

A1

Flexible. Reliable. Efficient.

DORNIER A1: Productivity at maximum quality

The DORNIER air-jet weaving machine A1 – a real all-round talent – offers innovative solutions for all challenges of weaving – today and tomorrow. Built on the proven technology of the DORNIER system family, the A1 convinces with a completely new electronic control system and an application-oriented main drive concept based on three different systems.



Exceptionally wide range of application

Whether operating with a simple cam motion, in combination with a Jacquard head of 12,000 hooks, a dobby with up to 16 heald frames or with the DORNIER EasyLeno® motion – the A1 is the perfect tool for the creative, economical and precise production of technical fabrics, home textiles and garment fabrics – in machine widths ranging from 150 up to 540 cm (59 inch up to 212 inch). A multitude of patented components, e. g. the DORNIER PIC® system with DORNIER ServoControl®-2 or the DORNIER PneumaTucker® guarantee a process security which is unparalleled in air-jet weaving.

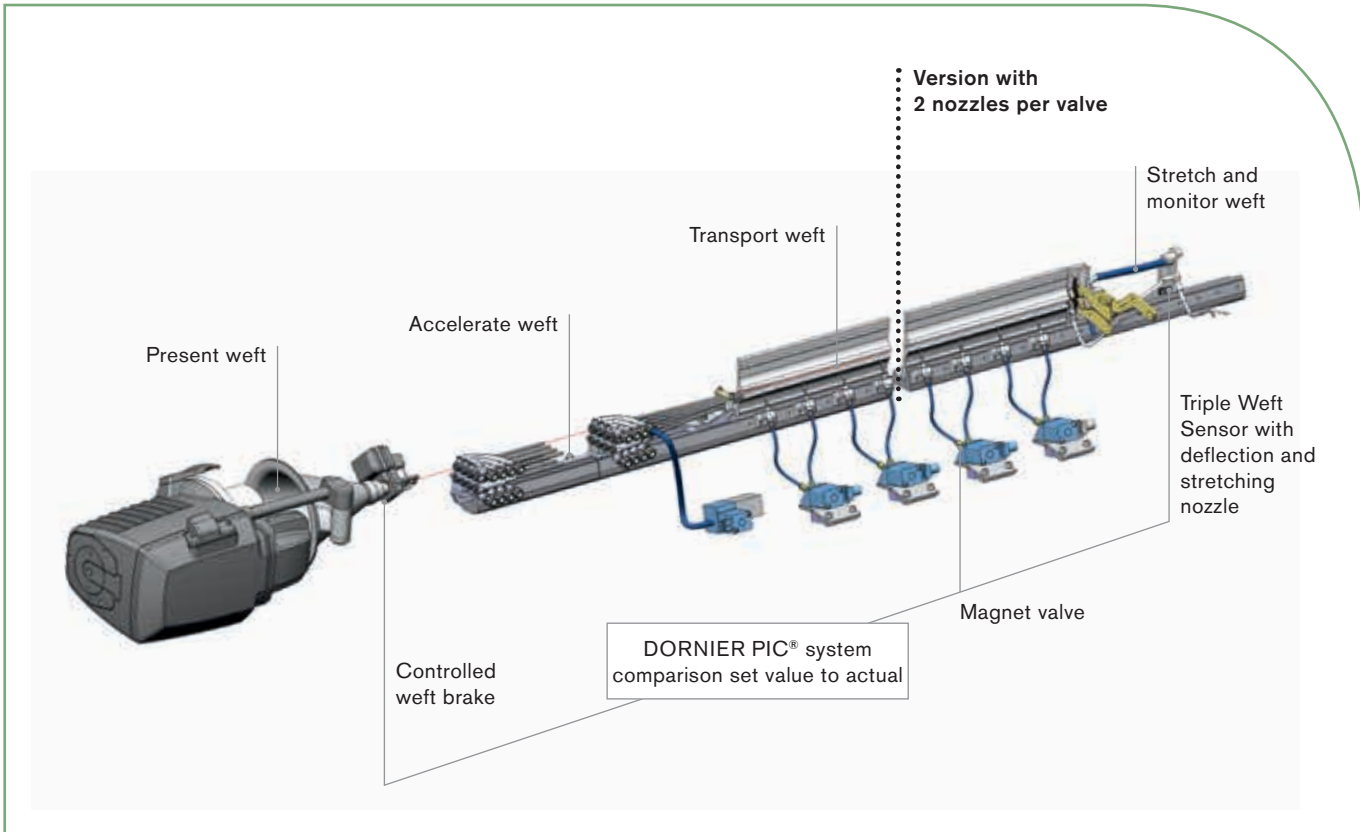
The application spectrum of the A1 ranges from technical textiles such as lightest spinnaker silk, tightly woven airbags or conveyor belting to car- and airline seating Jacquard upholstery. Fabrics for garments of fine worsted or Jacquard damask fabric of Egyptian cotton, function and sportswear fabrics, home textiles for decoration and Jacquard table cloth with matching napkins in multiple widths, sheer window drapery – all these goods and many more can be reliably produced on the A1 with excellent quality.

READY FOR THE FUTURE

“Quality creates value” - in the production of high value textiles for the automotive industry worldwide leading companies have relied on the DORNIER air-jet weaving machine for nearly 20 years because of its unparalleled flexibility and efficiency. Airbag or seat upholstery fabrics, tire cord or heavy truck tarpaulins – all these products, in the past woven on projectile or negative tape rapier weaving machines, are today manufactured with substantially improved economy and at much higher quality on DORNIER air-jet weaving machines. The air-jet machine generation A1 creates additional potentials to upgrade existing production methods in the automotive fabric industry as well as in many other areas.

DORNIER filling insertion: Unique in performance and safety

Thanks to the reliability of its unique filling insertion controlled through the patented DORNIER PIC® system with DORNIER ServoControl®-2 in combination with the proven shed geometry of the DORNIER rapier weaving machine and a long insertion window, the DORNIER A1 air-jet opens up new dimensions for air-jet weaving machines as relates to flexibility, efficiency and fabric quality.



High process reliability thanks to DORNIER PIC®

The patented DORNIER PIC® system (Permanent Insertion Control) recognizes imprecise function of magnet valves right from the start and thus guarantees highest process reliability. The permanent control of the function timing of the relay nozzles with continuous comparison of set to actual values of the sequential nozzle group timing (on-condition monitoring) guarantees high quality of weaving and eliminates unnecessary stops for maintenance.

The newest valve technology

Faster reaction times and smaller dead volume considerably decrease the air consumption of main, relay and stretching nozzles. With two nozzles per valve, the air consumption of relay nozzles is additionally reduced and allows a more precise adjustment of the sequential nozzle group firing, resulting in a wider insertion window with a more gentle treatment of the filling thread. Through the electronic compressed air supply, various pressurisation levels can be programmed and transferred.

Easy handling of main valves

The easy exchange of main valves permits the use of the optimal main valves for different yarns thus guaranteeing high performance at minimal air consumption.

Gentle filling yarn handling, improved fabric appearance

The weft feeders with layer separation and advanced electronics were developed further to be able to precisely measure the length of even more complex yarn necessary for one insertion across the shed. The optimized airflow of main and relay nozzles exerts a gentle acceleration to the filling thread at lowest tension levels, thus permitting higher machine speeds with lower filling stop levels. Ultimately, this results in less hairiness of yarn and a better final fabric quality.

The compact throttle block with DORNIER ServoControl®-2

The patented DORNIER ServoControl®-2 system with integrated entry-pressure monitoring controls the air pressure in one common closed circuit for main and tandem nozzles in accordance with the pre-determined thread arrival times for each individual color. The pressure values are displayed digitally in absolute figures which increases the degree of automation and simplifies the reproducibility of article data.

Ease of operation

The compact design of the whole throttle block grants unobstructed view and free access to filling yarns and main nozzles. The semi-automatic filling threading for main and tandem nozzles is operated per push button and integrated into the throttle block, significantly simplifying weaver handling and reducing downtimes.



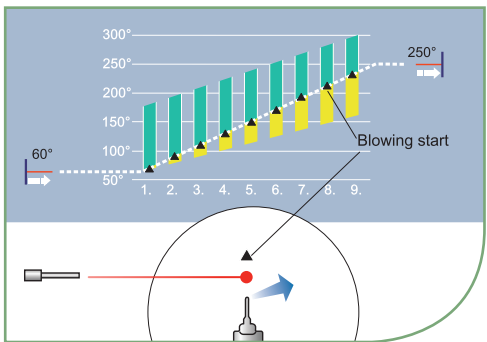
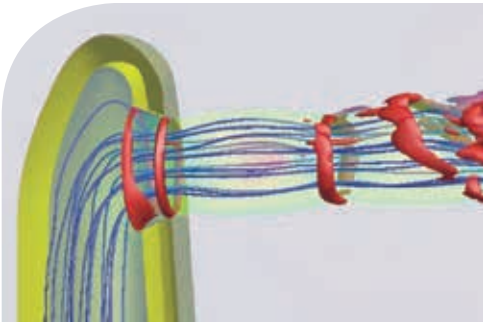
Simple fabric width changes

A newly designed temple profile allows an even faster width adjustment. The throttle block is easily shiftable which permits simple symmetrical settings of fabric widths and substantially reduces set-up times.



Efficient and without maintenance single-hole relay nozzles

Based on positive experiences over many years with the DORNIER single-hole relay nozzles, important performance improvements have been realized through the refinement of details in design and manufacturing which also result in a reduction of air consumption. The strength of the DORNIER single-hole nozzle is its uncomplicated usage, free of any maintenance procedures. A sectional view (numeric simulation) shows the conicity of the air hole opening and the optimum air flow it creates. The nozzle is surfacehardened for a long lifetime. Being uncoated no cracking of the nozzle surface can occur preventing therefore filament damages.



Air savings thanks to DORNIER EcoValveControl®

The newly developed DORNIER EcoValveControl® detects the arrival of the weft end in the area of the respective relay nozzle group. The magnet valve of the nozzles opens therefore only when the weft end enters the zone of the air-jet. The control inhibits a premature opening, thus saving air.

Efficient nozzle and valve technology

With the technology of the A1 air-jet weaving machine, DORNIER sets new standards: The mobile tandem nozzle attached to the reed bar allows extra prolonged insertion times – an undisputable requirement for maximum machine speeds and multiple width weaving. In combination with the optional TandemPlus nozzle and the PWC-clamp, the range of insertable filling yarn types is substantially increased. Reliable control of perfect completion of thread insertion is guaranteed by DORNIER's unique sensor systems, Triple Weft Sensor and STS, integrated as modular and compatible components.

The performance boosters:

TandemPlus, TRIM and main nozzle Plus Plus

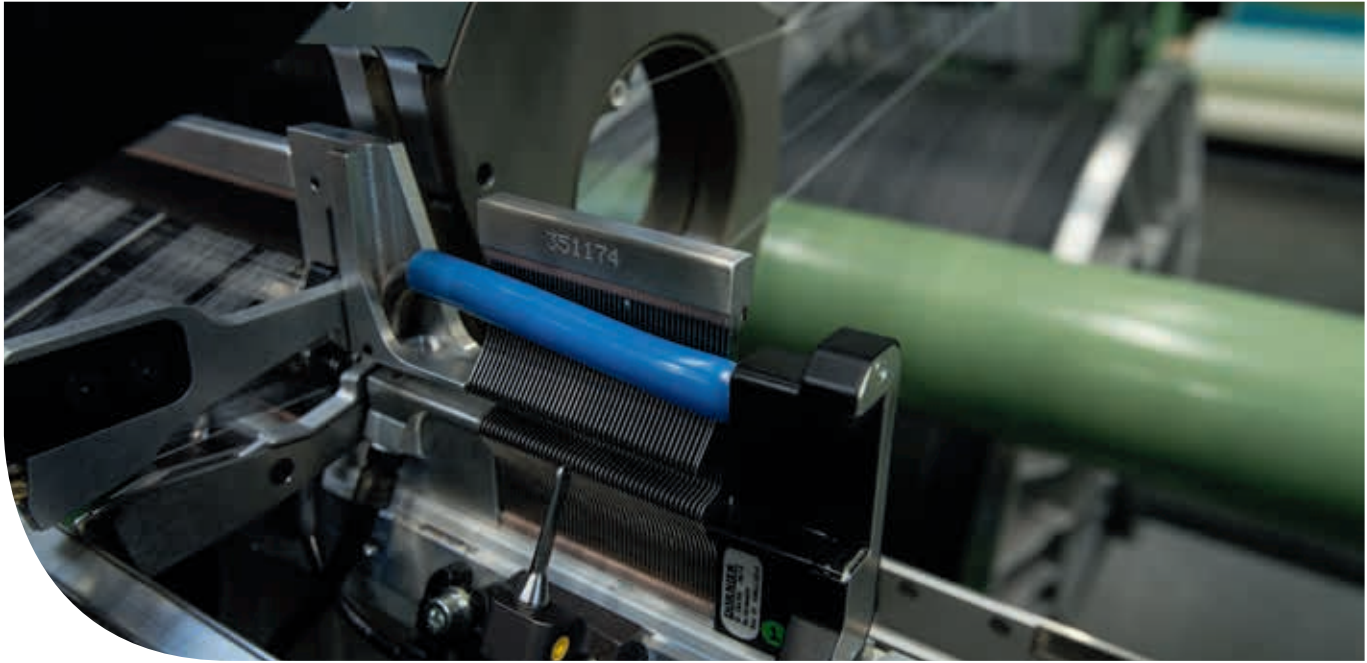
Optionally, a third pre-nozzle of fixed position and up to 8 colors can be installed for the high speed insertion of slick or subtle yarns – the TandemPlus feature. On extra wide machines with up to 4 colors, optionally a third mobile pre-nozzle can be installed on the reed bar – the TRIM feature. Both of these technologies reduce the necessary air pressure of the main nozzles, thus minimizing the impact of power transmission on the surface of delicate yarns. Higher efficiencies and overall performance improvements are the consequence.

Newest developments (main nozzle Plus Plus) ensure an even higher insertion performance in combination with two pre-nozzles, e.g. for finest wool yarns. The gentle yarn treatment is maintained and the air consumption further reduced.

Filling control: The Triple Weft Sensor

The patented and conceptually modular Triple Weft Sensor, consists of a first and second filling stop motion combined with the stretching nozzle. It guarantees precise filling control of even most subtle yarns. The first filling stop motion monitors thread arrival, the second one thread breaks during insertion.

The distance between both filling stop motions can be adjusted in accordance with filling yarn elasticity. After reed beat-up the thread is taken up by the deflection nozzle so that the stretching nozzle remains always free for the next filling insertion.

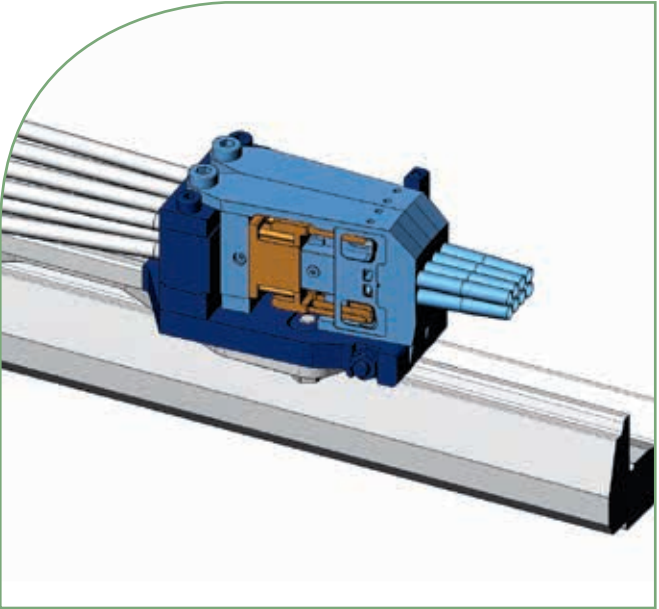
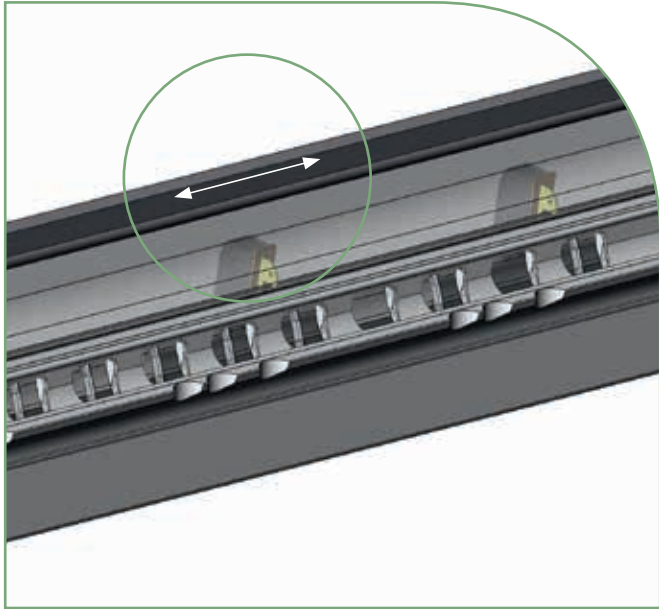
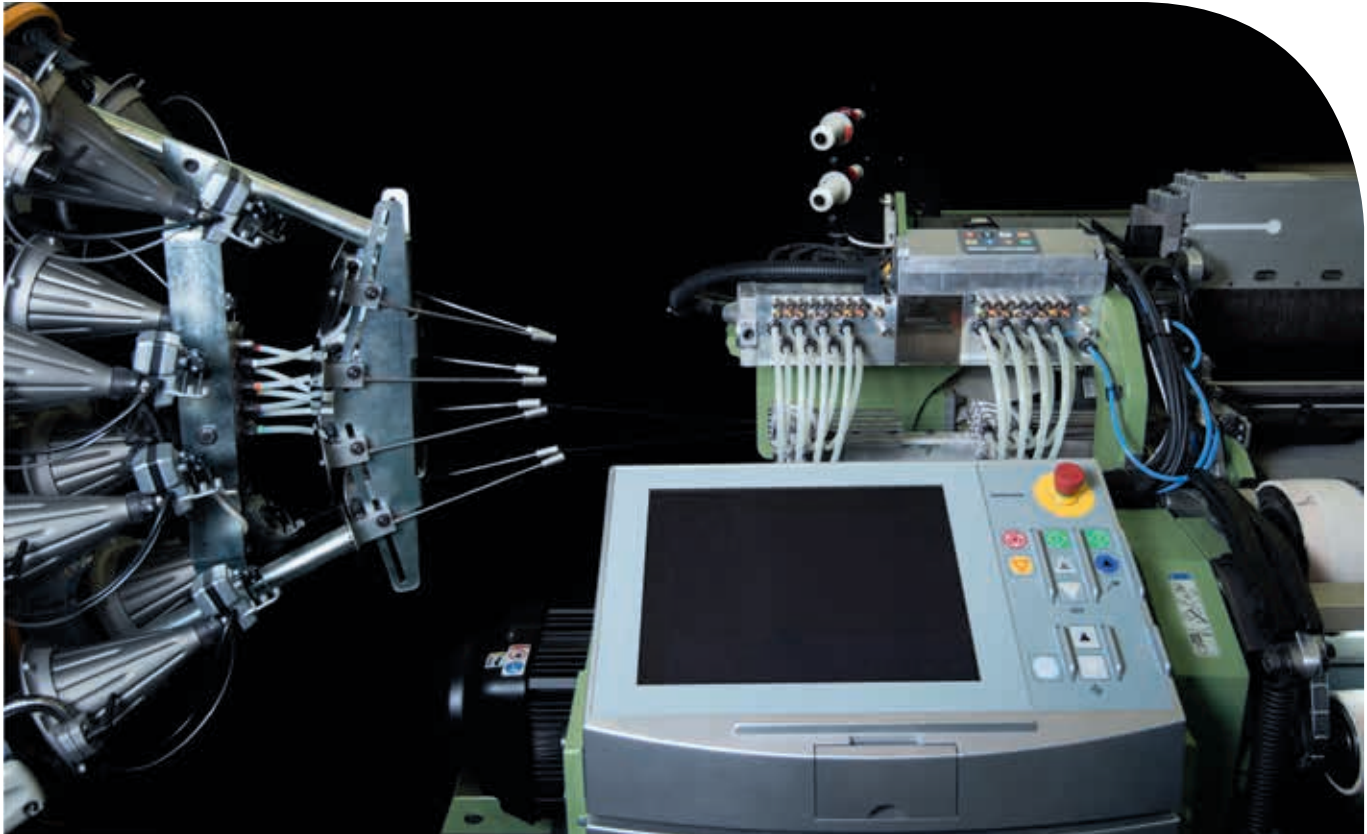


For elastic yarns: The PWC-clamp

The patented, positively acting filling thread clamp PWC works reliably, preventing the use of any holding air pressure. The clamp is positioned at the exit of the main nozzle tubes which is unique for air-jet weaving machines. Thus the application spectrum of insertable filling yarns can be widened out to core yarns, Elasthans, fancy yarns such as flammées, ratinées and slub yarns, up to low twist materials etc. always maintaining the 8 color capability. Fancy styles with exceptionally long pattern repeats, as sometimes used for home textiles and garments, can now be produced for the first time without problems using air-jet technology.

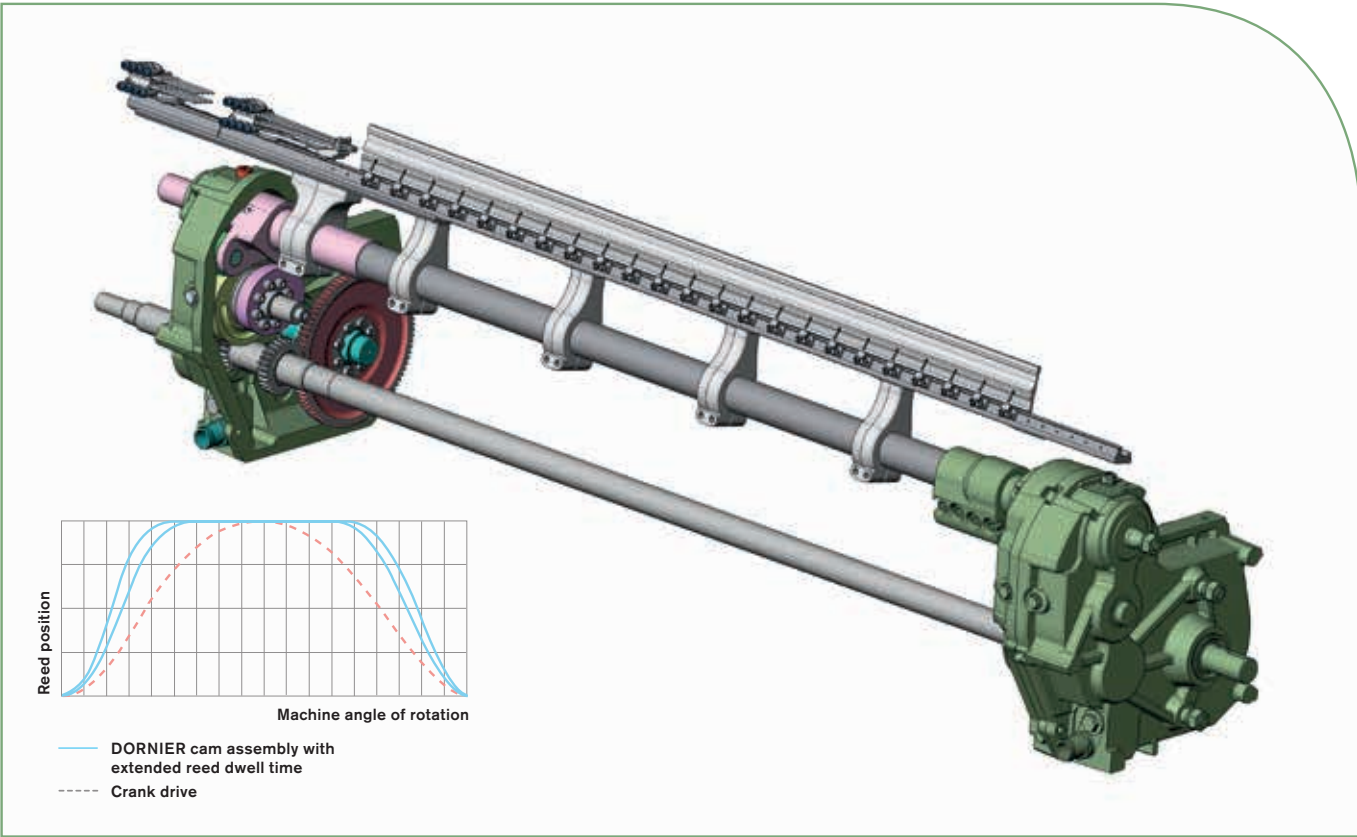
Quality control: STS

The new filling stop sensor STS (Slim Throughlight Sensor) is based on the throughlight principle. It provides highest functional and quality reliability also for dark filling colors and finest threads down to 10 den. It can be easily positioned anywhere on the reed with a clip-on attachment according to filling insertion width.



Stability and precision for high filling insertion rates

The whole counts more than the total of all its parts. The finely concerted function of all elements including the solid mechanical components and main assembly groups of the A1 as well as the new electronic control system creates an individually configurable mine. It operates safely, efficiently and with reproducible data like never seen before.



Robust construction, solid reed drive

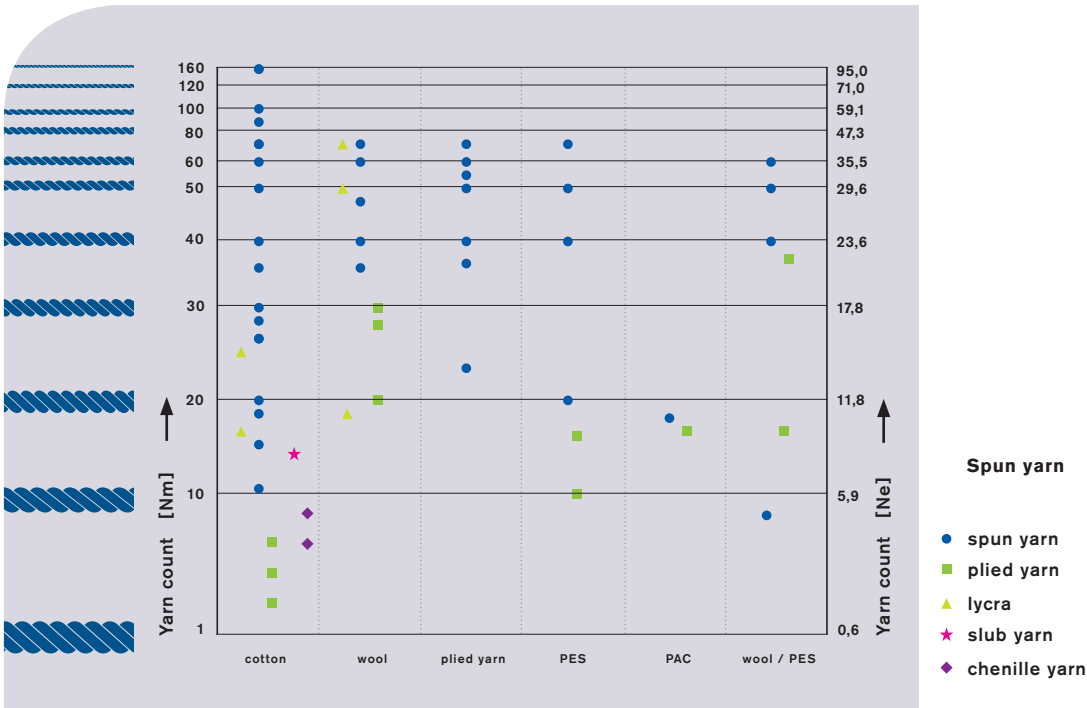
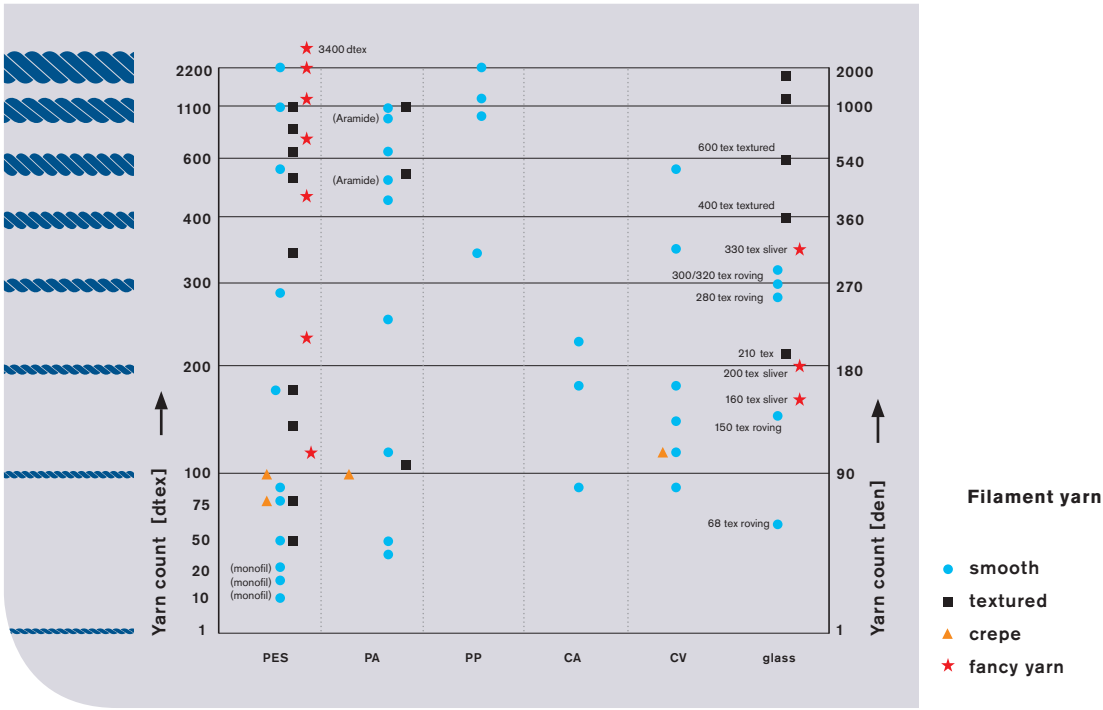
Reliability in the production of high value fabrics starts with a sturdy machine frame, equipped with a solid reed drive system. The bilateral reed drive of the A1 is equipped with a large dimensioned main shaft, rotating at accelerated speed, which connects the two gear boxes. Combined with a shortened drivetrain section it forms an exceptionally sturdy unit. The mass-reduced but extremely stable reed bar guarantees an exact and well-balanced reed beat-up. The vibration behaviour is significantly improved and start marks are positively eliminated.

Large filling insertion window through optimized reed movement

The reed dwell time can be adapted to the machine width and therefore provides more time for the gentle insertion of subtle filling yarns. This enables the machine to process an extremely wide spectrum of different yarn types.

Unique: The application range of the DORNIER A1

The extremely wide insertion range of the A1 covers spun and filament yarns made of natural and man-made fibers as well as mixtures of both. The fineness for spun yarns ranges from Nm 4 to Nm 160 and from 10 to 2200 dtex for filament yarns. Effect and textured yarns can be even coarser.



FT control system and DORNIER ErgoWeave®:
Complex technology provides easy handling

Born out of practice, the new DORNIER ErgoWeave® operating concept enables for intuitive machine handling for the first time. The innovative FT control system newly developed for it forms the foundation stone for significant further improvements in the most diverse variety of sub-assemblies. It guarantees high reliability and efficiency in woven fabric production – with a technology which is open to future developments.



Important innovations

- Data transfer is effected in real time
- Short response times guarantee faster reaction of all electronically controlled components at any time during the weaving process
- The defined time cycles are precisely and reliably observed and automatically corrected to the weaving machine's operational condition

Fast-Ethernet-Technology control system: Innovative and fit for the future

DORNIER is again successfully producing a revolutionary innovation in the new weaving machine generation's control technology. As with the introduction of the CAN-Bus in 1990, DORNIER remains true to its pioneering role, bringing, in the shape of the FT control system, a completely new type of system to the market which makes the reliable transfer of the largest quantities of data possible in real time.

The entire communication structure, with control, process and reference planes, is effected via Fast-Ethernet-Technology bus. This system is also co-responsible for safety on board of the new A380 Airbus. This shows impressively the high status DORNIER places on data transfer reliability. The new control system is a sustainable innovation carrier, also guaranteeing for forthcoming new developments in electronics and drive technology.

DoNet (Global Communication Network)

A standard integrated Ethernet interface permits to connect the weaving machine to all common production data acquisition systems or to a network. DoWeave, a PC program, is available for processing and managing machine, style and pattern data. When the machines are networked, style and pattern data can be exchanged bidirectionally between the DoWeave PC and DORNIER ErgoWeave®. Furthermore, software updates can be centrally provided and machine data secured (backups).

When an Internet connection is set up between DORNIER and your DoWeave PC, with prior authorization, remote diagnostics provide assistance for troubleshooting via Teleservice (DoTes).

DORNIER ErgoWeave®'s integrated browser permits to use own applications of your intranet. Via Internet it is possible to place speedily and comfortably orders by PC using our proven EPOS system.



DORNIER ErgoWeave®: Intuitively operable touchscreen

The software is operated via a spacious, user-friendly designed 15 inch touchscreen. Graphic representations of function cycles plus universally comprehensible symbols facilitate understanding of the selection possibilities. Direct access to important settings significantly reduces analysis time.

Useful new functions

DORNIER ErgoWeave® provides extensive functions for a quick and perfect fabric quality result to the weaver. Start-mark correction can be limited to one setting, or ideally adjusted whenever necessary. One of the DORNIER ErgoWeave®'s special strengths is the simple production of the statistical evaluations of all weaving functions plus the recording and correction of stoppage causes by means of a system diagnosis tool. With standard articles, automatic settings and high product setting reproducibility reduces personnel workload. The DORNIER ErgoWeave®'s pattern storage volume records up to one million pick repeats – and can be further extended.



Online documentation

The online help provides directly a description of the menu pages, parameters and messages, relevant for the current context, and saves the user from having to search in the software manual.

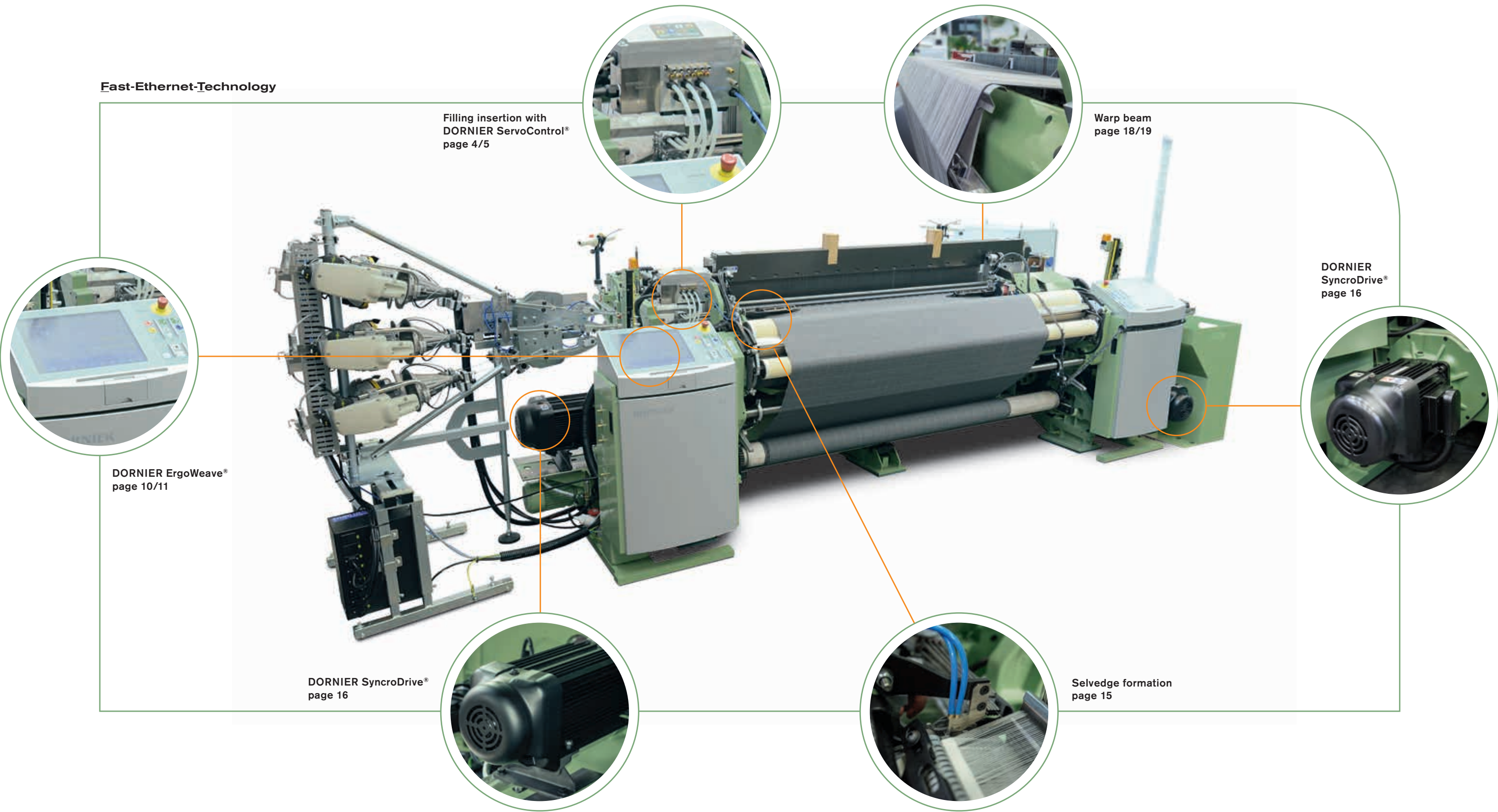
In addition to online help, the entire content of the printed user instructions is displayed on the dialog panel. This online user instructions provide information required for daily work on your weaving machine: Overviews, function and component descriptions, information for your safety, setting work, operating instructions, cleaning, lubricating, maintaining, troubleshooting and repairing.

An intelligent link between the online help and the online user instructions makes it very comfortable to swap between the two. Interactive tables of contents and indices further facilitate locating information.

The A1 at a glance: Sturdy technology with intelligent controls

The A1 stands for reliance in all respects. Thanks to the connection of the machine side frames with a robust profile traverse, its sturdy basic framework guarantees low vibration operation – even at high speeds and in doublewidth version. Therefore it is unnecessary to bolt or cement the machine to the floor.

All systems necessary for filling insertion are bilaterally displaceable, making time-saving as well as symmetrical and asymmetrical width adjustment possible. For Jacquard weaving or when using a split warp beam arrangement, this feature is of great advantage. The new main drive concept consisting of three different systems forms, in conjunction with the new FT controls, the ideal combination for your production.



Fast-Ethernet-Technology

Filling insertion with
DORNIER ServoControl®
page 4/5

Warp beam
page 18/19

DORNIER
SyncroDrive®
page 16

DORNIER ErgoWeave®
page 10/11

DORNIER SyncroDrive®
page 16

Selvedge formation
page 15



HIGHTECH WITH TRADITION

"Quality creates value" - when it comes down to safety and comfort, functional textiles woven on DORNIER air-jet weaving machines are a class of its own. Whether flame resistant aramid, finest light-weight spinnaker cloth or breathable high performance fibers: The DORNIER air-jet weaving machine produces the best possible cloth quality at the most reasonable cost in all these areas. The DORNIER air-jet weaving machine A1 raises the top level of weaving another notch higher.

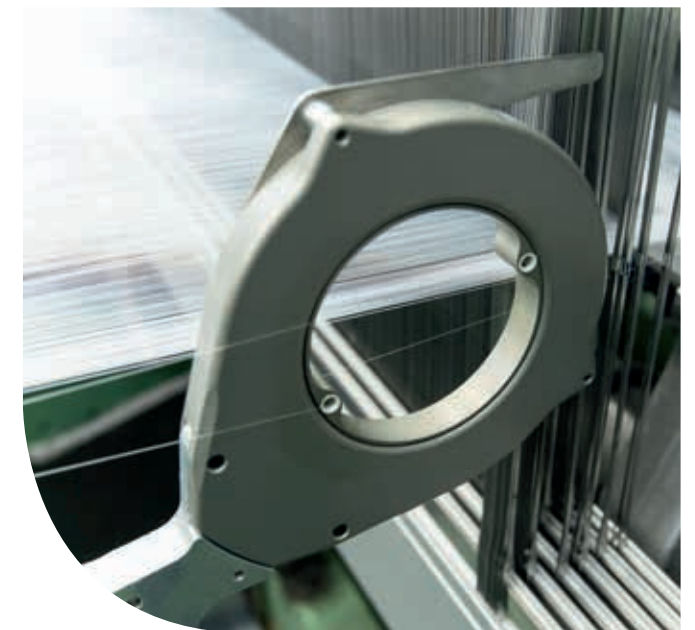
A quality seal: The DORNIER selvages formation devices

The selvedge sells the fabric. The patented selvedge formation devices are one of DORNIER's strengths. They offer decisive advantages, also as regards further fabric processing: The freely programmable 2-end DORNIER MotoLeno® full-turn leno and the pneumatically operated DORNIER PneumaTucker® produce unique neat and narrow selvages. The uniform mounting of the two units makes it possible to change from tuck-in to leno selvedge in the shortest possible time.

Perfect selvages, thanks to intensive binding: DORNIER MotoLeno®, DORNIER MotoEco® (option)

Previously unattainable performance potentials can be reliably achieved with the DORNIER selvedge-forming units. The 2-end full-turn DORNIER MotoLeno® is suitable, pattern controlled, for any filling density variant and fabric construction. The firm and solid selvedge securely withstands robust finishing, while warp end breaks in the selvedge zone are markedly reduced.

Based on the DORNIER MotoLeno®, the modularly designed, patented DORNIER MotoEco® double-disk leno is available as an alternative. It consists of two full-turn lenos with system-related rotation reversal which operate side by side for fabric selvedge and catch selvedge. No additional shafts and catch selvedge bobbins are required for the leno. The double-disk leno provides for intensive binding with very short yarn ends and also operates from standard king bobbins. Waste-saving and material recycling are thus optimized with the DORNIER MotoEco®.



Full usage of the speed potential without compromising cloth quality: The DORNIER PneumaTucker® (option)

With the pneumatic tuck-in device DORNIER PneumaTucker®, pictured here in combination with the patented full-width bar temple, the thread end is tucked-in by an electronically controlled short jet of air. Tuck-in depth, number of simultaneously to be tucked filling ends as well as timing for the electronically controlled scissors are adjustable via touch-screen.

The advantages: Reduced changeover time, when weaving multiple fabric widths, through elimination of mechanical components. No damages to reeds through malfunctions of mechanical tucker parts. No loss of selvedge quality on account of wear and tear when operating at maximum machine speeds.

The tuck-in selvedge unit is also available as center tuck-in device for multiple-width fabric weaving.

The right drive for you

The A1 disposes of a completely new concept of main drives based on three pillars. In combination with the FT control each provides the ideal solution for its corresponding applications. With the three drive variants every customer's requirement can be optimally matched. Function and handling are substantially simplified, the number of components reduced to the essentials through elimination of belt drive and inching motion. With this and the integrated speed control maintenance cost and set-up times are decisively minimized.

The DirectDrive: Economy at its max

- The DirectDrive represents a reliable and low-maintenance drive concept – without clutch-brake unit
- Through reduced set-up times the DirectDrive lowers the personell workload in the weaving mill
- A highly dynamic synchronous motor serves as main drive, providing unsurpassed precision for start mark prevention and thus guarantees a perfect fabric quality level



The CompactDrive: An all-rounder

- Overall construction is orientated to the most extreme maintenance-friendliness of the clutch-brake unit, significantly reducing maintenance cost and time
- The fly-wheel mass which is integrated in the drive motor, facilitates the reliable weaving of the heaviest products with maximum number of heald frames of lifting hooks
- The air-cooled motor is easily accessible, installed on a mounting platform so that it can be easily shifted without lifting gear
- Stable running speed is ensured even with heavy pattern changes at dobby or Jacquard machines with high numbers of heald frames or lifting hooks



The DORNIER SyncroDrive®: The innovative drive

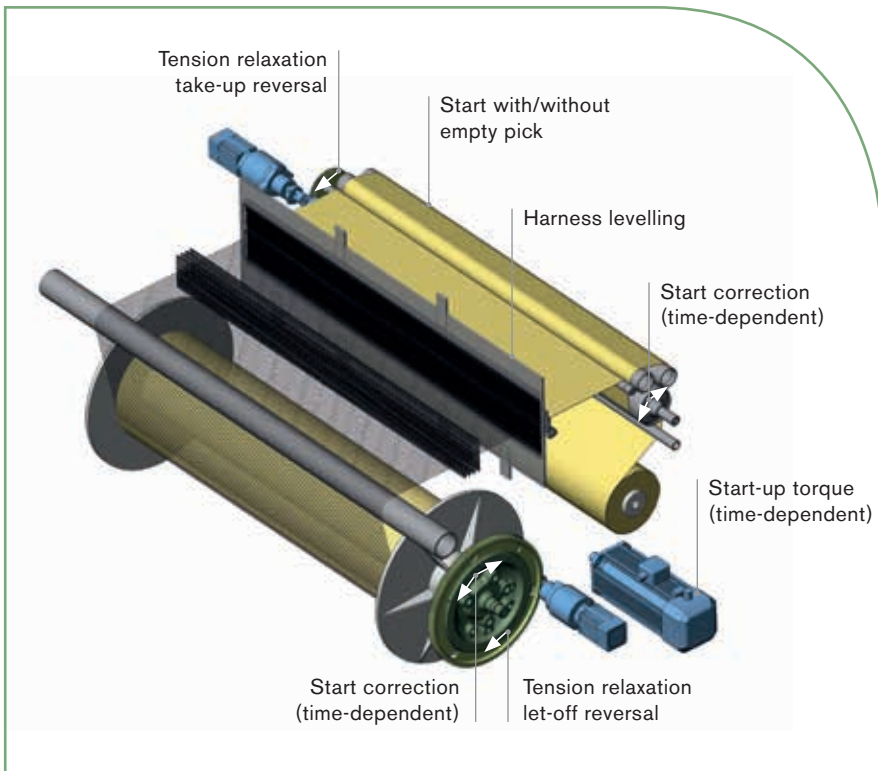
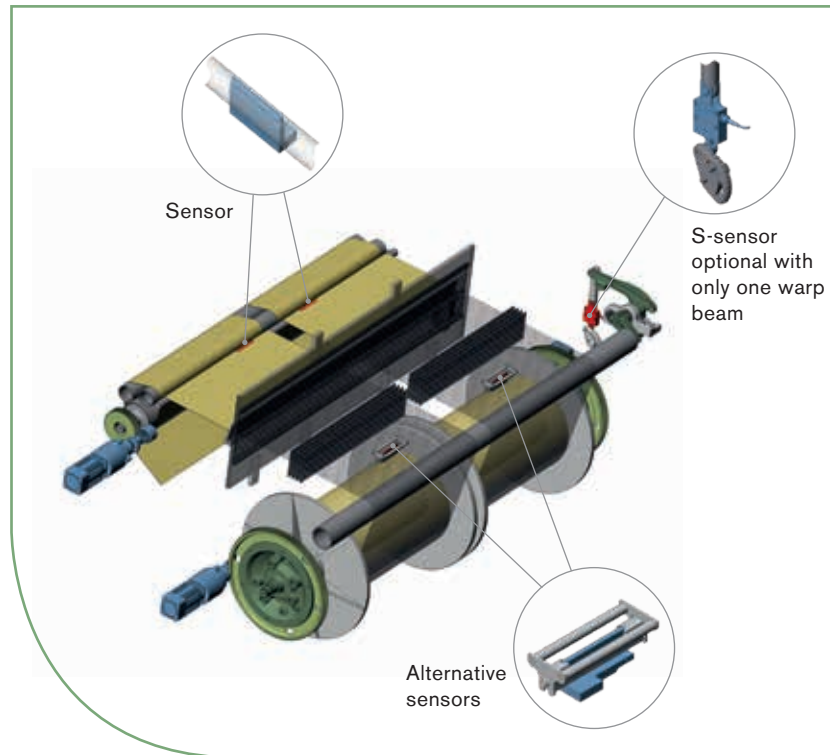
- The patented DORNIER SyncroDrive® is a low-maintenance drive system without clutch-brake unit, with a separate motor for the shedding device
- This intelligent drive system is characterized by extremely low speed variations, compared to conventional direct drives (resulting in an astounding absence of vibrations.) This permits the A1 with DORNIER SyncroDrive® to achieve unequalled speeds in dobby weaving with up to 16 heald frames
- The timing of shed closing is electronically adjustable via DORNIER ErgoWeave® during full speed operation. It is memorized with the article data and thus reproducible anytime
- The minimum vibration load on the shaft and the heddle system results in a prolonged service life of all mechanical elements and thus guarantees perfect cloth quality on the long run



Mechanics and Electronics: Intelligently combined for a reproducible high fabric quality. As far as electronic warp let-off and cloth take-up are concerned, the A1 results in an unique configurable machine which does not only react and regulate, but controls and operates with reliability and efficiency.

Electronic fabric take-up and warp let-off

With its electronic fabric take-up and warp let-off, DORNIER is following up the concept of not only controlling and reacting, but also acting with regard to the future. Patented absolute sensors measure the warp tension – independently of the position of back-rest roller and mechanical element motion – keeping it constant, even when weaving with splitted warp beams. The accuracy of warp beam settings on the display amounts to 1 cN/end with a filling density resolution of 0.01 picks/cm. Exactly reproducible values for filling density, machine speed, warp tension and contraction support start-mark prevention. Warp tension control is effected via absolute or S-sensor (optional). S-sensor positioning is independent of drawn-in width and dispenses with bothersome fastening components in the warp area.



Automatic Start mark Prevention ASP and knot-free weaving APMkn

The simple functionality of ASP automatic start-mark prevention with absolutely reproducible functions stands for quality reliability in the event of machine stoppage and restarting. Starting behaviour can be set with dynamic reed beat-up and the starting process is individually programmable.

Electronic control units replace conventional mechanics and consequently mechanical adjustment operations, in the case of yarn brakes, color selectors, selvedge units and scissors.

The automatic knot-free package switching APMkn and the knot-free weaving function increase fabric quality and ensure higher productivity.

Versatile options: From warp to weft

With its numerous options and extras, the DORNIER A1 offers you solutions for the widest variety of requirements. Suggestions from the constant dialogue with customers form a valuable input for our product development. The result: Waste reduction, handling simplification, high productivity and of course perfect fabric quality.



DynamicWarpGuide DWG: Ideal tension balance

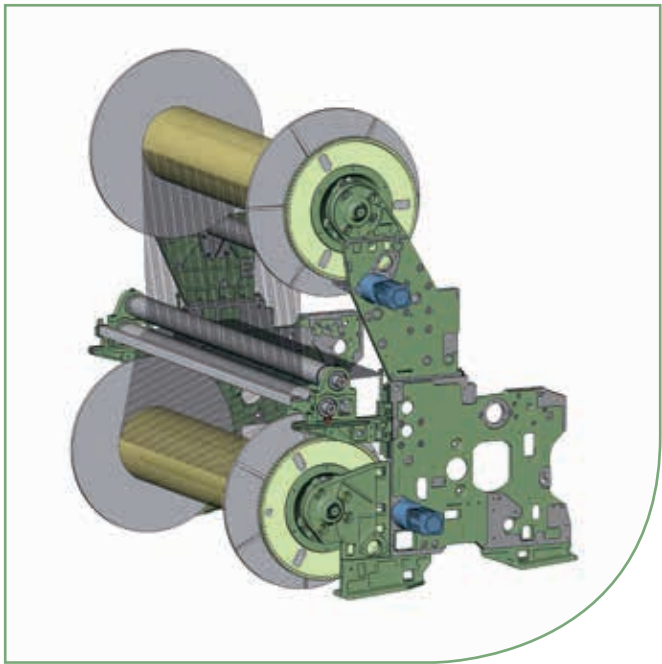
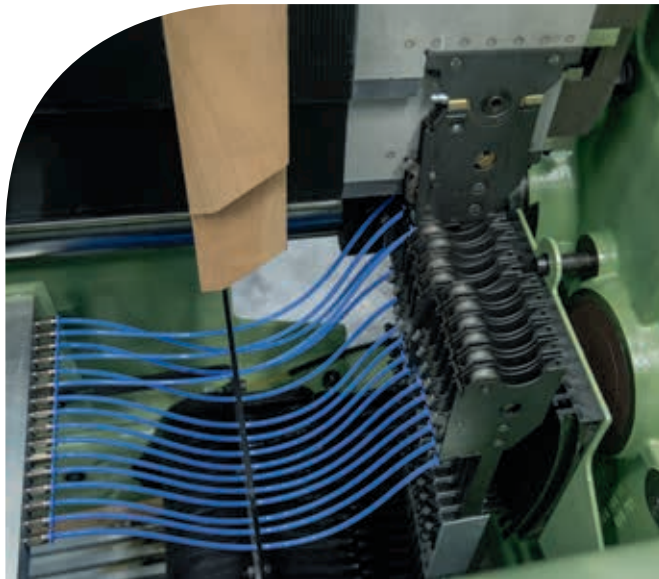
The highly dynamic warp yarn guide unit, DynamicWarpGuide (DWG), enables to weave with the lowest possible warp tension level leading to a significant warp end break reduction. Through its synchronous movement with the shed motion, this patented, roller-free unit guarantees an ideal tension balance between open and closed shed motion even at maximum machine speed! The tension measurement can be done directly at the DWG with a S-sensor. This system can be used therefore in combination with a top warp beam support.

Mobile, multifunctional axis control

The new mobile warp change key pad significantly facilitates the warp changing process. It can even be carried out by one person on double width weaving machines. The operator can control warp and fabric take-up with it from any point around the weaving machine.

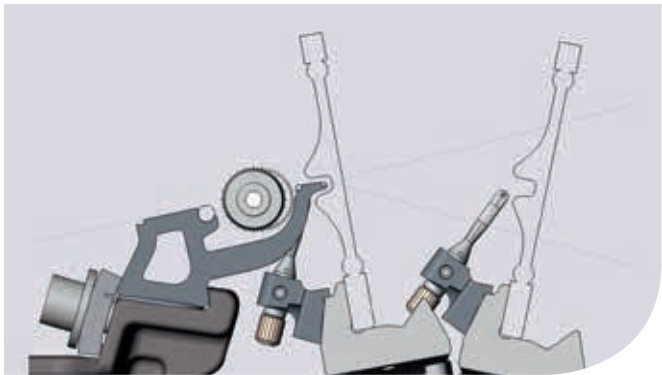
Automatic shaft coupling

PSL pneumatic shaft coupling automates shaft engagement and release independently of the shed position, thus decisively reducing setting-up times.



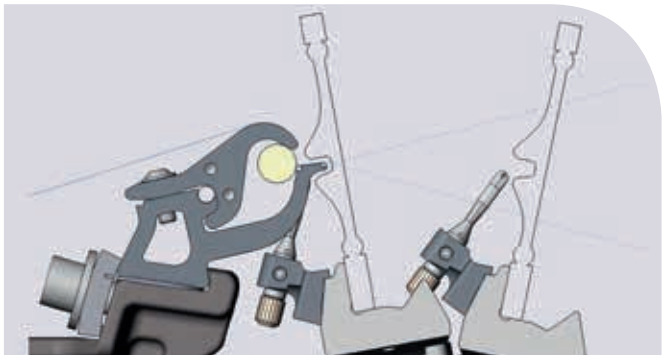
Flexible warp beam supports

Warp beam support is flexible and individually adaptable to customer requirements. In addition to the tried and proven universal warp beam mounting system, DORNIER offers the EuroFix mounting for ground, top and split warp beams with flange diameters from 800 to 1,250 mm. The warp beam gear wheel stays in the machine during warp changes. The use of additional warp beam frames enables to work with three or more warp beams with positively controlled warp let-off for each single warp beam.



Optimizing operation:
The new A1 temple profile

- The temple profile with its new supports can be steplessly positioned laterally only by turning a few screws
- Width changes are possible very simply and without time consuming adjustments
- Optionally, the temple cylinder can be easily adjusted in depth position



The A1 is trimmed from A to Z for efficiency

The A1 combines intelligent solutions which – in their totality – represent a technological quantum leap resulting in a clear-cut improvement of economy. The new FT control ensures optional resource usage, making extremely flexible machine operation possible. Various main assemblies obtain decisive feature changes – beginning with the drive, via filling insertion and statistical evaluations, through to quick and reliable product reproducibility. The air consumption of the A1 is – compared with its already excellent predecessor – again substantially reduced. Combined with important increases in productivity and shortened set-up times this decisively raises economics.

Reduced maintenance needs

- CompactDrive with reduced maintenance times
- DirectDrive and DORNIER SyncroDrive® drive systems without clutch-brake unit
- Maintenance-free single-hole relay nozzles
- Compact throttle block with stable arrangement of air-hose connections

Reduced set-up times

- Faster width changes
- Integrated speed control
- Effective reproducibility of electronic article data on settings
- Electronic adjustment of shed-closing during operation with DORNIER SyncroDrive®



Efficient and secure production

- Reduced manual time on filling stop repairs through compact throttle block
- Gentle insertion of delicate yarns and low tensile strength material
- Potential for high speeds on weaving with up to 16 harness frames with DORNIER SyncroDrive®
- DORNIER PIC® permanent monitoring of electronic filling insertion components

Reduced air consumption

- New valve technology with faster reaction-times and reduced dead volumes
- New, faster DORNIER ServoControl®-2 with integrated monitoring of entry air pressure
- 2 relay nozzles per magnet valve
- DORNIER EcoValveControl® for air savings

A TOUCH OF DORNIER

"Quality creates value" – Savile Row, Via Montenapoleone or Rue du Faubourg Saint-Honoré: Today you will find the finest menswear suit fabrics woven on DORNIER air-jet weaving machines in these exclusive store addresses around the world. It is a perfect example of the close and very successful cooperation between DORNIER and the most prestigious weavers of their trade. The DORNIER air-jet weaving machine A1 continues to weave on this story of success.

The Lindauer DORNIER GmbH: A company with a background and a future

Lindauer DORNIER GmbH has been producing weaving machines for over half a century. Since the beginning of our technical developments in weaving, our central focus and our unbroken enthusiasm are aimed at perfected technologies for the production of high quality woven fabrics. “Quality creates value” is our creed and we are doing our utmost to continue setting quality standards.

The DORNIER system family: Air-jet and rapier weaving machines

The unique DORNIER system family consists of air-jet and rapier weaving machines based on an identical, robust machine frame and equipped with uniform electronics. The operative and maintenance personnel are therefore working on identically designed machines – despite different filling insertion systems. Accessory exchangeability and largely identical spare parts reduce inventory and save money.

Technology leader with two supporting pillars

With both its company divisions – weaving machines and specialty machines – DORNIER belongs to the technology leaders of the world today. In specialty machine construction, DORNIER is market leader for the engineering and production of drying and film stretching plants. In addition to the packaging industry, these films find ever increasing use in high-tech products like semi-conductors, condensers and film displays for mobile telephones and flat screens.

With you in dialogue

A meaningful dialogue with you, the users of our technologies, is pivotal for the success of DORNIER. For us it is matter of concern to provide prompt and competent support throughout the world at any time. You profit simultaneously through the constant exchange of experience with our skilled technicians. Therefore we maintain our own technical textile laboratories including trial machines for weaving trials in Lindau (GER), Charlotte (USA) and Shanghai (PRC). Sales teams with technicians are available for you in Mumbai (IND) and Istanbul (TR) too.



The A1 in detail

- Filling insertion**
System with main and relay nozzles and profiled reed with Permanent Insertion Control (DORNIER PIC®), DORNIER ServoControl®-2 and DORNIER EcoValveControl®
Electronic compressed air supply for two different pressure levels programmable for relay nozzles (option)

Main nozzle
Standard main nozzle and mobile tandem booster nozzle TDM
TandemPlus, TRIM nozzle, main nozzle Plus Plus (option) with semi-automatic threading-up device and Positive Weft Clamp type PWC (option)

Filling stop device
Triple Weft Sensor
Filling thread sensor according to the throughlight principle, type STS (option)

Reed drive
Bilateral gearboxes with complementary cam assemblies

Width reduction
Symmetrically up to 40 cm on both sides, asymmetrically up to 100 cm
Larger reductions on request

Filling insertion rate
Over 2,650 m/min., on double picking up to 5,000 m/min.

Yarn count
See table on page 8

Filling colors
1 - 8 colors, any pick and pick color sequence

Filling feeders
Various manufacturers, controlled by DORNIER electronics
Electronically controlled filling tension devices
Automatic Package Monitoring APM

Knot-free weaving and knot-free package switch APMkn

Shed formation
Cam motion, max. 10 harness frames with 12 mm pitch
Rotary dobby for up to 16 harness frames with 12 mm pitch
Electronically controlled Jacquard machine with up to 12,000 hooks
Leno motion DORNIER EasyLeno® 2T
Open Reed Weave (ORW) Technology
Pneumatic Shaft Lock, Typ PSL (option)

Selvedge creation
Two-end disc leno device DORNIER MotoLeno®, double disc leno device DORNIER MotoEco®, thermally sealed selvedges, tucked selvedges with DORNIER PneumaTucker® (right, left and in the center)
Quick change from tucked to leno selvedges and vice versa

Temples
Cylinder temples and width-independent full-width temple

Electronic Warp Let-off motion EWL
Electronically controlled warp let-off with absolute or S-sensor (option)
Warp beam support universal and EuroFix for 800 - 1,250 mm beam diameter, also with split warp beams
Top beam support up to 1,250 mm

Electronic Cloth Take-up motion ECT
Electronically controlled, synchronized with EWL
Cloth roll diameter 540 mm with off-loom wind-up up to 1,800 mm

Automatic Start-mark Prevention ASP
ASP including harness leveling, high torque start-up of main motor
Time-dependent start compensation with let-off reversal

Lubrication
Gearboxes with continuous oil circulation
All lubrication points inclusive universal undermotion
AutoLub lubricated via automatic central lubrication

Electronic control system
Modern FT-technology with Fast-Ethernet-Technology bus
15" touchscreen display DORNIER ErgoWeave®
Modern safety technology
Software update via USB or online

DoNet (Global Communication Network)
Total networking between machine, host computer and DORNIER for spare parts ordering, user manuals, setting instructions, style and performance data and remote diagnostics by teleservice

Options
A large selection of other options is available for many fields of application
Please ask our sales and service personell for further details

Machine type code

DORNIER Air-Jet Weaving Machine A1

Number of filling colors

S: Dobby

E: Positive cam motion

J: Jacquard machine

Nominal widths in cm

C: CompactDrive

D: DirectDrive

G: Separate drives DORNIER SyncroDrive®

AWS 8/S 190 G

Dimensions

| Nominal width | Machine width* | max. fabric reeded width | min. fabric reeded width** |
|---------------|----------------|--------------------------|----------------------------|
| cm | mm | mm | mm |
| 150 | 4465 | 1480 | 500 |
| 170 | 4665 | 1680 | 700 |
| 180 | 4765 | 1780 | 800 |
| 190 | 4865 | 1880 | 900 |
| 200 | 4965 | 1980 | 1000 |
| 210 | 5065 | 2080 | 1100 |
| 220 | 5165 | 2180 | 1200 |
| 230 | 5265 | 2280 | 1300 |
| 240 | 5365 | 2380 | 1400 |
| 250 | 5465 | 2480 | 1500 |
| 260 | 5565 | 2580 | 1600 |
| 280 | 5765 | 2780 | 1800 |
| 300 | 5965 | 2980 | 2000 |
| 320 | 6165 | 3180 | 2200 |
| 340 | 6365 | 3380 | 2400 |
| 360 | 6565 | 3580 | 2600 |
| 380 | 6765 | 3780 | 2800 |
| 400 | 6965 | 3980 | 3000 |
| 430 | 7265 | 4280 | 3300 |
| 460 | 7565 | 4580 | 3600 |
| 540 | 8365 | 5380 | 4400 |

Other weaving machine nominal widths and special versions on request

Overall depth

- with 800 mm warp beam ø 1,979 mm

with 1,000 mm warp beam ø 2,084 mm

with 1,100 mm warp beam ø 2,205 mm

* width valid for dobbies with 4 colors
** further width reductions on request

For precise measurements of each type of machine outlined, please contact DORNIER

Subject to change

**Lindauer DORNIER GmbH**

Rickenbacher Str. 119
88131 Lindau, Germany
Telephone +49 8382 7030
Telefax +49 8382 703 1386

American DORNIER Machinery Corp.

P.O. Box 668865
Charlotte, N.C. 28266, USA
Telephone +1 704 697 3310
Telefax +1 704 697 3379

**DORNIER Machinery India
Private Limited**

201-A, Sangeet Plaza
Marol Maroshi Road
Andheri (East)
Mumbai 400 059, India
Telephone +91 22 292 506 74
Telefax +91 22 292 087 60

DORNIER Makina Ltd. Sti.

Oruç Reis Mahallesi
Giyimkent Sitesi 6. Sokak B64 No. 38-40
34235 Esenler/Istanbul, Turkey
Telephone +90 212 4266 998
Telefax +90 212 6011 603

DORNIER Machinery (Shanghai) Co. Ltd.

WaiGaoQiao Tax Free Zone
299 FuTeZhong Road
Area B G/F Block 45
Shanghai 200131, China
Telephone +86 21 504 62838
Telefax +86 21 504 62138

www.lindauerdornier.com
sales.wm@lindauerdornier.com