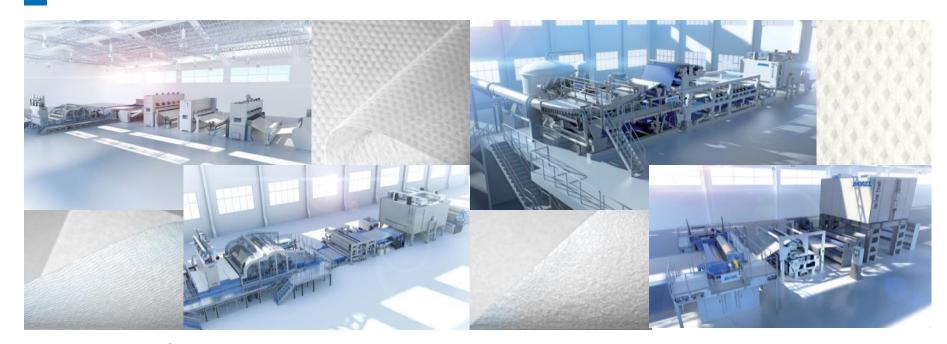


Your preferred partner for complete nonwovens lines



#### Content

- ANDRITZ Group
- ANDRITZ Nonwoven
- ANDRITZ Nonwoven product range
- neXline spunlace aXcess
- neXline wetlace
- neXline needlepunch aXcess



#### The ANDRITZ-GROUP

#### Overview

#### Company

- ANDRITZ AG, Graz, Austria (Group headquarters)
- More than 220 production and service sites worldwide
- Employees: approx. 23,800 worldwide as of March 31, 2014

#### Key financial figures 2013

Order intake: 5,611 MEUR\* Net income: 53 MEUR

Sales: 5,711 MEUR Equity ratio (as of year-end 2013): approx. 17%

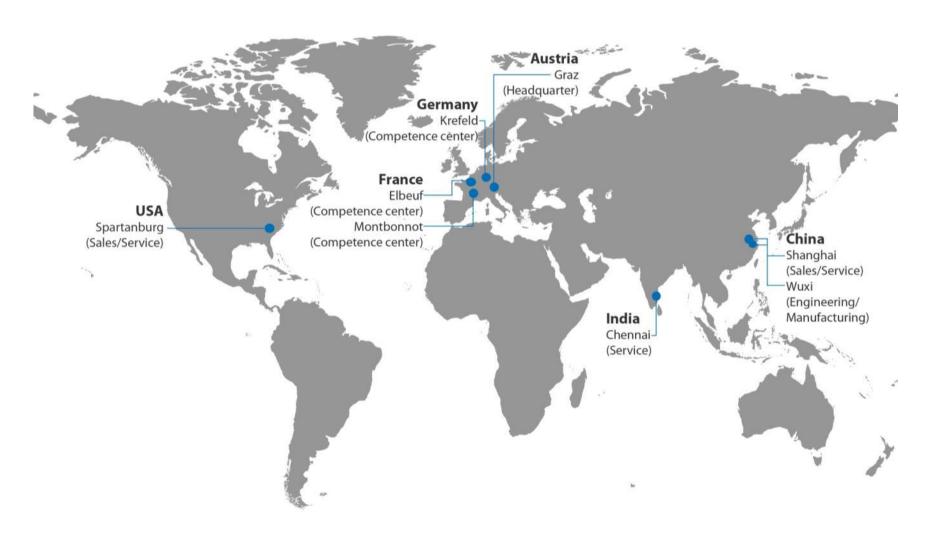
#### \* MEUR = million euro

#### Products and services

Plants and services for hydropower stations, the pulp and paper industry, the metalworking and steel industries, and the solid/liquid separation in the municipal and industrial sectors



#### Locations





#### **ANDRITZ (Wuxi) Nonwoven Technology**

#### Wuxi, China

#### **Business** areas

- process and machine technology for the nonwovens industry: web forming by carding technology, crosslapping, drafting
- product portfolio aXcess

#### **Employees**

approx. 85

#### Equipment and service

- sales, project management, service
- manufacturing and assembly center incl. roll repair shop
- technical center









## **ANDRITZ (Wuxi) Nonwoven Technology**

## Our history

- **1997** Set up of manufacturing for nonwovens equipment in Wuxi Production start of crosslappers
- **2003** Production start of cards
- **2010** Production start of chute feeders
- Installed base of 110 crosslappers and 45 cards made in Wuxi
- **2012** ANDRITZ buys 100% of shares from NSC Group
- **2013** Complete lines for spunlace and needlepunch made in Wuxi Inauguration of new facilities in Wuxi New District

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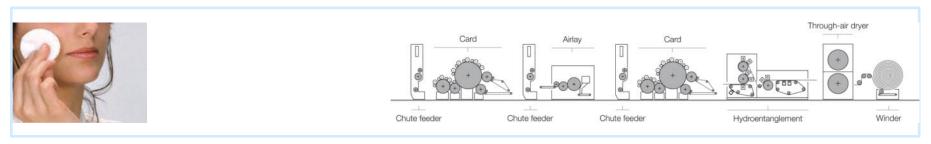




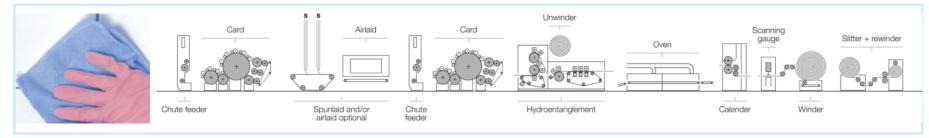




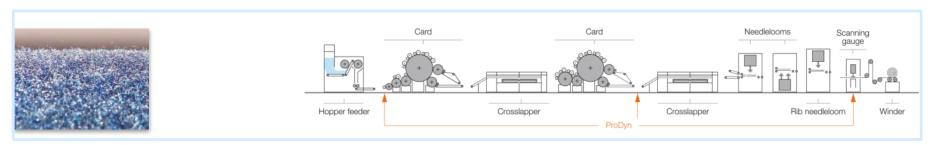
# System supplier for the nonwovens industry



#### **Cotton pads**



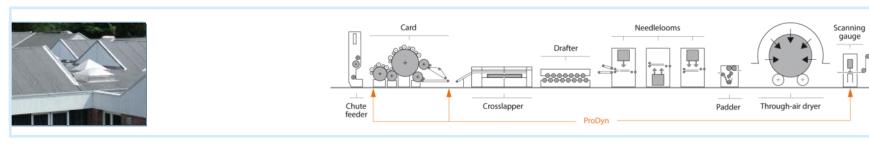
Wipes / technical



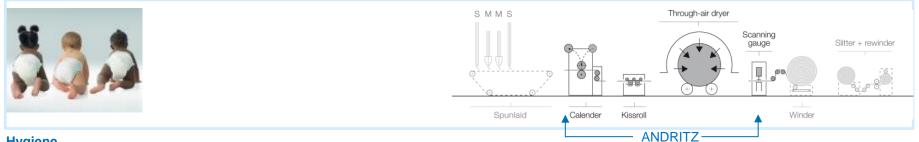
**Carpet** 



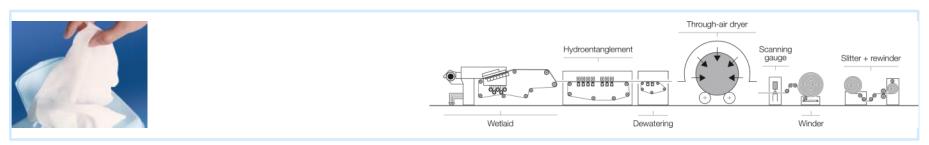
## System supplier for the nonwovens industry



**Roofing / filtration** 



Hygiene



Wipes (flushable)



Winder

#### **ANDRITZ Nonwoven technical centers**

## Nonwoven process technology with full-line capabilities

ANDRITZ Asselin-Thibeau



ANDRITZ (Wuxi) Nonwoven Technology



**ANDRITZ** Perfojet





**ANDRITZ Küsters** 

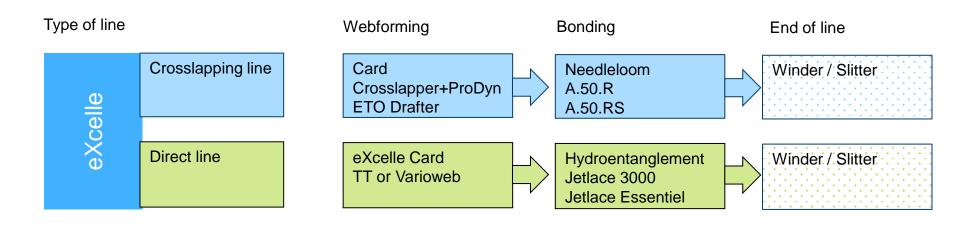


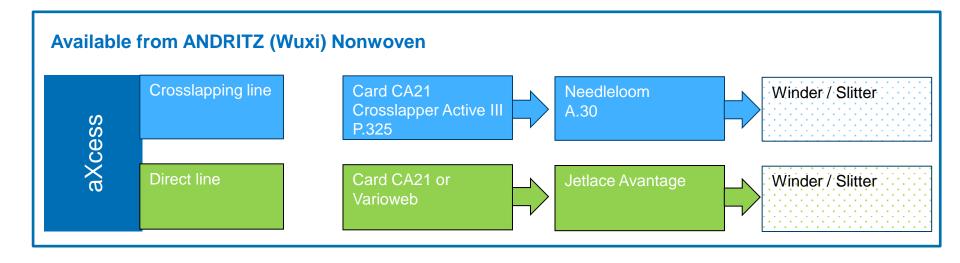




## Two customised ranges from ANDRITZ Nonwoven

#### eXcelle and aXcess









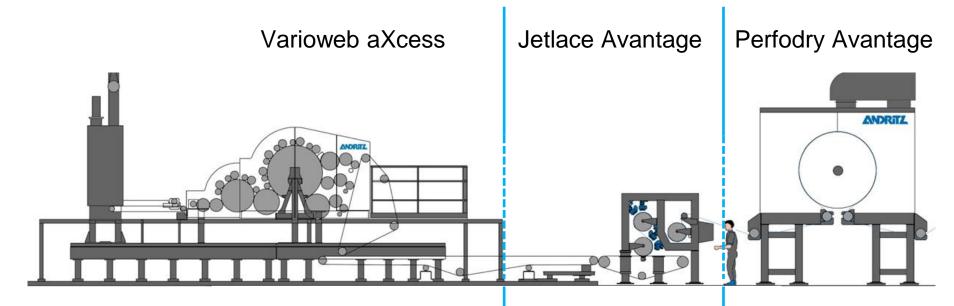
# **ANDRITZ** spunlace technology

neXline spunlace aXcess



#### neXline spunlace aXcess

## Line specification



- 3 doffers
- Web uniformity
- MD:CD ≤ 4:1

WW: 3.6 m

Capacity: 8,100 T/Y

- Low draft
- Energy efficient
- Aperture / pattern
- Gas burner / oil
- Heat recovery
- Moisture control

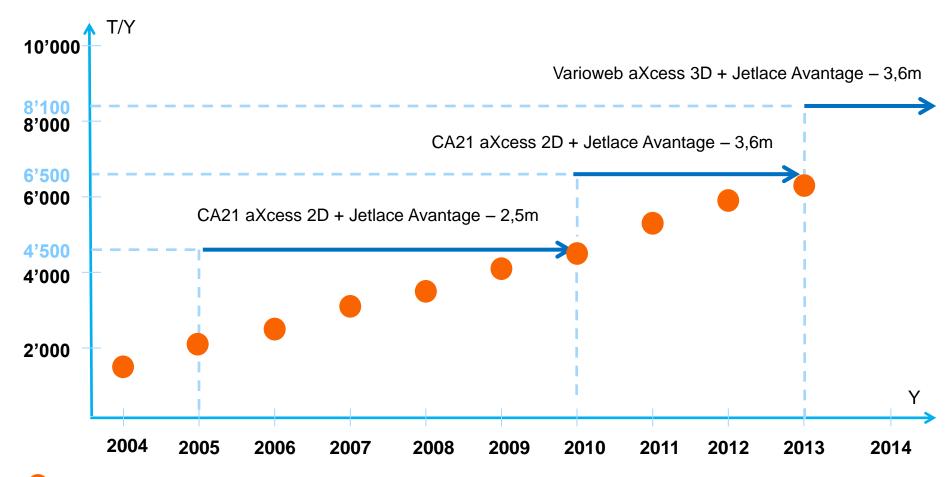
Speed: 170 m/min

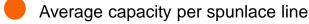
Product range: 30 to 80 gsm



## neXline spunlace aXcess

## Always ahead of market needs







## neXline spunlace aXcess

## Perfect web uniformity for lightweb fabric

Card 2 doffers 35 gsm – 107 m/min



Card 3 doffers 35 gsm – 143 m/min

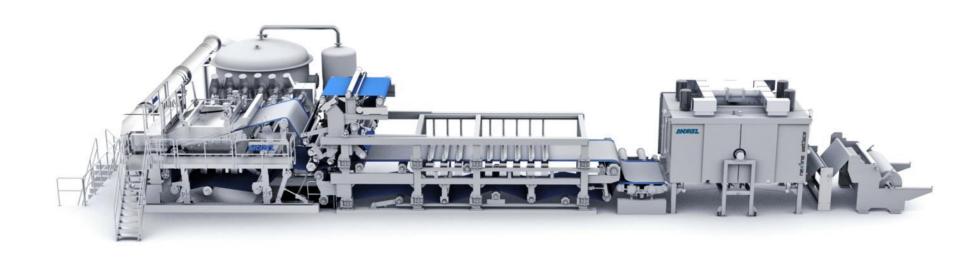






# **ANDRITZ** wetlace technology

neXline wetlace



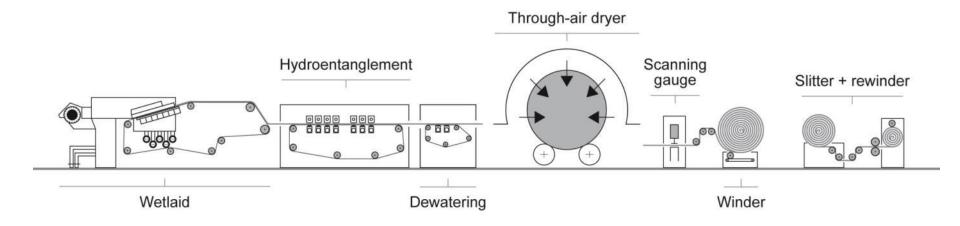
#### ANDRITZ in-house wetlace technology for wipes

## Proven flushability

Perfectly designed for the production of fully biodegradable nonwovens without chemical or thermal bonding, such as flushable wipes.

The ANDRITZ product already passed the EDANA flushability tests in February 2011 and was also able to comply with the new guidelines in 2013.





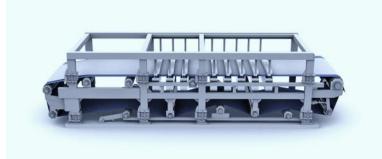


#### Step ahead with ANDRITZ wetlace technology!

#### A perfect combination







Fiber supply

Wet forming

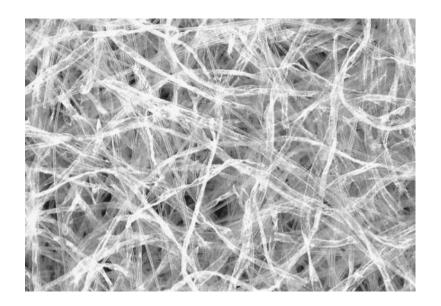
Hydroentanglement

20 years of experience in selling hydroentanglement systems for wetlaid applications ensure top performance. The core of our cutting edge technology is the ANDRITZ wet forming unit coupled with ANDRITZ Perfojet's hydroentanglement process. Hydroentanglement ideally complements the wetlaid technology, as the product is already wet (energy saving) and is reinforced without any chemicals but only by fiber entanglement.



#### **ANDRITZ** wetlace technology

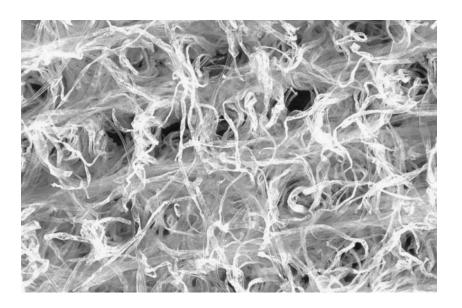
#### Wetlaid + hydroentanglement = Wetlace



# Traditional wetlaid fabric before bonding

Product properties:

- Homogeneous distribution of long and short fibers
- Ideal porosity for subsequent hydroentanglement



# Wetlace fabric after bonding by hydroentanglement Product properties:

- Good wet tensile strength, without negative influence on flushability
- Bulk (textile feeling)
- No chemical binders





## **ANDRITZ** needlepunch technology

neXline needlepunch aXcess

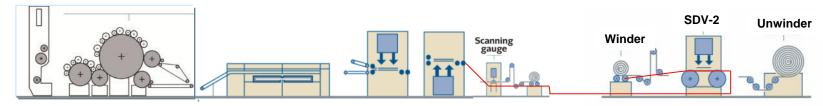


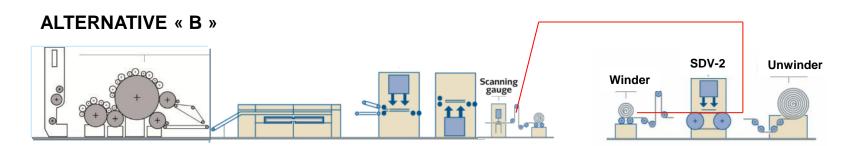
## **Automotive needlepunch lines**

## Automotive felts production layout



#### **ALTERNATIVE « A »**







# **Automotive production lines**

# Selecting the optimum working width

	Fabric width	Gsm	Market volume	When using 2,50 m w.w line	When using 3,50 m w.w line	When using 4,40 m w.w. line	Difference in Production Kg/h
Car floor	1,70 m 2,10 m 2,80 m	400 to 600	Very important Also important Less important	1 x 1,70 m 1 x 2,10 m Not possible	1 x 1,70 m 1 x 2,10 m 1 x 2,80 m	2 x 1,70 m 2 x 2,10 m 1 x 2,80 m	Up to 100 %
Trunk liners	1,40 m 1,20 m	550 to 700	Very important Very important	1 x 1,40 m 1 x 1,20 m	2 x 1,40 m 2 x 1,20 m	3 x 1,40 m 3 x 1,20 m	up to 200 %





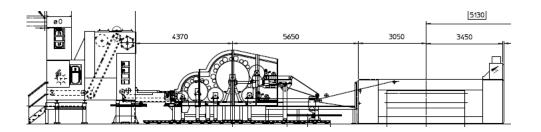


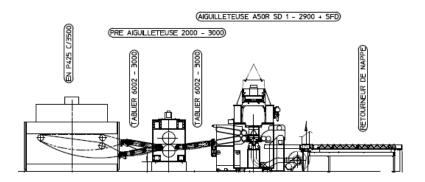


## **Automotive needledpunch lines**

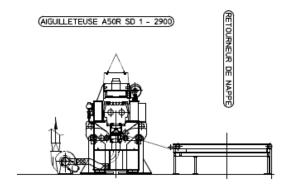
#### for heavy sound insulation products

Needled felts from flax, fiber glass, in blends with Polypropylen, can be made with final fabric weight as much as 2 500 gsm.













Your preferred partner for complete nonwovens lines

