

DIFA

air-jet weaving machine for drop stitch

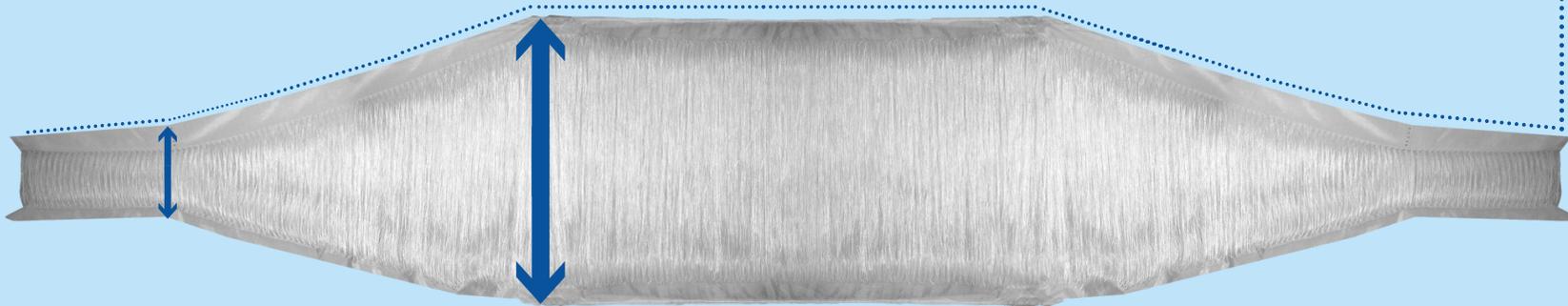


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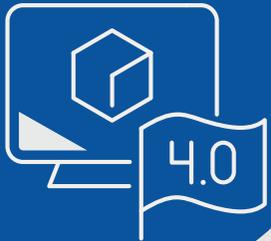
AIR-JET WEAVING MACHINE
FOR DISTANCE FABRICS

- + VARIABLE DISTANCE
- + SPEED OF MACHINE SETTING
- + QUALITY & PRODUCTIVITY
- + FABRIC WALL DISTANCE
- + PILE YARN DENSITY
- + RAW YARN FINNENES

VARIABLE DISTANCE



INDUSTRY 4.0
READY



DIFA

AIR-JET WEAVING MACHINE
FOR DISTANCE FABRICS

FRAME CONSTRUCTION

- Left side and right side (casts made of grey cast iron)
- Central steel H profile connecting sides
- Steel tubes reinforcement
- Left and right warp stand (casts made of grey cast iron)
- Breast beam construction made of linked steel profiles
- Steel back rest limbs connected by steel L profile
- Upper extension made of steel brackets and aluminium profiles

MACHINE DRIVE

- Individual drives of the mechanisms, with synchronous servomotors controlled in the electronic cam mode

BEAT-UP MECHANISM

- Cam beat-up mechanism with a profile slay made of C/E composite material

SHEDDING MECHANISM

- Shedding mechanism with the Stäubli S3060 electronic rotary dobbie (12 heald shafts 13", healds with open end loops "C")

WEFT PICKING

- Two or four independent pick systems
- Weft picking modes: single, mix and color change
- ROJ Super Elf G2 weft feeders, with CAN Bus communication
- Automatic braking system (ROJ Pulsar) of weft
- Tandem and main nozzles with automatic air pressure control
- Left (input) weft cutting, with diamond blades, with an electronically controlled step motor
- Profiled weaving reed
- Relay nozzles with automatic timing system
- Stretch nozzle
- Opto-electric weft stop motion
- Right (arrival) weft cutting, with diamond blades, with an electronically controlled step motor
- Automatic filling repair

WARP LET-OFF MOTION

- 2x electronic let-off motion, 1x high-speed, electronically controlled unwinding system
- Bottom warp beam (binder warp system): diameter of warp beam flanges max. 1 000 mm
- Upper warp beam (ground warp system): diameter of warp beam flanges max. 700 mm

BACK REST

- Fixed back rest system with three rotary rollers
- Overall width strain gauge sensing (6 sensors) of warp tension, independent for both warp systems

WARP STOP MOTION

- Optic laser warp stop motion LASERSTOP 4082, Protechna

TAKE-UP AND PACKAGING

- Electronic take-up motion with machine control system
- Packaging solved by external device type large size badge winder

DISTANCE FABRIC FORMATION MECHANISM

- Electronically controlled inserting mechanism (patented)
- Electronically controlled distance mechanism (patented)

SELVEDGE MOTIONS

- Rotary Selvage Entangling Devices Propeller Leno, Gebr. Klöcker

CONTROL SYSTEM

- Machine drives control and distance fabrics weaving technology, large and variable distances
- B&R Automation ACOPOSmulti control systems
- VÚTS, a.s. Liberec control software
- LCD control touch screen terminal – 15.6 inch
- Continuous weaving technology monitoring and production diagnostic of the machine on the OPCUA server platform
- External communication via VNC Klient and Ethernet with INDUSTRY 4.0 READY

PROCESS FIBRES

- PES, PAD, PP: 150 up to 1500 den

REVOLUTIONS RANGE

- Automatic discontinuous process of distance fabric production
- Weaving mode: working frequencies 500 rpm (max. 600 rpm)
- Distance mode: approx. 10 s

ENERGY CONSUMPTIONS

- Air consumption according to weft: 80 up to 100 m³/hour
- Power input of weaving machine according to producing revolutions, consumption depends on the structure of the distance fabric: up to 4 kW

WIDTH

- Min. reed width 150 cm | Max. reed width 230 cm
- Drop stitch width in the reed - Min. 120 cm | Max. 200 cm

DISTANCE

- 6-10 cm structurally dependent, 10-50 cm structural independent
- structures: XX or IIII
- constant and variable

MACHINE SPACE DEMANDS

- Width: 7 200 mm
- Depth: 2 280 mm
- Height: 2 320 mm
- Weight: 5 600 kg

(Without control box and large-size batch winder)



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