





ELWEBTEX

Infeed and exit systems for textile production processese



ELWEBTEX | Contents



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Key competences

Web guiding

Web guiding by the web center or edge are essential for accurate infeed positioning during the process or for precise winding results after the process.





Web tension control

Reliable product quality depends upon consistent web infeed tension before, during and after the production process.





Web spreading

Crease-free webs and evenly spread web edges are essential for both the web infeed stage of the production process and during storage.

Web accumulator for continuous operation A web accumulator before and after the process is mandatory for the batch changes required during continuous production.







Web accumulator for transport

For transportation to the next production process, the webs must be stored on large batches on an A-frame or in plaiter trolleys.











Infeed and exit systems



Infeed framework

- + Infeed systems for woven and knitted fabrics, non-woven fabrics, carpet and technical textiles before the production process
- + Frame construction with closed C profile, also for use as a cable duct
- + Tension control with dancer or load cell
- + Integrated web guiding with web guider or segmented roller guider with spreading
- + Suitable for dry or wet webs
- + Optional integrated traction unit available





Infeed framework on a digital textile printing machine

Technical data

Web type	Woven fabrics, knitted fabrics, non-woven fabrics, carpet, technical textiles
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C







Infeed framework with traction unit and web guider

Infeed framework with traction unit and segmented roller guider



Infeed framework with center unwinder and web guider

J-box

- + J-box for storing woven fabrics, non-woven fabrics, carpet and technical textiles before and after the production process
- + Frame construction with closed C profile, also for use as a cable duct
- + Dancer position control for tension control
- + Integrated web guiding with web guider or segmented roller guider with spreading
- Stainless steel and plastic J-box sliding guides for wet and dry webs



Technical data



Web type	Woven fabrics, knitted fabrics, non-woven fabrics, carpet, technical textiles
Capacity	approx. 200 m (depending on material)
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Infeed J-box







Infeed J-box for woven fabrics









Exit J-box with traction unit, plaiter and surface winder

Belt accumulator

- + Belt accumulator for tension-free storage and resting of woven and knitted fabrics or non-woven fabrics at room temperature
- + Suitable for wet or dry applications
- + Integrated plaiter with storage drum for tension-free storage





Technical data

Web type	Woven fabrics, knitted fabrics, non-woven fabrics
Capacity	Depends on resting time and material
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	Without tension
Roller diameter	100/140/160 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Belt accumulator





Belt accumulator with storage on drum



Standard belt accumulator

Roller accumulator with chain adjustment

- Web tension controlled roller accumulator with chain adjustment for web-based storing of woven fabrics, non-woven fabrics, technical textiles and carpet
- + Roller accumulator optimized for single infeed (comb accumulator)
- Roller accumulator optimized to maximum capacity with minimum size (normal storage)
- + Parallel roller frame movement with prestretched chains
- + Optional infeed and exit traction unit available
- + Roller frame drive available as pneumatic or electric
- + Low web tension due to balanced roller frame
- + Optional double infeed available for minimum space requirements





Roller accumulator, capacity 30 m, comb version

Technical data

Web type	Woven fabrics, non-woven fabrics, carpet, technical textiles
Capacity	10 - 140 m
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C



Function of standard roller accumulator, single infeed



Function of roller accumulator with comb version, single infeed





Roller accumulator with chain adjustment, storage capacity 30 m, standard design



Roller accumulator with chain adjustment, storage capacity 50 m, standard design



Function of standard roller accumulator, double infeed



Roller accumulator with chain adjustment, storage capacity 30 m, comb version



Roller accumulator with chain adjustment, storage capacity 90 m, comb version



Function of roller accumulator with comb version, double infeed

Roller accumulator with spindle adjustment

- + Web tension controlled roller accumulator with spindle adjustment for storing woven fabrics, non-woven fabrics, technical textiles and carpet
- + Roller accumulator optimized for single infeed (comb accumulator)
- Roller accumulator optimized to maximum capacity with minimum size (normal storage/double infeed)
- + Parallel roller frame movement with recirculating ball screw, electrically driven
- + Optional infeed and exit traction unit available





Roller accumulator with spindle adjustment, standard



Technical data

Web type	Woven fabrics, non-woven fabrics, carpet, technical textiles
Capacity	10 – 140 m
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C





 $\label{eq:Function} \mbox{ Function of roller accumulator with comb version, single infeed}$





Roller accumulator with spindle adjustment, storage capacity 50 m, standard design



Roller accumulator with spindle adjustment, storage capacity 90 m, standard design



Roller accumulator with spindle adjustment, storage capacity 90 m, comb version



Function of standard roller accumulator, double infeed



Function of roller accumulator with comb version, double infeed

Center unwinder

- + Center winder for unwinding woven and knitted fabrics, non-woven fabrics and technical textiles
- + With cardan shaft to connect large batches on an A-frame
- + Available in stationary, moveable or suspended design
- + Speed-regulated drive for dancer position or web tension control





Center unwinder on tenter infeed

Technical data

Web type	Woven fabrics, knitted fabrics, non-woven fabrics, technical textiles
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Ambient temperature	0 – 50 °C





Stationary center unwinder



Moveable center unwinder

Surface winder

- + Surface winder for rewinding woven fabrics, non-woven fabrics and technical textiles onto large batches on an A-frame
- + Consistent web tension from lowest to maximum coil diameter
- + Winding arm with pneumatic adjustment
- + Spreading with curved spreader roller or curved, polished stainless steel pipe
- + Optional mechanical oscillation feature available
- + Also combinable with a plaiter





Technical data

Web type	Woven fabrics, non-woven fabrics, technical textiles
Roller diameter	1800 mm
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Surface winder on tenter exit





Surface winder



Surface winder with plaiter

Center rewinder

- + Center winder for winding woven and knitted fabrics, non-woven fabrics and technical textiles onto large batches on an A-frame
- + Consistent web tension from lowest to maximum coil diameter
- + Winding arm with pneumatic adjustment, including distance control to the winder
- + Spreading with curved spreader roller or curved, polished stainless steel pipe
- + Optional mechanical oscillation feature available
- + Also combinable with a plaiter





Technical data

Web type	Woven fabrics, knitted fabrics, non-woven fabrics, technical textiles
Coil diameter	max. 1800 mm
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Pneumatic cylinder for sochor arm





Center rewinder

Two-position winder

- + Semi-automatic surface or center winder for continuous rewinding of woven fabrics or technical textiles onto large batches on an A-frame
- + Continuous production is assured in conjunction with an upstream accumulator
- + Speed-regulated drive for dancer position or web tension control
- + Winding arm with hydraulic adjustment, including gap control for center winder
- + Spreading with curved spreader roller
- + Optional mechanical oscillating feature available



Technical data



Web type	Woven fabrics, technical textiles
Coil diameter	1800 mm
Web width	1600 – 5400 mm
Machine speed	0 – 200 m/min
Web tension	max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Two-position winder





Two-position surface winder



Two-position center winder

Ascending batch winder

- Ascending batch winder for unwinding or rewinding woven fabrics, non-woven fabrics and technical textiles onto large batches on A-frames
- + Adjustable roll hardness for winding
- + With pressure roller for reliable and firm winding





Technical data

Web type	Woven fabrics, non-woven fabrics, technical textiles
Coil diameter	1600 mm
Web width	1600 – 5400 mm
Machine speed	0 – 100 m/min
Web tension	Max. 1000 N
Roller diameter	100/140/160/220 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C

Ascending batch winder





Ascending batch unwinder



Ascending batch rewinder

Plaiter

- + Plaiter for placing down woven and knitted fabrics
- + Available either as rocker or linear design
- + Adjustable plaiting length
- + Combinable with surface or center winder
- + Speed-regulated drive for dancer position or web tension control



Technical data



Plaiter on a digital textile printing machine

Web type	Woven fabrics, knitted fabrics
Web width	1600 – 3200 mm
Machine speed	0 – 80 m/min
Web tension	max. 500 N
Roller diameter	100/140/160 mm
Roller width	Web width + 200 mm (standard)
Roller material	Aluminum/stainless steel
Ambient temperature	0 – 50 °C







Exit framework with plaiter





Exit framework with plaiter and surface rewinder

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Exit framework with linear plaiter and surface rewinder

Services



Project planning/engineering

Together, we compile your requirements and work out the best solution to meet your needs. By using the very latest products from our manufacturers, we achieve maximum flexibility and high production reliability, with a ready supply of spare parts available at short notice.



Drive technology

As your system partner, Erhardt+Leimer provides a one-stop, financially viable drive system. We work with well-known and trusted manufacturers, such as Siemens, Bosch Rexroth and Lenze. We also implement an end-to-end automation concept from the control system to an intelligent drive solution with technology modules.



Control cabinet and control engineering

Our range includes all control cabinet sizes – from small operating panels to complex control cabinet systems. As "approved and certified control cabinet constructor in accordance with UL 508A", Erhardt+Leimer has been a trusted partner for projects on the American continent for many years. We design, construct and approve control cabinets for various branches in accordance with the UL 508A standard.





Programming

Our engineers program solutions for your projects and assignments. We have in-house component libraries for many of these applications. These enable us to realize your projects quickly and reliably. The programming process then becomes a project-based parameterization.

Our projects are mainly realized with the following control systems:

- » Siemens Simatic S7
- » Bosch Rexroth
- » Allen Bradley



Visualization/operation

We offer customized visualization applications for a clear presentation of your production processes on one or more PCs. These are based on established programs such as SIMATIC WinCC.



Remote maintenance/diagnosis

Remote diagnosis and maintenance ensure minimum downtime for you and therefore maximum availability throughout the entire service life of your facility.

Additional products



Guide rollers

Guiding rollers, measuring rollers and path rollers are required wherever webs run. A high level of quality on the rollers ensures the accuracy of the web guiding and in this way creates the prerequisite for high production velocities.

E+L offers:

- » Aluminum roller with blank or hard-anodized surface, static or dynamic balancing
- » Steel rollers with painted, chrome-plated or rubber surface, static or dynamic balancing
- » Stainless steel rollers



Heated and chill rollers

Heated and chill rollers are used to heat, cool and smooth out all types of web-based products.

E+L offers:

- » Heated and chill rollers in steel or stainless steel
- » Double-walled with spiral baffle
- » Single-sided entry and exit
- » Entry and exit on opposite sides



Spreading rollers (based on bow rollers)

Spreading rollers are used in the paper, plastics and textile industries to ensure that webs are processed with even width and free of creases. Spreading rollers are used after cutting stations to separate the individual panels in order, to prevent the webs from running into one another.

E+L offers:

- » Bow roller with rubber mantle
- » Flange or pedestal bearing version
- » Manually adjustable bow position





The spreading roller effect is achieved through stretching the highly elastic rubber bands which are distributed evenly over the surface. This spreading effect can be adjusted as required by changing the angle of the guide plates. Spreading rollers with rubber bands are used in particular for sensitive material webs or webs with high surface stability.

E+L offers:

- » Spreading rollers with a diameter of 127 or 154 mm
- » Continuously adjustable spreading effect





Oscillating rollers (mechanical function)

Oscillating rollers move a guide roller axially with an adjustable travel distance and a required frequency. The main area of application is on center or surface winders to achieve even winding and to prevent unwanted raised edges.

E+L offers:

» Oscillating rollers with an adjustable travel of 0 to 55 mm



Bearing caps

Bearing caps are suitable for unwinding and rewinding materials on reels. They are available as bearing block or flange bearing design, with and without drive shaft. Alternatively, the bearing caps can also be designed as sliding bearings for axial displacement of the winding product.

E+L offers:

- » Bearing cap in pedestal bearing version
- » Bearing cap in flange bearing version
- » Sliding-bearing cap in pedestal bearing version
- » Sliding-bearing cap in flange bearing version



Expanding shafts

Expanding shafts, also know as winding shafts, are used to accommodate sleeves during the unwinding or rewinding of web-based materials. The actual tensioning process i.e. the expansion of the tensioning elements, can be achieved with various different auxiliary energy sources.

E+L offers:

- » Pneumatic expanding shafts with central hose
- » Pneumatic expanding shafts with clamping strips
- » Friction winding shafts

Questionnaire

General data

Customer	
Street	
Zip code	City/town
Country	Internet
Telephone	Fax
Contact person	
Telephone	E-mail
Project	

Technical data

Type of machine				
Make				
Position on the machine				
Web type	□ Woven fabrics □ k	Knitted fabrics	Carpet	Non-woven fabric
Web elasticity	Lengthwise elasticity		Crosswise	elasticity
Web surface	Not transparent	Transp	parent	
Web edge	□ Straight	Frayed	🗅 Wavy	Rolled up
Web width	Minmm		Max	mm
Web thickness	Minmm		Max	mm
Web weight	Ming/m	1 ²	Max	g/m²
Web speed	Minm/n	nin	Max	m/min
Web tension	MinN		Max	N
Condition in operation	Dry	🖵 Damp	🗅 Wet	
Ambient temperature	°C			
Ambient conditions	Dry	🖵 Damp	🗅 Wet	
Infeed error	+/mm			
Operating pressure	bar			
Reference voltage	Machine speed	C	0-10 V DC	□ 0/4-20 mA
Operating side	In direction of production	C	Left	Right
Drive side	In direction of production	C	Left	Right
Control voltage	V		Hz	□ 24 V DC
Operating voltage	3xV		Hz	



Technical specifications for infeed systems Infeed framework for woven and knitted fabrics

	Infeed framework for		With center unwinder	Without drive	With drive
	fabrics		With traction unit on the infeed framework	Without drive	With drive
			With traction unit after the infeed framework	Without drive	With drive
			Synchronization traction unit - subsequent machine	With dancer roller	With flange load cell
			With web guiding	Segmented roller guider	Web guider
		Elec	trical control	Without control	With control
		Corr	nmand station	Without command station	With command station

Infeed system with J-box for woven and sturdy knitted fabrics

	Infeed system with	Web infeed		Plaited	From the roll
	sturdy knitted fabrics		With center unwinder	Without drive	With drive
			With infeed traction unit for J-box	Without drive	With drive
			With web guiding	Segmented roller guider	Web guider
			With traction unit for exit	Without drive	With drive
			Synchronization traction unit – subsequent machine	With dancer roller	With load cell
		Elec	trical control	Without control	With control
		Con	nmand station	Without command station	With command station

Infeed system with Z-box for very light textiles

Infeed system with Z-box for very light textiles		With small roll unwinding		
		With center unwinder	Without drive	With drive
		Synchronization center unwin- der – traction unit	Without dancer roller	With load cell
		Traction unit in J-box	Without drive	With drive
		With web guiding	Segmented roller guider	Web guider
	Elec	trical control	Without control	With control
	Com	imand station	Without command station	With command station

Questionnaire

Center unwinder

Center unwinder	Center unwinder	Version		Stationary		Moveable
		Center drive		Without drive		With drive
		Coil diameter	Min	mm	Max	mm
		With synchronization		With dancer roller		With load cell
		Electrical control		Without control		With control
		Command station		Without command station		With command station

Ascending batch unwinder

Ascending batch unwinder	Coil diameter	Min	mm	Мах	mm
	Drive		Without drive		With drive
	Electrical control		Without control		With control
	Command station		Without command station		With command station



Technical specification storage systems

Infeed or exit J-box for carpet

	Infeed or exit J-box	Traction unit for storage			Without drive	With drive
	for carpet		With traction unit for extraction		Without drive	With drive
	C C C C		Synchronization before traction unit		With dancer roller	With load cell
			Synchronization after traction unit		With dancer roller	With load cell
		Elec	trical control		Without control	With control
		Command station			Without command station	With command station

Belt accumulator

	Belt accumulator	Position on the system		Before production system		After production system		
		Vers	sion	Linear storage		With storage drum		
		Stor	age length (belt length)	 m				
		Trac	tion unit on infeed	Without drive		With drive		
			With traction unit on exit	Without drive		With drive		
	[[[[[[[[[[[]]]]]]]]]]]]]]]]]		With synchronization infeed	With dancer roller		With load cell		
			With synchronization exit	With dancer roller		With load cell		
			With web guiding	Segmented roller guider		Web guider		
		Elec	trical control	Without control		With control		
		Com	nmand station	Without command station		With command station		

Roller accumulator before or after production system

Roller accumulator before or after production system	Position on the system			Before production system		After production system		
		Roll	er frame version		Standard		Combing	
		Roll	er frame adjustment version		With chain		With spindle (only moto- rized)	
		Roll	er frame drive version		Pneumatic		Motorized	
		Web	o feed		Single		Double	
		Memory capacity		m				
			With traction unit on infeed		Without drive		With drive	
			With traction unit on exit		Without drive		With drive	
			With synchronization infeed		Dancer roller		Flange load cells	
			With synchronization exit		Dancer roller		Flange load cells	
		Advanced speed during storage opera				%		
		Elec	ctrical control		Without control		With control	
		Con	nmand station		Without command station		With command station	

Questionnaire

Technical specifications for infeed systems

Plaiter

	Plaiter Version Drive □ With synchronization Electrical control Command station	Version	Rocker	Linear plaiter
		Drive	Without drive	With drive
		With synchronization	With dancer roller	With load cell
		Electrical control	Without control	With control
		Command station	Without command station	With command station

Exit system with J-box for woven and sturdy knitted fabrics

	Exit system with J-box for woven and sturdy knitted	Syn prev	chronization vious machine – traction unit	With dancer roller	With load cell
	Tablics	Trac	tion unit into the J-box	Without drive	With drive
			With center rewinder	Without drive	With drive
			With surface rewinder	Without drive	With drive
			With web guiding	Segmented roller guider	Web guider
			With plaiter	Without drive	With drive
		Elec	trical control	Without control	With control
		Com	nmand station	Without command station	With command station

Exit system with surface winder

	Exit system with surface winder	Surface winder drive			Without drive		With drive
		Coil diameter		Min.	mm	Max	mm
			With synchronization		With dancer roller		With load cell
			With spreading on sochor arm		With bent stainless steel pipe		With spreading rollers
			With oscillation on sochor arm	+/	mm		
			With plaiter		Rocker		Linear plaiter
		Elec	trical control		Without control		With control
		Corr	imand station		Without command station		With command station



Exit system with center rewinder

	Exit system with center winder	Version			Stationary		Moveable
		Center drive			Without drive		With drive
		Coil	diameter	Min	mm	Мах	mm
			With synchronization		With dancer roller		With load cell
			With spreading on sochor arm		With bent stainless steel pipe		With spreading roller
			With oscillation on sochor arm	+/	mm		
			With plaiter		Rocker		Linear plaiter
		Elec	trical control		Without control		With control
		Con	nmand station		Without command station		With command station

Semi-automatic surface or center rewinder

Exit system with semi- automatic surface or center winder (two- position winder)	Winder			Surface		Center
	Drive			Without drive		With drive
	Coil	diameter	Min.	mm	Max	mm
		With synchronization		With dancer roller		With load cell
		With spreading on sochor arm		With bent stainless steel pipe		With spreading roller
		With oscillation on sochor arm	+/	mm		
	Electrical control			Without control		With control
	Com	mand station		Without command station		With command station
	Exit system with semi- automatic surface or center winder (two- position winder)	Exit system with semi- automatic surface or center winder (two- position winder)	Exit system with semi-automatic surface or center winder (two-position winder) Winder Drive Coil diameter • With synchronization With synchronization • With spreading on sochor arm With spreading on sochor arm Electrical control Command station	Exit system with seminational submatic surface or center winder (two-position winder) Minder Image: Coll diameter Minder Coil diameter Mith synchronization Image: Coll diameter Minder Image: With synchronization Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: With synchronization Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: With synchronization Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Coll diameter Image: Co	Exit system with semi- automatic surface or center winder (two- position winder) Winder Winder Drive Without drive Coil diameter Minmm With synchronization With dancer roller With synchronization With bent stainless steel pipe With oscillation on sochor arm With out control Electrical control Without control Command station Without command station	Exit system with semi- automatic surface or center winder (two- position winder) Winder Image: Surface Image:

Ascending batch rewinder

	Ascending batch rewinder	Coil diameter	Min.	mm	Мах	mm
		Drive		Without drive		With drive
		Electrical control		Without control		With control
		Command station		Without command station		With command station

Questionnaire

Transport/packaging/assembly and commissioning

Transport	Truck freight	Sea freight	Air freight
Packaging	Wooden crate	Wooden crate seaworthy	For container
Assembly	By customer	By E+L	
Commissioning	By customer	By E+L	

Comments

Date:

Issuer:



Other products for the textile industry

	ELFEED – Tenter infeed systems
	ELSPREADER – Web spreading systems
No. Contraction of the second	ELCUT – Web cutting systems
	ELSMART – Web guiding systems
Re C	ELBANDER – Conveyor belt control systems
	ELTENS – Web tension control systems
	ELPOSER – Positioning and follow-up control systems
	ELMETA – Metal detection systems
000	ELMAT – Process control systems for tenters
	ELSTRAIGHT – Textile straightening systems
	ELCOUNT – Thread counting systems



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