



# **MAAG BROTHERS MACHINE WORKS LTD.**

**SWITZERLAND**

**At the**  
**Swiss Textile Machinery**  
**Symposium 2016 Teheran**

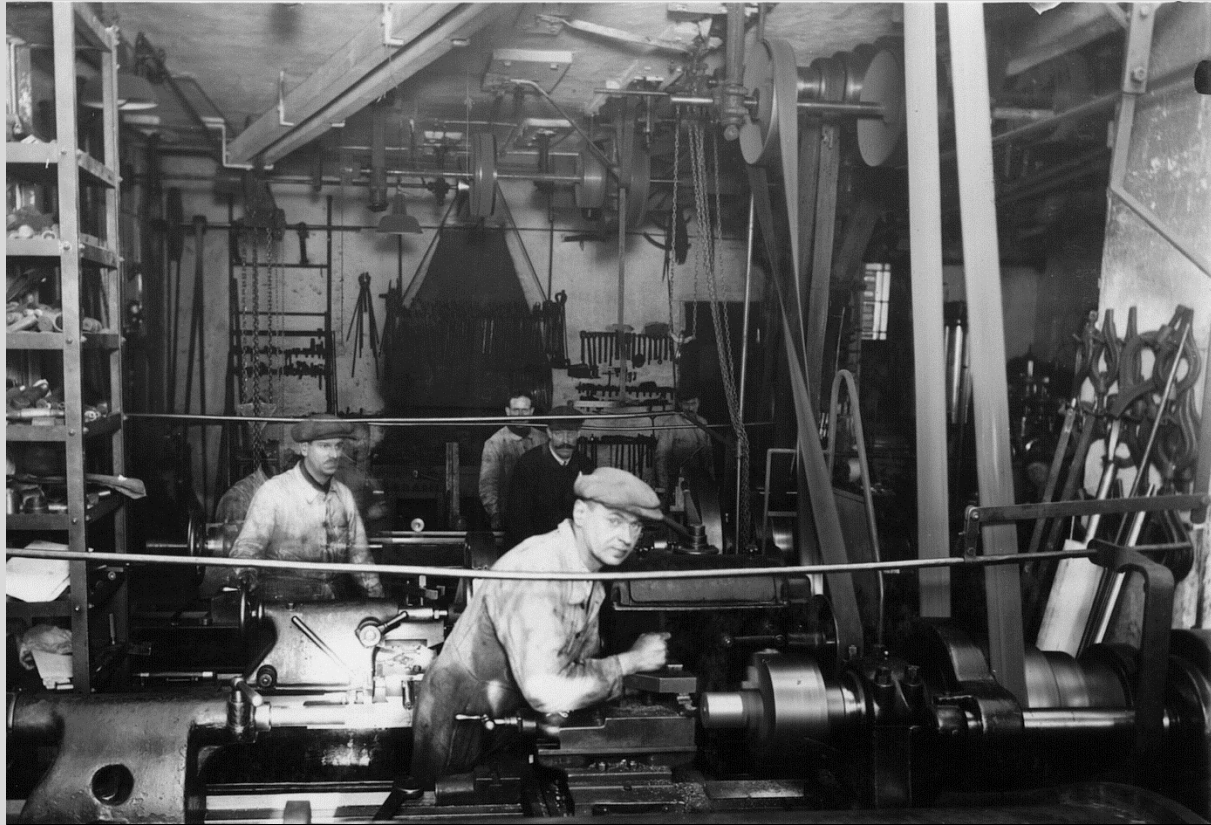


**Presents**

# History of Maag Brothers Machine Works Ltd.

- Founded **1875**
  - Experts for fabric inspection and making up machines
  - **1'500** machines working at **400** clients
  - International sales and service network
  - Licensee production in key markets
- > start in Iran 2017**

# History of Maag Brothers Machine Works Ltd.



**Since over 140 year manufacturing  
inspection and making up machines**

# Located at the lake of Zurich, Switzerland



**A visit is always a great experience!**

# Agenda

- MAAG Machines for the Iranian market
- Engineering of a modern inspection department
  - > MAAGQTex software solution
- Future technology in fabric inspection

# Present in the local market since 1960

Kunden-Kontrolle Nr 15852		Gebr. Maag Maschinenfabrik AG. KÖsnacht		BIOLA-Sicherkarte Oberholzer AG., Zürich	
Bestellt	Kommission	Beschreibung der Maschinen	Preis	Faktur	
8.12.60	10386	1 DR spez. 160 cm, Automat, 2 Messapparate	19235 -	25.7.61	
8.12.60	10387	1 Legemaschine L 160 cm	19190 -	25.7.61	
8.12.60	10388	1 CT 4012, 160 cm, Neon, Zähler			
8.12.60	10389	1 SKD 160 cm, Farb/Folie, Automat			
<b>Genauere Adresse:</b> Saadi Street 559					
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		The Baresh & Co. Ltd.			
<b>Genauere Adresse:</b> 86, Kocheh Kan Bazar, Mesgarha					
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		FORTEX & CO.			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		Derakhshane Teheran Co.			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Tabriz		Barghelame			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Esfahan		SS. Rissandegi va Bafandegi			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		MOJDEH Sherkate Towlidi va Sanaati Ba			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		Kashan Velvet and Rayon Mills Ltd			
Domizil:		Name:		J F M A M J J A S O N D 1 2 3 4 5 6	
Teheran		Karkhanejat Towlidi Teheran			

# MAAG Machines for the Iranian market



PART I



# Maag Business Fields

**1**

## Weaving

- Inspection
- High pile plating

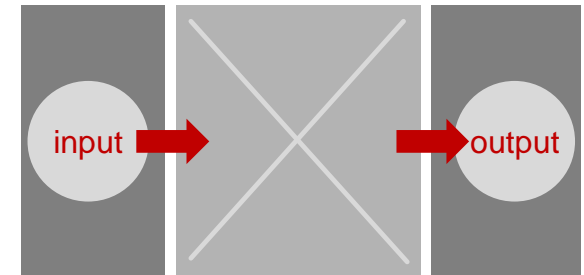
**2**

## Final inspection and making up

- Inspection
- High pile plating
- Selvedge printing
- Packing
- Logistics
- Software

**3**

## Winding Technology



# CT 5000 Serie – THE INSPECTION ALL-ROUNDER



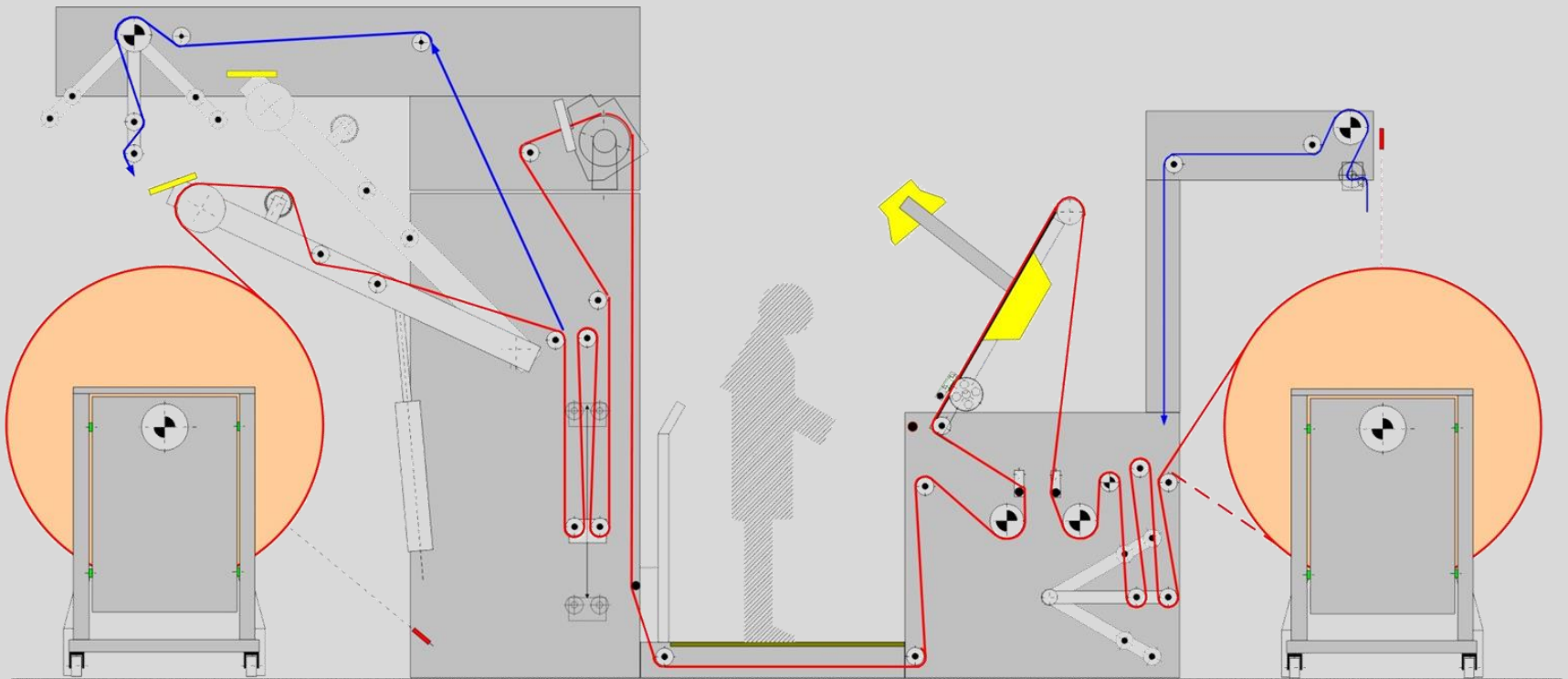
# CT 5000 Serie – THE INSPECTION ALL-ROUNDER

## Key features:

- Adjustable for all types of woven fabrics
- From light weight to very heavy fabrics
- Many applications for technical fabrics available
- Many options for automation
- Option for length and cross cutting devices
- Bestseller - over 1'000 machines sold worldwide

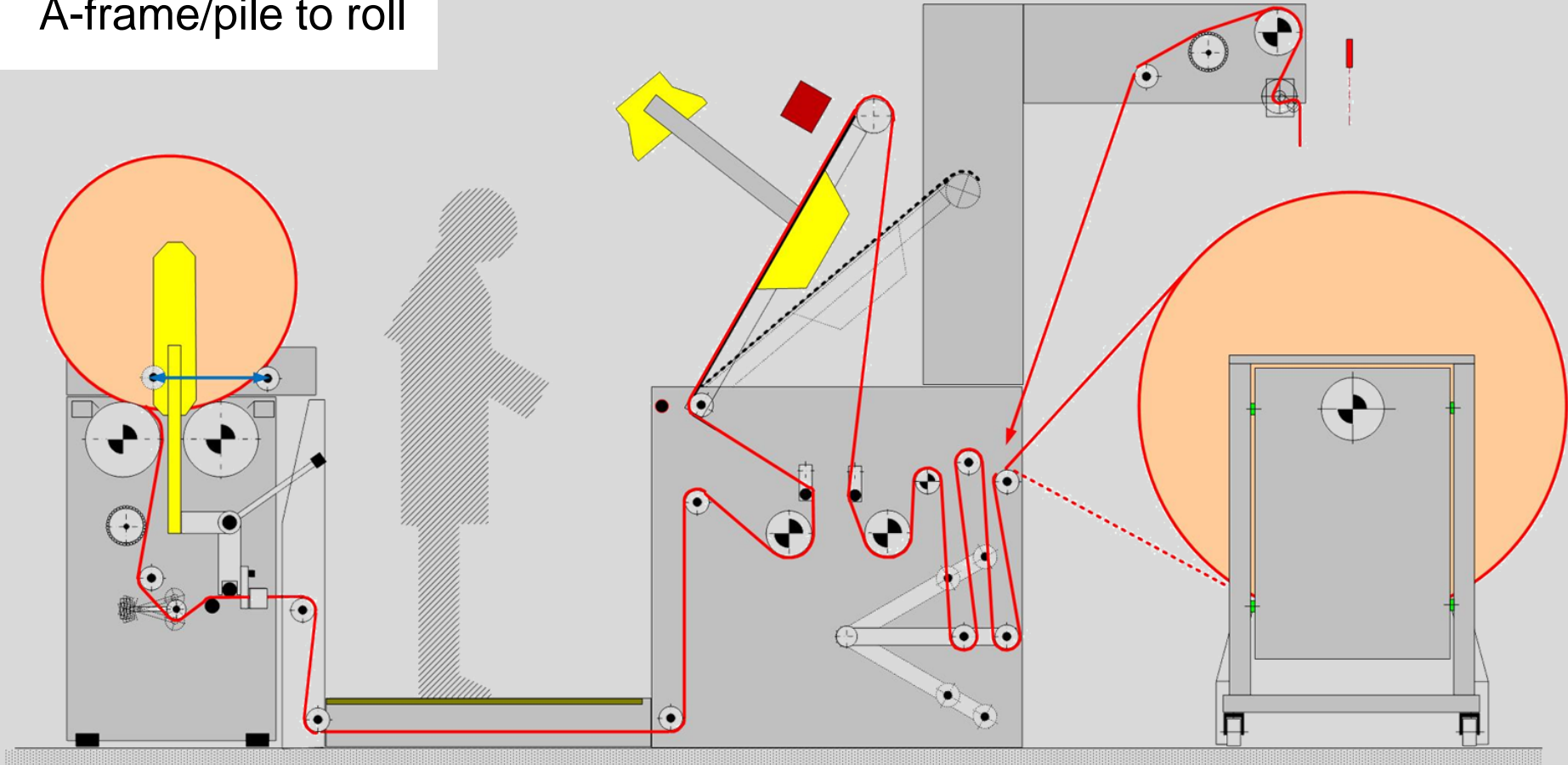
# CT 5000 Serie – THE INSPECTION ALL-ROUNDER

Intermediate inspection  
A-frame/pile to A-frame/pile



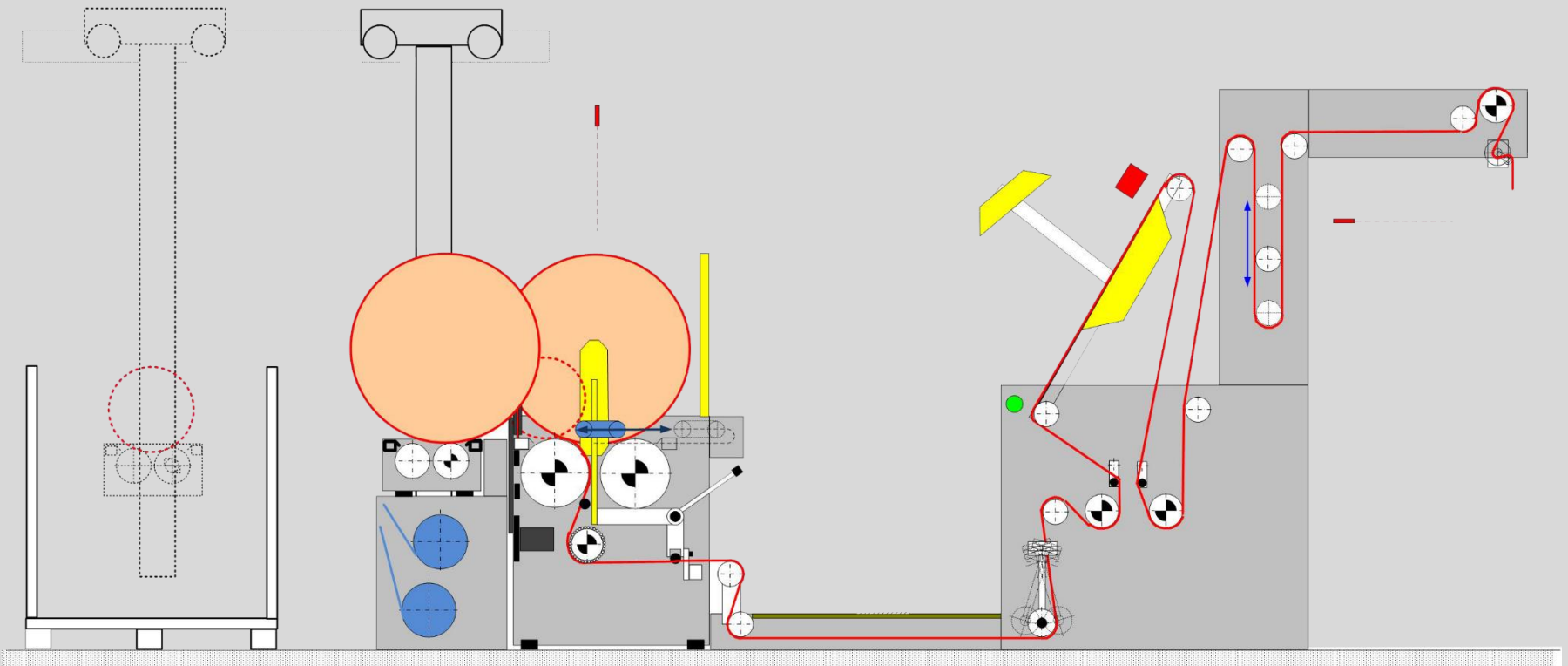
# CT 5000 Serie – THE INSPECTION ALL-ROUNDER

Final inspection  
A-frame/pile to roll



# CT 5000 Serie – THE INSPECTION ALL-ROUNDER

Special version with automation  
and cutting systems



# CT 6000 Serie – THE LYCRA MACHINE

Especially for  
high elastic fabrics



# CT 6000 Serie – THE LYCRA MACHINE

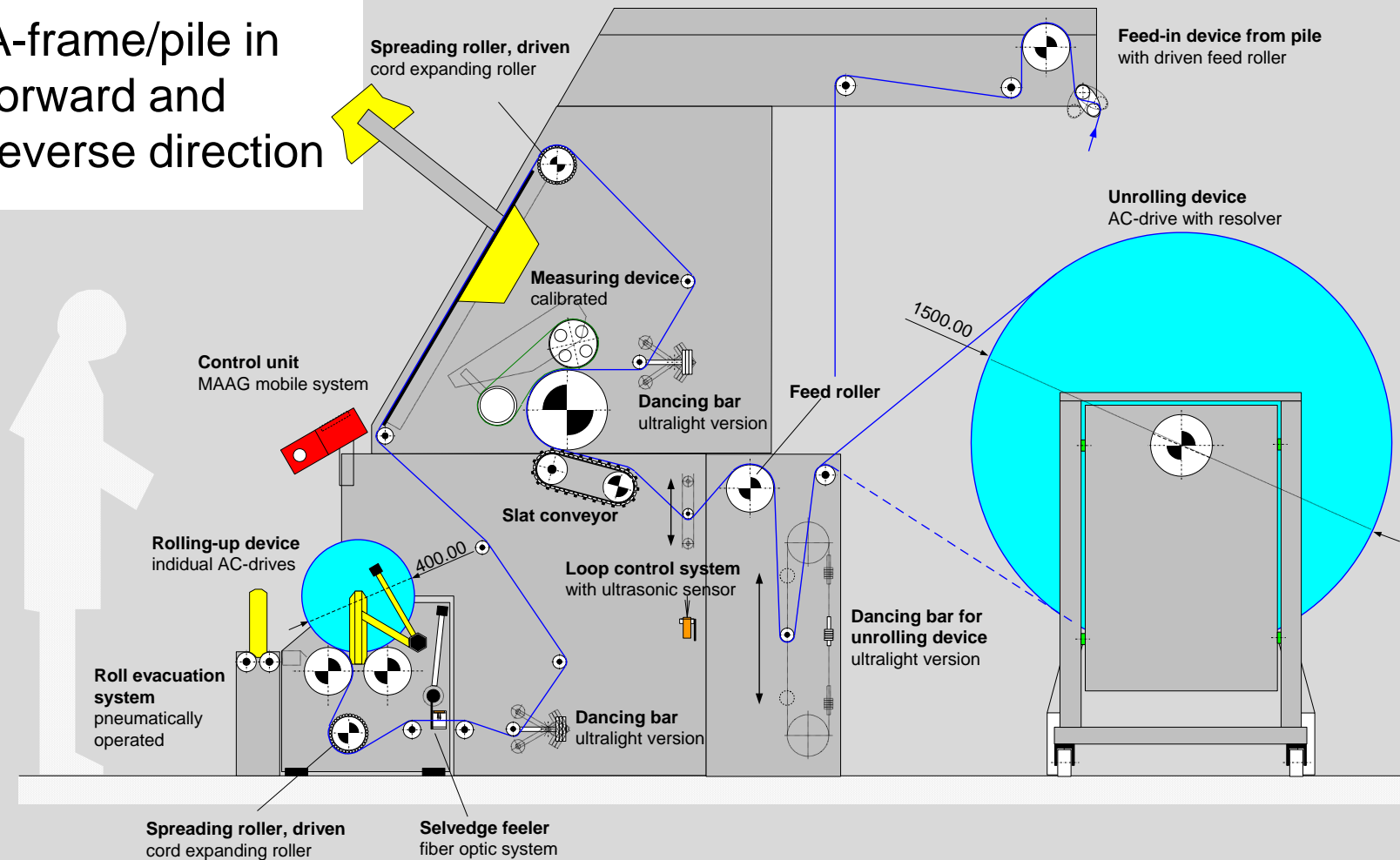
## Key features:

- Especially developed for high elastic fabrics
- Many applications for technical fabrics available  
(automotive fabrics)
- European length measurement certification, accuracy  $\pm 0.5\%$



# CT 6000 Serie – THE LYCRA MACHINE

Feeding from  
A-frame/pile in  
forward and  
reverse direction



# CT 6000 Serie – THE LYCRA MACHINE

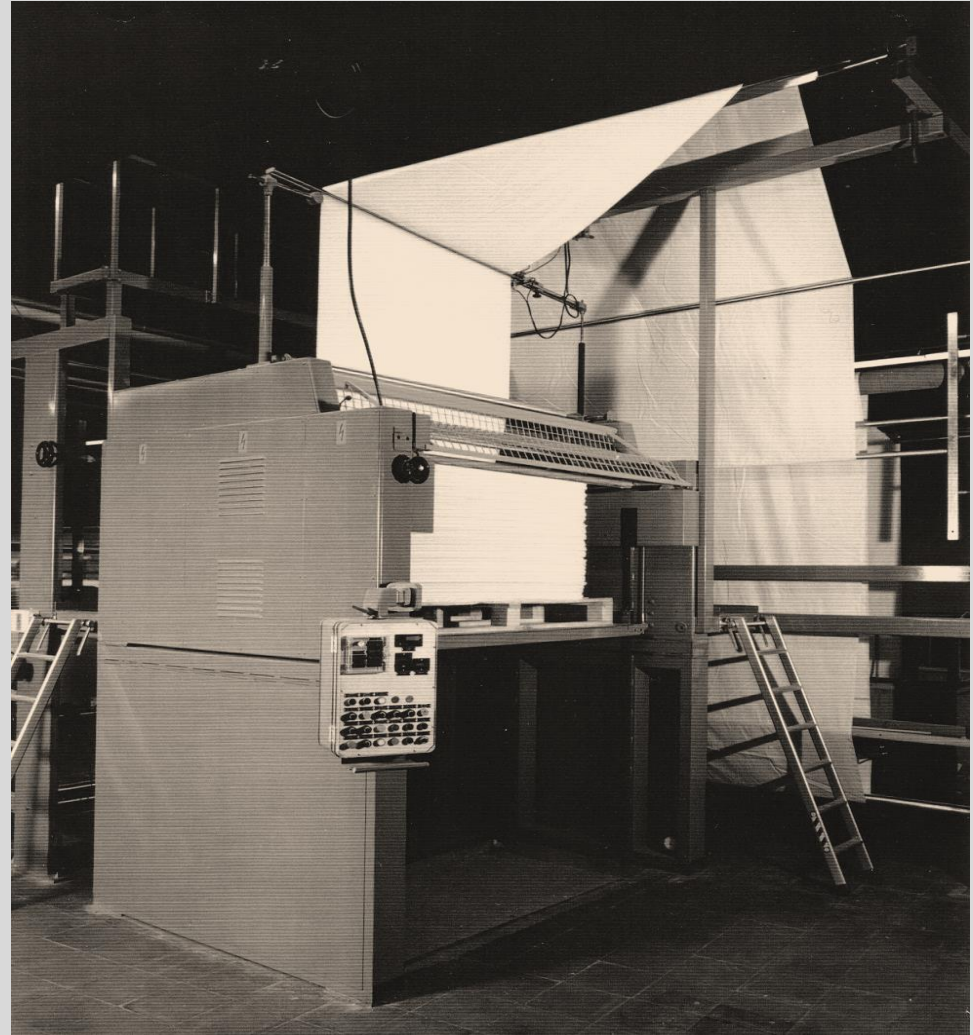
All rollers are motorized



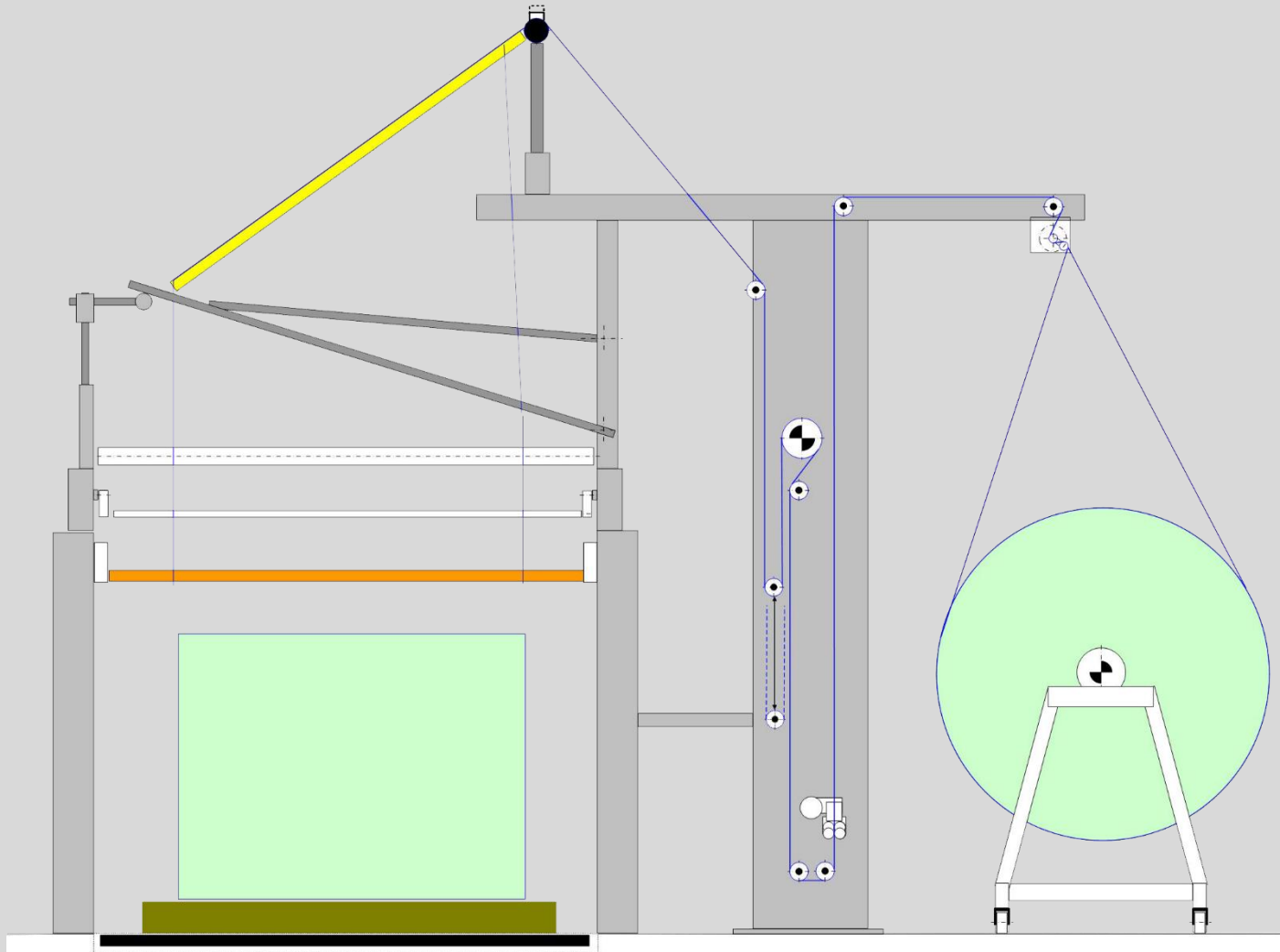
# Type (D)L3HS – FOR HIGH PRECISION PILES

## Key features:

- Calibrated layer length of 1m
- Pile height 2m
- Fabric width up to 4m
- Layer identification
- Speed up to 80m/min.



# Type (D)L3HS – FOR HIGH PRECISION PILES



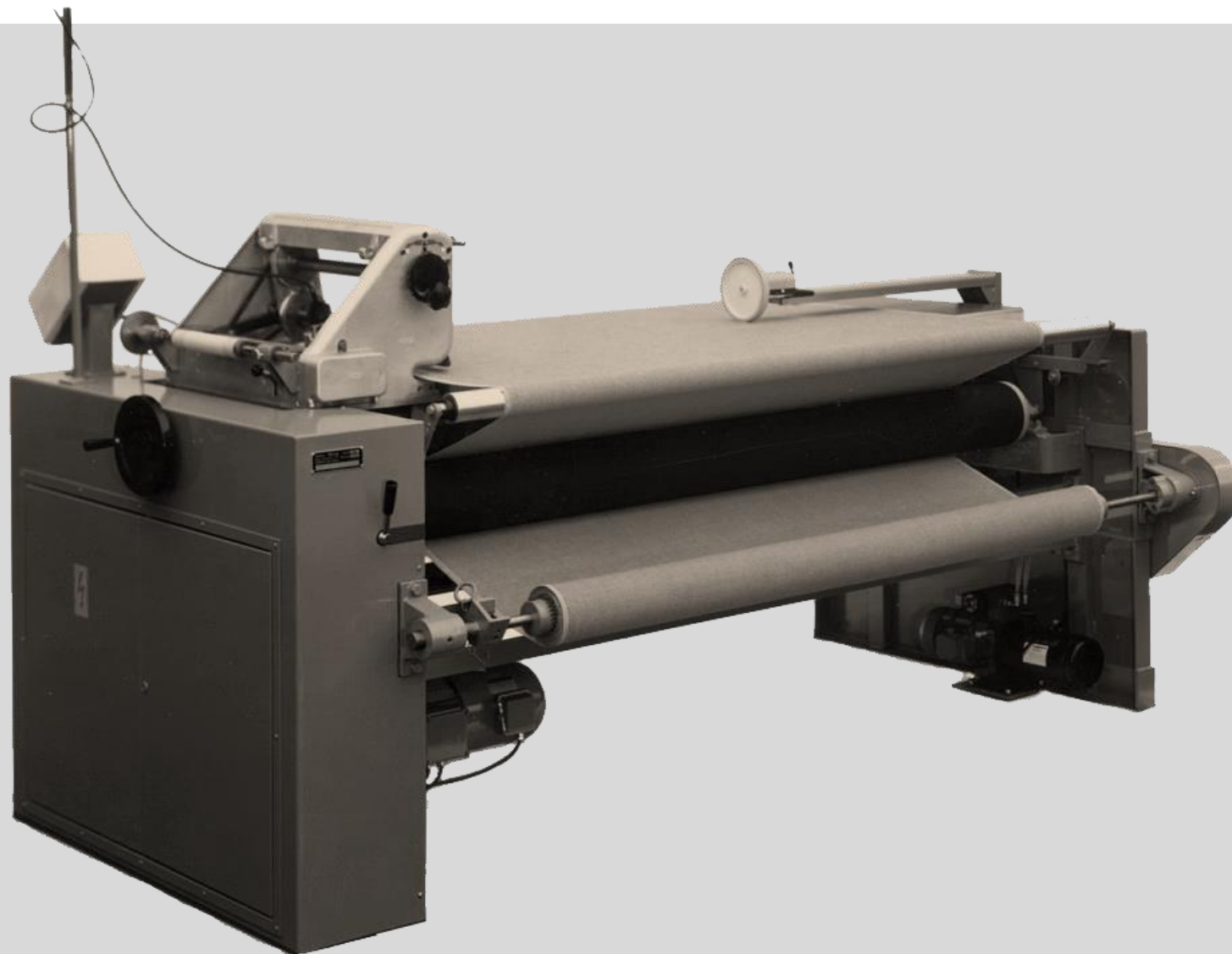
# Type (D)L3HS – FOR HIGH PRECISION PILES



# Type (D)L3HS – FOR HIGH PRECISION PILES



# Type SKD – THE SELVEDGE PRINTING MACHINE



# Type SKD – THE SELVEDGE PRINTING MACHINE

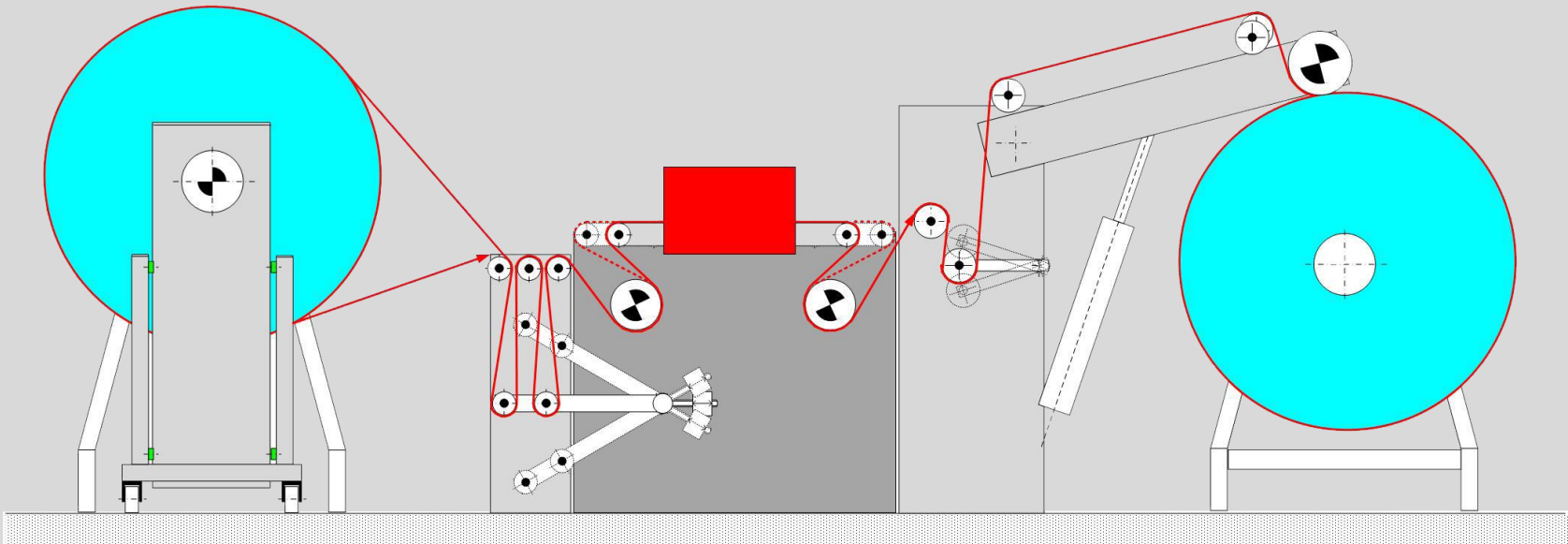
## Key features:

- High quality prints even in gold or silver foil
- High working speed up to 50m/min
- Fast exchange of printing stamps
- Small consumption of transfer paper
- Sales and marketing departments just love it



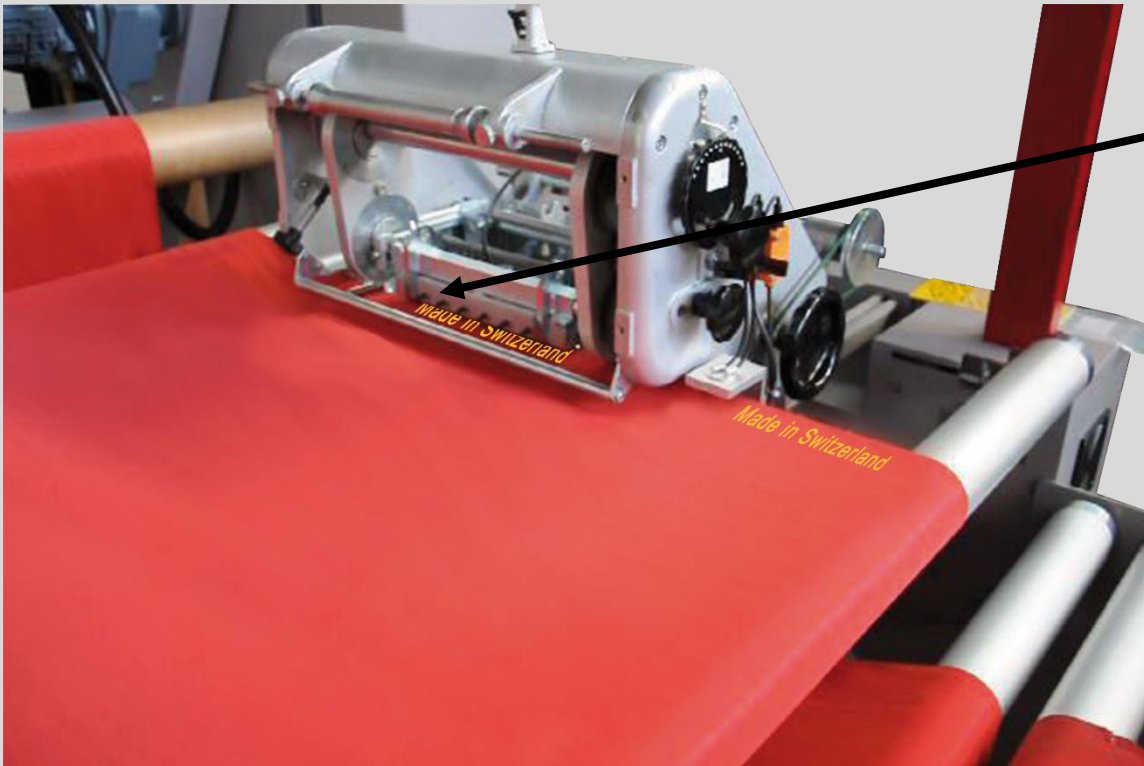
# Type SKD – THE SELVEDGE PRINTING MACHINE

SKD A-frame to  
A-frame machine  
configuration

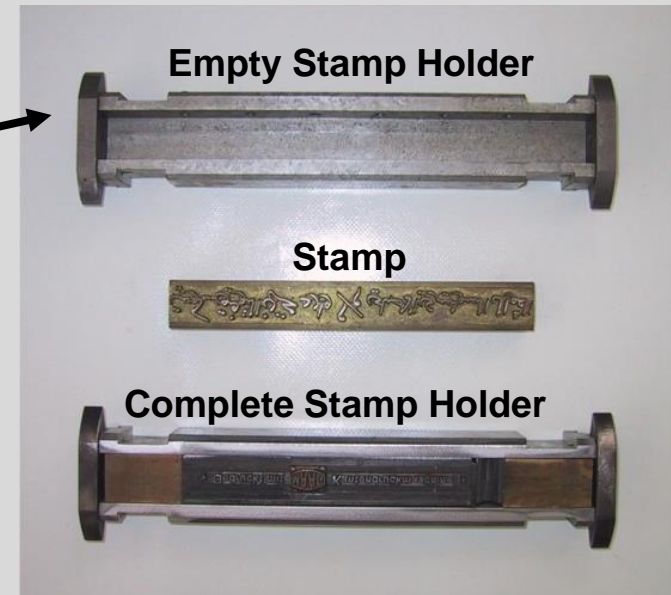


# Type SKD – THE SELVEDGE PRINTING MACHINE

Detail of printing head

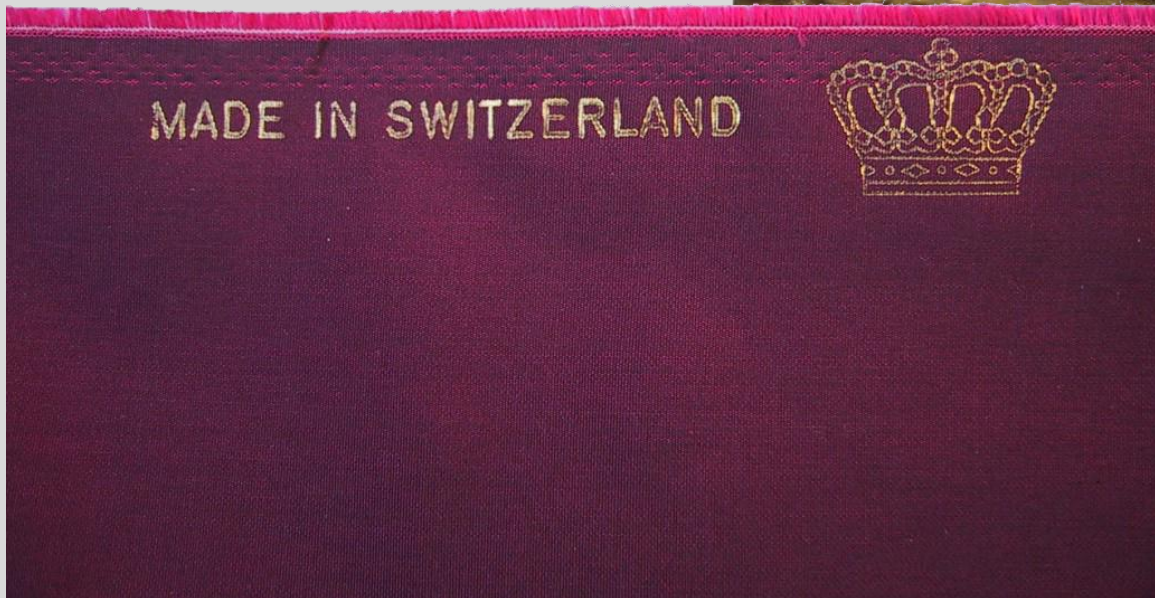


Easy exchangeable printing stamp holder



# Type SKD – THE SELVEDGE PRINTING MACHINE

High quality selvedge  
print with gold foil



# Type SKD – THE SELVEDGE PRINTING MACHINE



# Type SKD – INLINE APPLICATION



# Type FC – AUTOMATIC PACKING MACHINE

## Key features:

- Self-adapting for textile rolls of different diameter and length
- High productivity due to full automation
- Tight and perfect wrapping
- Energy saving - no heat shrinking required



# Type FC – AUTOMATIC PACKING MACHINE

Longitudinal welding



Ultrasonic welding



Pulse welding



# Type FC – AUTOMATIC PACKING MACHINE



Packing  
process

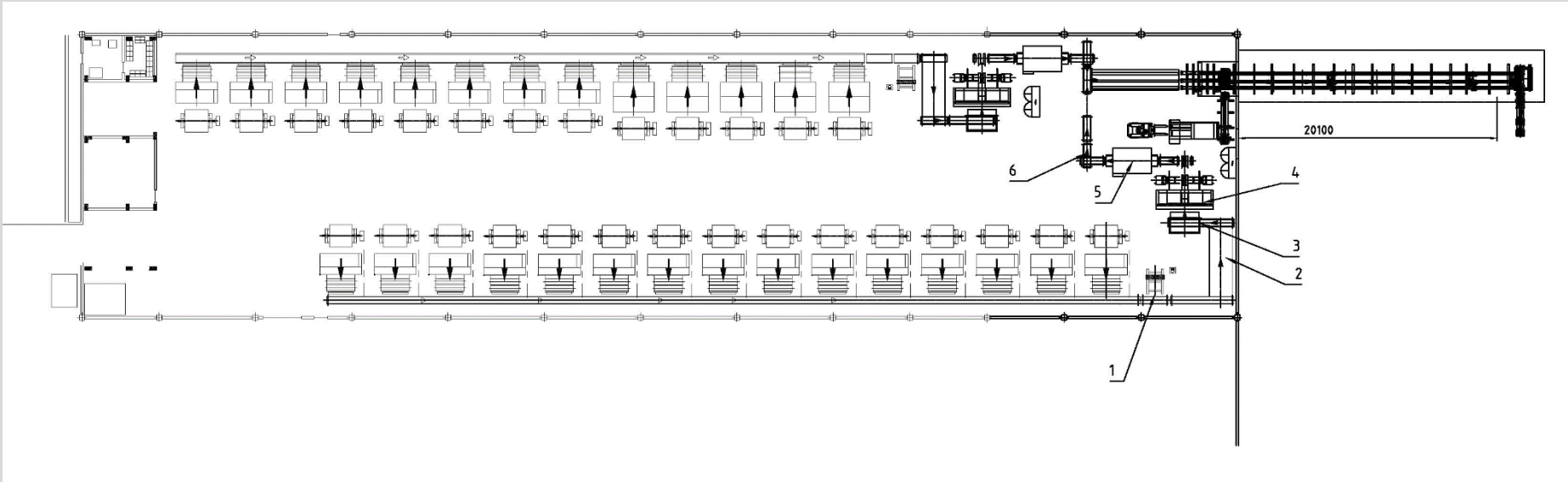


# Type FC – AUTOMATIC PACKING MACHINE



Simple roll  
handling  
after packing

# MAAG INSPECTION DEPARTEMENT SOLUTIONS



We can build any layout and implement your required level of automation

# Engineering of a modern inspection department

## MAAGQTex software



## PART II

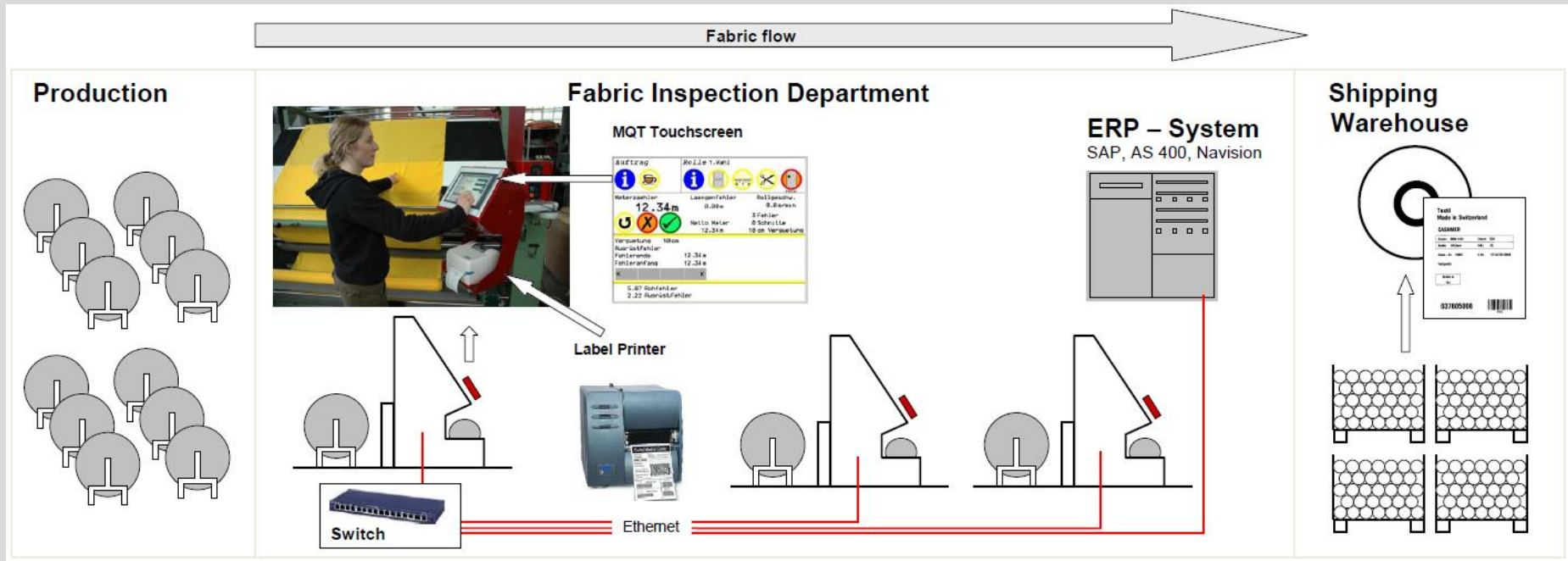
# MAAGQTex – THE INSPECTION TOOL

## Key Features:

- Saving cost and time
  - > no manual paperwork
- Immediate feedback
  - > electronic data processing
- User friendly interface
  - > low instruction time
- High reliability
  - > industrial standard components
- Interface to any ERP



# MAAGQTex – THE CONCEPT



# MAAGQTex – THE HUMAN-MACHINE-INTERFACE

Grade A		1 - 9	07.11.05 08:15:36
010 defect 010	068 defect 068	10 - 39	Meter <b>1234.56m</b>
013 defect 013	077 defect 077	40 - 69	Defect length 285.43 m
016 defect 016	086 defect 086	70 - 99	7 Defects
019 defect 019	095 defect 095	from 100	0 Partitions
025 defect 025	104 defect 104		7 Points
030 defect 030	113 defect 113	Defect number	33 illegal defect number or defect not allowed!
037 defect 037	122 defect 122	Points	1
044 defect 044	146 defect 146	Fremdfaser	
050 defect 050	157 defect 157	End of defect	949.13m
059 defect 059	160 defect 160	Begin. of def.	949.13m
		S	S
		Begin WeftDir: 450mm	End WeftDir: 900mm
		Reset weft	

					Repeat defect	Corr....	Long defect	Erase all	Erase

# MAAGQTex – THE LABEL / REPORTS

- Printed report
- Defect map
- Defect table
- Piece label
- Barcode

MaagQTex

stretch  
223

Fabric width	Color	Ext
Fabric width 160 cm	Quality	123456
Usable width 158 cm		

Piece number: 1  
No of defects: 5  
Sum allowance: 20  
Gross meter: 57.73

Net meter: 57.73

1212

MaagQTex

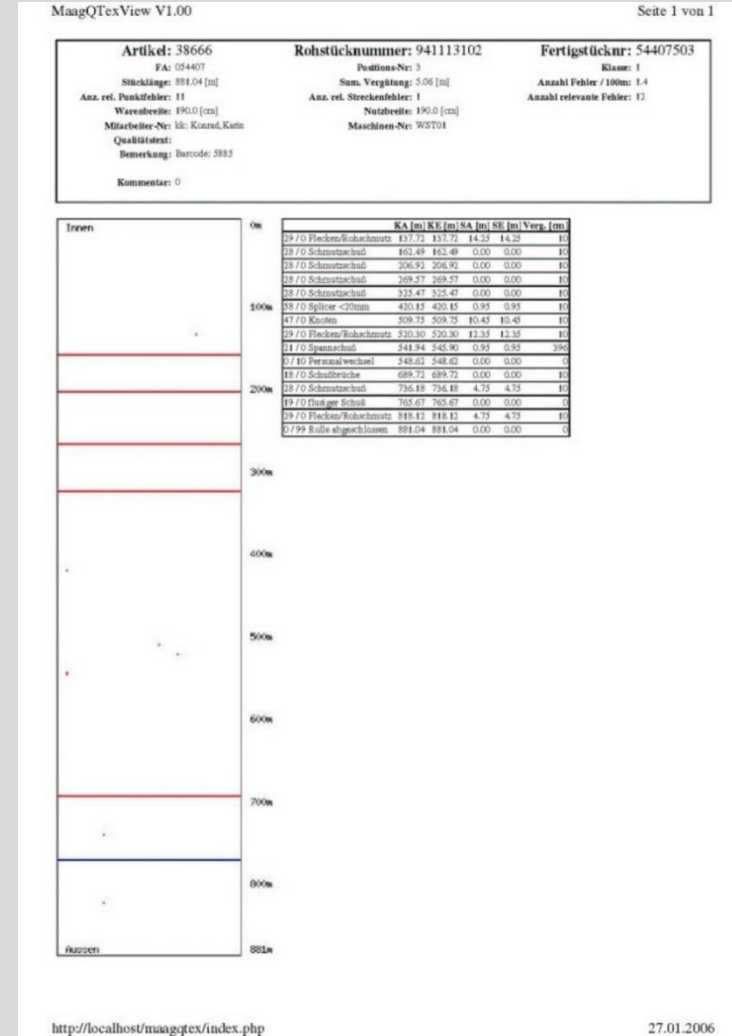
Defect protocol

Order number

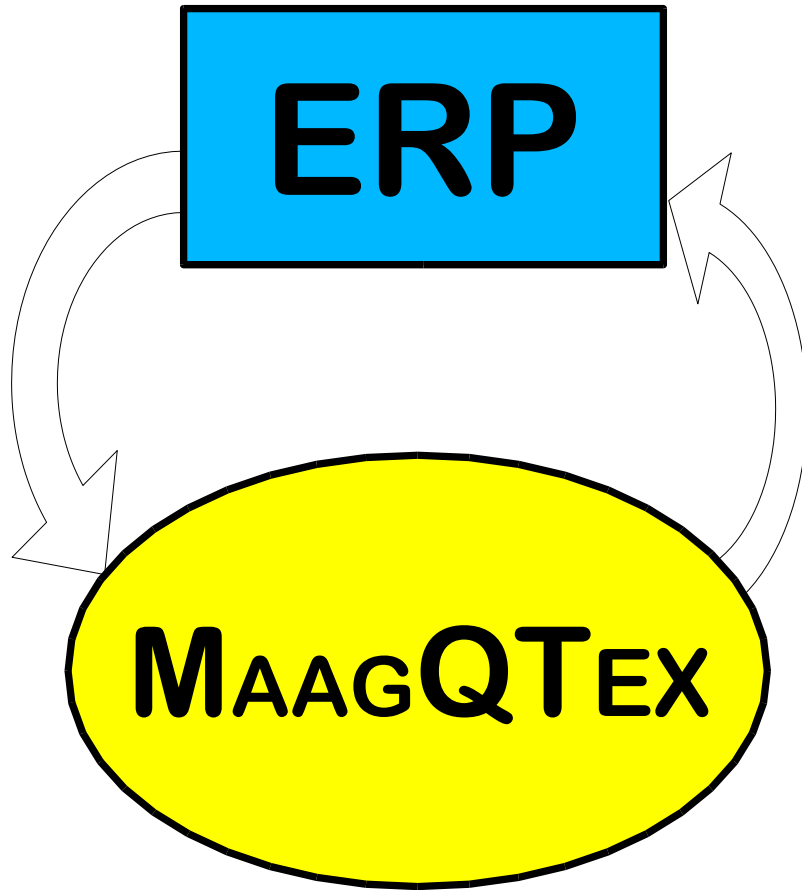
Color ext

Fabric width	Usable width
160 cm	158 cm

Begin Weid.	End Weid.	Allowance
463	463	10
757	757	10
1121	1121	0
1317	1317	0
1657	1657	0



# MAAGQTex – INTERFACE TO ERP-SOFTWARE



Import and export of production data to and from ERP-Software via standardized interfaces (CSV-files, ODBC, SQL)



# Future of fabric inspection



## PART III

# THE PESSIMISTIC SCENARIO

**Utilisation of camera-based automatic vision inspection systems**

**Today only 2% of the fabric production is inspected automatically !**



# THE OPTIMISTIC SCENARIO

**The best way to handle  
off-quality is simply  
not to make it !**

**or**

**Fashion gets less picky !**



**THE END**



**Thank you !**

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