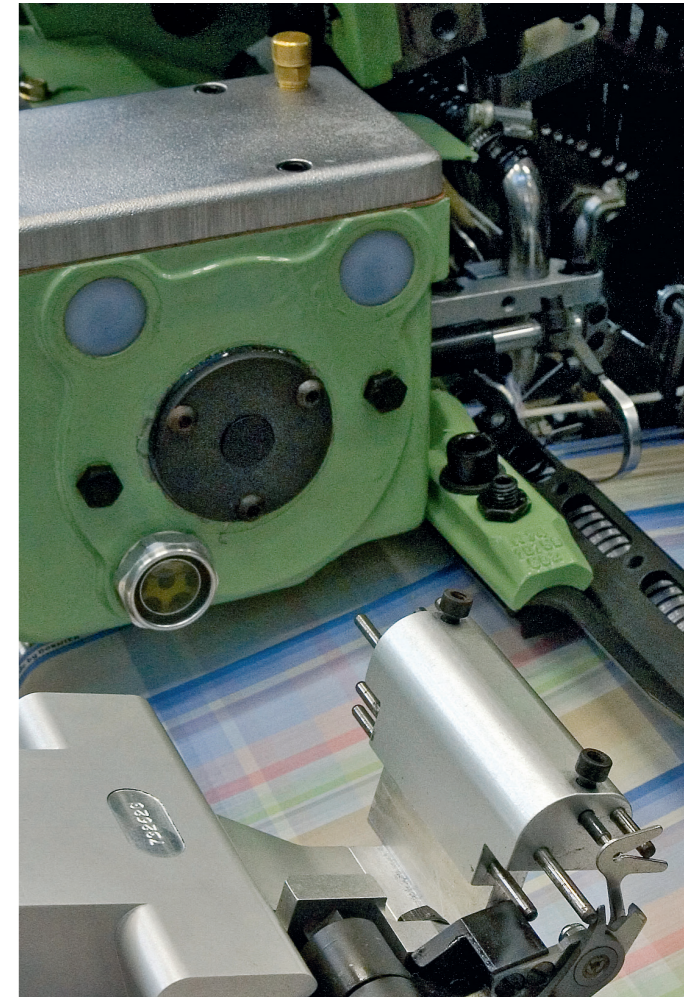
## Economic tuck-in selvedges: DORNIER QuickSet Tuck-in

The DORNIER QuickSet Tuck-in allows the economical production of tuck-in selvedges, even for label application. The adjustment of scissors and draw hook is set outside the machine. The entire unit is then fixed to the mounting plate in the machine. With this development, it is possible to guarantee reproducibility of the required selvedge quality with tuck-in lengths as low as 8 mm. Due to its narrow width, the selvedge can be easily tailored. Changing from leno to tuck-in selvedge and vice-versa is possible within the shortest time. The tuck-in selvedge unit is also available as a center tuck-in device for multi-width fabric weaving.

## 经济型折入边装置：多尼尔QuickSet Tuck-in折入边装置

多尼尔QuickSetTuck-in®折入边装置可以实现以快速经济的方式形成折入边，还可用于商标织造。可在上机前调整剪刀和钩针的设置，然后此折入边装置即可整体安装在织机上的支座上。这一改进使得布边的折入长度缩减到8mm。此设备宽度较小，方便布边织造。可快速进行纱罗绞边和折入边的相互转换。在进行多幅织造时，此装置亦可用作中央折入边。

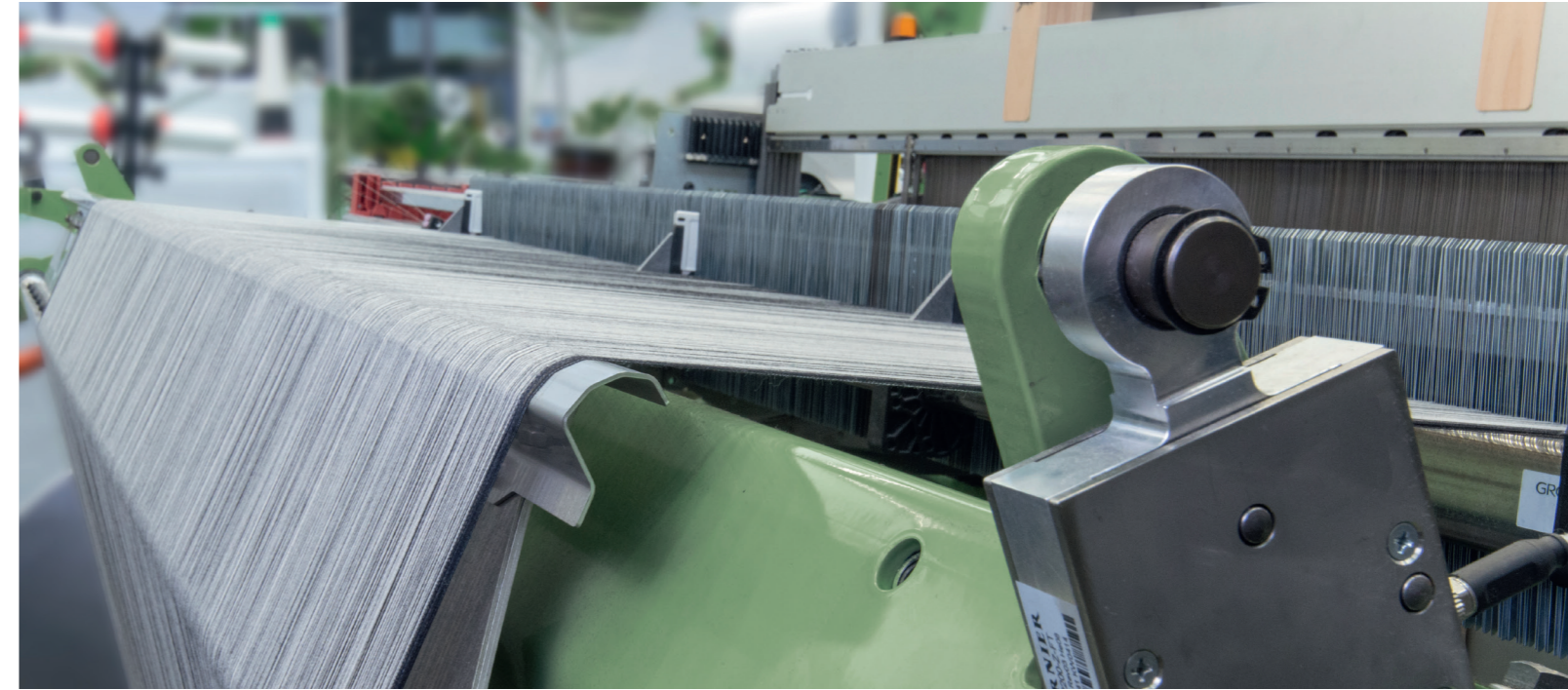
# 可靠质量的保证： 边组织





# GENTLE CONTROL: WARP AND FABRIC MOVEMENT

## 轻柔的控制： 经纱和织物运动



### Full tension control from warp to cloth

A holistic control concept enables precise control over tension conditions from warp to cloth. The Electronic Warp Let-off (EWL) uses warp tension sensors to realize closed-loop control of the warp tension. At the same time, the electronically controlled Electronic Cloth Take-up (ECT) ensures that the set target filling density is precisely met. Therefore, even the most demanding fabrics can be manufactured with consistent quality.

### Ideal compensation: Back-rest roller systems

The requirements for the back-rest roller system vary considerably depending on the application and the warp material. With various solutions from spring-mounted to mechanically controlled back-rest rollers, DORNIER comprehensively meets these requirements. With DORNIER DynamicWarpGuide (DWG), a highly dynamic, lightweight system for cost-effective production of sensitive fabrics is available.

### 从经纱到织物的张力控制

整体控制概念可以精确控制从经纱到织物的张力条件。电子送经装置（EWL）使用经线张力传感器实现经纱张力的闭环控制。同时，电子控制的电子卷取装置（ECT）确保精确满足设定的目标纬纱密度。因此，即使要求最高的织物也可以以一致的质量进行织造。

### 理想的经纱张力补偿：后梁罗拉系统

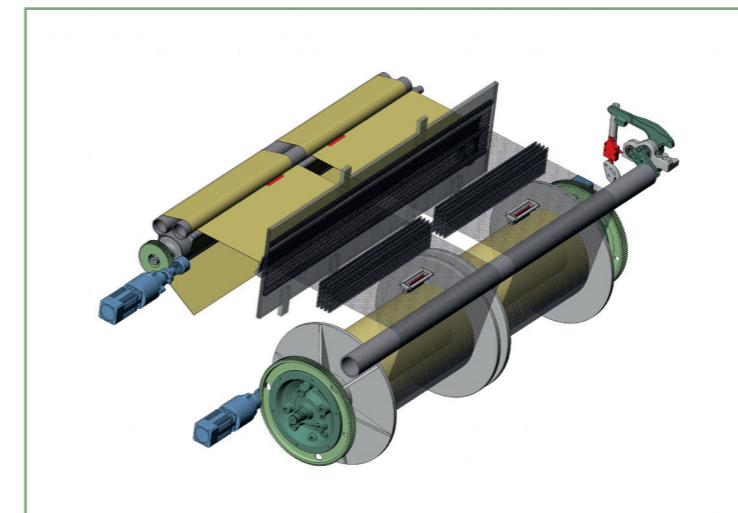
后梁罗拉系统的要求因织物品种和经纱材料而异。通过从弹簧加载张力传感器到机械驱动、电子控制的后梁罗拉等各种解决方案，多尼尔全面满足了这些要求。使用多尼尔DynamicWarpGuide（DWG）动态后梁，轻质且能实时补偿经纱张力，用于经济高效地生产对张力波动敏感的织物。

### Versatile options: Warp yarn feed

DORNIER offers the EuroFix warp beam bearing for top and ground warp as well as for split warp beams. With additional external warp beam stands the application spectrum is further broadened. For weaving from creel, a positively controlled feed roller and a set of guiding rollers are integrated. In addition, an auxiliary reed ensures that all warp ends run parallel.

### 多种选择：经纱喂入

多尼尔提供用于上经轴和地经轴以及并列双经轴的EuroFix经轴支座。也可通过增加外部经轴支架，织造范围得到进一步拓宽。对于从纱架引经织造，集成了一个积极控制的喂入辊和一组导向辊。此外，辅助钢筘可确保所有经线平行喂入。





# INTUITIVE INTERFACE AND NETWORKED PRODUCTION

## Intuitive control: The advantages of DORNIER ErgoWeave®

- Touchscreen panel with structured user interface
- Operator support for safe and efficient fabric production and machine maintenance
- Personalized and secure access
- Style data storage for rapid style changes and high reproducibility
- Online documentation and spare parts catalog access
- Machine connectivity, remote maintenance and online backups with DoXWeave/DoXNet

## Highly performant and ready for industry 4.0: DORNIER Fast-Ethernet-Technology (FT)

The entire communication of control, process and production management levels takes place through a Fast-Ethernet-Technology bus adapted specifically for DORNIER weaving machines. The fact that the system is also used to guarantee safety in modern aircraft is evidence that DORNIER is highly committed to the secure transfer of data in real time.

## 直观的控制：多尼尔ErgoWeave®的优势

- 结构化用户界面的触摸屏面板
- 支持挡车工安全高效的织物生产和机器维护
- 个性化和安全的访问
- 织物工艺数据存储，可实现工艺的快速更改和高度的重现性
- 在线文档和备件目录访问
- 通过DoXWeave/DoXNet进行机器连接、远程维护和在线备份

## 高性能以及为工业4.0做好准备：多尼尔快速以太网技术（FT）

通过以太网，可以对多尼尔织机的整个控制、工艺和生产管理进行人机交流。该系统还用于保证现代飞机的安全，这一事实证明了多尼尔高度致力于实时安全传输数据。

# 直观的界面和网络化生产



## DORNIER DoXNet: Networked production

DORNIER DoXNet connects weaving machines in one or more weaving shop floors to form a machine network. The software provides the user with a simple overview of the current status of all connected weaving machines via a browser-based dashboard. DoXNet runs on the company's in-house network infrastructure and does not require internet access. In this way, the customer remains in complete control over his data, including sensitive production details.

## DORNIER DoXWeave: Central management of DORNIER weaving machine data

DORNIER DoXWeave is a PC program for managing, reading and creating data of DORNIER weaving machines. Together with DoXNet, it enables the exchange of data between DORNIER weaving machines and DoXWeave via the internal company network and without using any physical data carriers. The combination of DoXWeave and DoXNet also enables remote access to connected weaving machines.

## 多尼尔DoXNet：网络化生产

多尼尔DoXNet将一个或多个织造车间的织机连接起来，形成一个机器网络。该软件通过基于浏览器的显示屏为用户提供所有连接的织机当前状态的简单概览。DoXNet在公司内部的网络基础设施上运行，不需要互联网接入。通过这种方式，客户可以完全控制其数据，包括敏感的生产细节。

## 多尼尔DoXWeave：多尼尔织机数据的集中管理

多尼尔 DoXWeave是一个PC程序，用于管理，读取和创建多尼尔织机的数据。与DoXNet一起，它可以通过公司内部网络在多尼尔织机和DoXWeave之间交换数据，而无需使用任何物理数据载体。DoXWeave和DoXNet的结合还可以远程访问连接的织机。



# SERVICE FOR YOUR SUCCESS: DORNIER SERVICE ADDS VALUE®

为您的成功服务：  
服务提升价值

## Close to the customer all over the world

You can contact the DORNIER customer service staff not only at the Service Center in Lindau, but also in all major market territories for systems and machines. In the US, India, China and Turkey, DORNIER also operates its own subsidiaries. The service staff can assist you in German, English, French, Spanish, Italian, Russian, Chinese, Hindi, Portuguese Romanian and Turkish.

## Inspections, upgrades and conversion sets

Whatever you weave, it is most important to DORNIER that you maintain and advance your performance capability to the maximum degree possible. Whether inspections of machine efficiency, custom conversions or the very latest upgrades for older machine generations: DORNIER will continue to meet the high quality requirements of its customers long after the purchase is complete.

## Training and training courses: With us or on-site?

Have you bought a weaving machine or hired new personnel who are not familiar with the weaving machines from DORNIER? At our modern Training Centers in Lindau, Charlotte, Mumbai and Shanghai, but also in your local weaving mill, experienced trainers will turn your employees into specialists in efficient weaving

## 贴近全球客户

您不仅可以联系我们位于林道的服务中心的客户服务人员，还可以联系我们机器所在的所有主要市场。在美国，印度，中国和土耳其，多尼尔还有自己的子公司。服务人员可以用德语、英语、法语、西班牙语、意大利语、俄语、中文、印度语、葡萄牙语，罗马尼亚语和土耳其语为您提供帮助。

## 检查、升级和转换件

无论您织造什么，对多尼尔来说最重要的是最大限度地保持和提高您织机的性能。无论是检查机器效率，定制转换还是旧机器的最新升级：多尼尔将在购买完成后继续满足客户的高质量要求。

## 培训和培训课程：在多尼尔培训中心还是在客户现场？

您是否购买了织机或雇用了不熟悉多尼尔织机的新员工？在林道、夏洛特、孟买和上海的现代化培训中心，或者客户自己的工厂，经验丰富的培训师将把您的员工培养成高效的织造专家。





# myDoX®: DORNIER CUSTOMER PORTAL

## myDoX®: 多尼尔客户门户网站



### Direct Link 4.0: the DORNIER Customer Portal myDoX®

Thanks to the customer portal myDoX® DORNIER's customers organise their production at the highest technological level. It completes and expands our personal technical DORNIER service and the weaving machine panel DORNIER ErgoWeave® with integrated Ethernet interface. In addition to a 24/7 online shop and the enhanced DoXWeave software for the networking of weaving machines, myDoX® offers also the direct 4.0 connection to experts and information from company DORNIER.



### 直接链接4.0: 多尼尔客户门户网站myDoX®

通过客户门户网站myDoX®多尼尔客户可以在最高技术水平上组织生产。它完成并扩展了多尼尔的个人技术服务和带有集成以太网接口的ErgoWeave®织机控制面板。除了24/7在线商店和用于联网织机的增强版DoXWeave软件外，myDoX®还提供直接4.0以连接来自多尼尔的专家和信息。

### The benefits of myDoX®

- Online shop for original parts
- Access to user documentation
- Optimal data overview by individually definable machine groups and numbers
- Access to previous orders and current quotations
- Improved running behavior, maintenance and shorter downtimes

### Log on and get started right away

This system based on HTML5 and the most modern database technology (powered by SAP HANA) does not need any plug-ins and can be comfortably operated via PC, smartphone, tablet computer or weaving machine panel.

### 24/7 online shop for original parts

Ordering original DORNIER parts directly and rapidly via online shop: Add the desired parts from the spare part catalogue to the cart – DORNIER ensures to deliver them promptly.

### myDoX® 的优势

- 原厂零件在线商店
- 访问用户文档
- 通过可单独定义的机器组和数字实现最佳数据概览
- 访问以前的订单和当前报价
- 改善运行性能、维护并缩短停机时间

### 登录并立即开始

该系统基于HTML5和最先进的数据库技术（由SAP HANA提供支持），不需要任何插件，可以通过PC，智能手机，平板电脑或织机面板轻松操作。

### 24/7 原装零件在线商店

通过在线商店直接快速地订购多尼尔原装零件：将备件目录中所需的零件添加到购物车中-多尼尔确保及时交付。



# THE P2 RAPIER WEAVING MACHINE: TRIMMED FOR EFFICIENCY

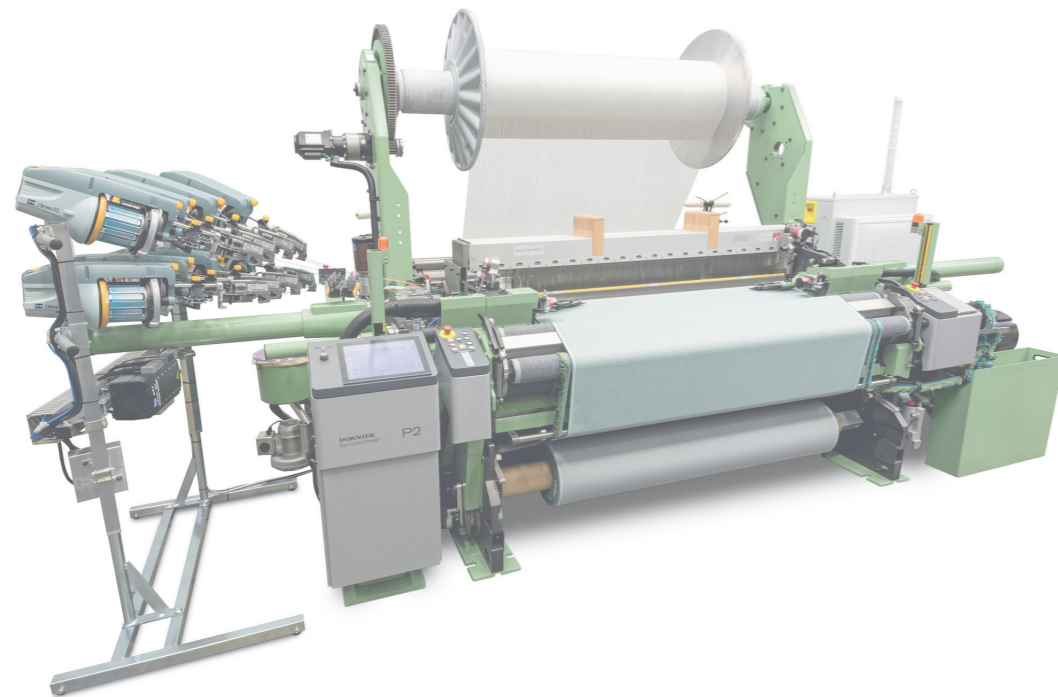
# P2剑杆织机: 精雕细琢以提高效率

## Short setup times and low maintenance

- Very fast width changes
- Modular machine concept for fast adaptations
- High process reliability with DORNIER AirGuide
- Start weaving assistant (SWA) for intuitive product development
- Low-maintenance main drive technologies
- Reproducible setting of shed closing time with DORNIER SyncroDrive®
- Central lubrication for easy maintenance

## 调机时间短，维护成本低

- 快速的幅宽调整
- 模块化的机器概念，可快速调整
- 多尼尔AirGuide气垫式导剑装置工艺可靠性高
- 启动织造助手（SWA）进行直观的产品开发
- 低维护主驱动技术
- 使用多尼尔SyncroDrive®同步驱动可重现设置梭口闭口时间
- 中央润滑，易于维护



## Supreme flexibility in filling insertion

- Open shed filling insertion with positive center transfer
- ECS color selector with individual presentation needles or DORNIER DisCoS® with single color disk
- Electronic Filling Control (EFC) for easy filling break settings
- Multiple weft insertion and optionally DORNIER DoPPIO® for parallel double weft insertion
- Free positioning of feeders and easy processing of low tensile strength yarns
- Weft saving devices DuoColor and DuoMix

## 引纬的高度灵活

- 积极式中央交接的全开口引纬系统
- 带独立呈纬针的ECS电子选色器 或带单个选色盘的多尼尔DisCoS®电子选色器。
- 电子纬纱张力器（EFC）便于纬纱断头设置
- 引多纬以及可选配的多尼尔DoPPIO®平行引双纬
- 储纬器安装位置灵活，便于纬纱在低张力下引出
- DuoColor 和DuoMix节边装置

Machine type code – DORNIER Rapier Weaving Machine P2  
机器型号-多尼尔P2系列剑杆织机



Nominal width	Machine width**	max. fabric reeded width	min. fabric reeded width***
标称宽度	机器宽度**	最大织物箱幅	最小织物箱幅***
cm / 厘米	mm / 毫米	mm / 毫米	mm / 毫米
150	4990	1470	874
180	5290	1770	1051
190	5390	1870	1125
200*	5490	1970	1180
210*	5590	2070	1255
220	5690	2170	1306
230*	5790	2270	1351
240	5900	2370	1448
250*	6100	2470	1480
260	6300	2570	1578
280	6700	2770	1690
300*	7100	2970	1827
320	7500	3170	1941
340	7900	3370	2127
360	8300	3570	2392
380	8700	3770	2392
400	9100	3970	2448
430	9700	4270	2696
460*	10300	4570	3006
540	11900	5370	3806

Other weaving machine nominal widths and special versions on request

Overall depth  
with 800 mm warp beam  $\varnothing$  1,868 mm  
with 1,000 mm warp beam  $\varnothing$  2,160 mm

\* On special request  
\*\* width valid for dobbies with 6 colors  
\*\*\*further width reductions on request

For precise measurements of each type of machine outlined, please contact DORNIER. Subject to change

可根据用户要求更改幅宽

总体深度（毫米）  
经轴边盘直径 800 毫米  $\varnothing$  1,868 毫米  
经轴边盘直径 1,000 毫米  $\varnothing$  2,160 毫米

\* 根据特殊要求  
\*\* 宽度适用于 6 色选纬的多臂开口织机  
\*\*\*可根据要求进一步减少宽度

各迹象织机的详细外形尺寸，请联系多尼尔。多尼尔保留修改权





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