



TEZ machinery

The list of machinery available in the Technology and Development Center (TEZ) is continuously updated.

GROZ-BECKERT

Groz-Beckert KG

Parkweg 2, 72458 Albstadt, Germany
 Phone +49 7431 10-0, Fax +49 7431 10-2777
 tez@groz-beckert.com
 www.groz-beckert.com

Technical Center Knitting

Large diameter circular knitting single jersey

Manufacturer:	Mayer & Cie.	Monarch	Pai Lung	Vanguard Pai Lung	Terrot	Mayer & Cie.	Santoni
Type:	S4 - 3.2	VXC - 3S	PL - KS 3.2 B	Delta SJ4A / DI3	SH 130	Relanit 3.2 HS	SM8-TOP2V
Gauge:	E24 - E60	E22 - E44	E24 - E60	E22 + E32	E18	E24 + E28	E28
Diameter:	34"	34"	34"	18"	16"	30"	16"
No. of feeders:	108	102	108	72	48	96	8

Large diameter circular knitting double jersey

Manufacturer:	Mayer & Cie.	Mayer & Cie.	Terrot	Terrot	JingMei
Type:	OVJA 1.6 ET 3 WT Jacquard electronic	IV 2.0	I 3 P 572 Rib + interlock	UP472 Mini jacquard 3WT	JT Rib + interlock
Gauge:	E16	E18 + E28	E28	E18	E28
Diameter:	34"	16"	34"	34"	34"
Feeders:	54 (36+18)	30	84	84	84

Flat knitting

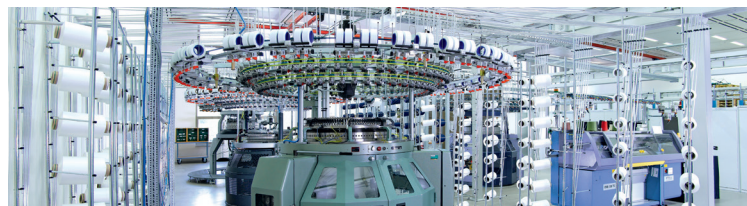
Manufacturer:	Stoll	Stoll
Type:	CMS 330	CMS 822 HP multi gauge
Gauge:	E18	E6.2
Nominal width:	50"	84"
No. of feeders:	3	2 x 2

Small diameter circular knitting sock machine, seamless bodysize

Manufacturer:	Lonati
Type:	Goal GK616F "S by S"
Gauge:	E14
Diameter:	3 ¾"

Warp knitting

Manufacturer:	Karl Mayer
Type:	HKS 3-1
Gauge:	E32
Nominal width:	180"
No. of guide bars:	3



Technical Center Weaving

Weaving machines

Manufacturer:	Dornier	Toyota	Dornier
Type:	PTSY 4	JAT 710	P TS 4/S C
Machine type:	Special mono-rapier machine	Air jet weaving machine	Rapier weaving machine
Max. speed:	180 picks/min	900 picks/min	500 picks/min
Width:	150 cm	190 cm	230 cm
Shedding motion:	Dobby	Cam	Dobby

The manufacture of standard and leno fabrics with PosiLeno® is possible on all machines.

Drawing-in machine

Machine:	WarpMaster
Reed:	Heald types Up to max. 20
No. of heald frames:	Up to max. 20
Heald types:	J- and C-shaped healds

Heald frames, healds, warp stop motions and drop wires as required

Tying machine

Machine:	KnotMaster
Knitting speed:	Max. 600 knots/min
Functions:	Single and double knots, four knot types, doubles detection, yarn break detection, KnotControl

Other machines

ReedCleaner	Machine for cleaning the reed within the weaving machine
PinMaster	Machine for fitting the contact bar of a warp stop motion with drop wires

Technical Center Felting

Staple fiber needle punch line (general information)

Fabric weight:	50–1.500 g/m ²	Fiber fineness:	0,9–17 dtex
Fiber types::	PP, PES, PA, CV, natural fibers, high tenacity fibers	Fiber length:	38–90 mm

Fiber opening and blending

Manufacturer:	Dilo Temafa
Type:	Bale opener and blender

Nonwoven card

Manufacturer:	Dilo Spinnbau
Type:	MultiCard, single/double doffer with optional condensing rollers
Working width:	1.500 mm
Additional equipment:	Basis weight regulation system

Cross lapper

Manufacturer:	Dilo Machines
Type:	Dilolayer, DLBS
Max. lay-down width:	2.000 mm
Input speed:	80 m/min

Web drafter

Manufacturer:	Dilo Spinnbau
Type:	VST 19
Max. working width:	2.000 mm

Pre-needling

Manufacturer:	Dilo Machines	
Type:	DI -LOOM OD-II 20	
Max. working width:	2.000 mm	
Possible pitches:	1917 oder 4500 needles/m	Infeed zone
	4500 needles/m	Outfeed zone

Main needling

Manufacturer:	Dilo Machines	
Type:	DI -LOOM OUG-II SB 15	
Working width:	1.500 mm	
Possible pitches:	1917 needles/m	One board from top (60 cm w. width)
	3.000, 5.036, 8.000 needles/m	One and multiple boards from top and bottom

Technical Center Carding – Spinning

Card

Manufacturer:	Rieter
Type:	C70
No. of licker-ins:	1
Working width:	1,5 m
Revolving flats – aluminum	Flat bars for flat clothing – 99 pieces
Card variants ...	

... for natural fibers

Pre-carding zone:	2 knives, 4 stationary flats
Post-carding zone:	2 knives, 1 stationary flat

... for synthetic fibers

Pre-carding zone:	6 stationary flats
Post-carding zone:	3 stationary flats

Can coiler:	Can diameter: 600 mm
Grinding systems:	- DSW - TSG
UNICollect:	Waste study

Bloomer

Type:	<i>UNIfloc A10 (Rieter)</i> Working width: 1,70 m
	<i>UNIClean B11 (Rieter)</i> Drum with double hooks
	<i>UNImix B7/3 (Rieter)</i> Mixing principle with 6 chambers
	<i>UNIflex B60 (Rieter)</i> Drum with needle segments
	<i>FS5 (Hergeth Hollingsworth)</i> Reserve feed box
Line variants ...	Variant 1: UNIfloc A10 / UNIClean B11 / UNImix B7 3 / UNIflex B60 / FS5
	Variant 2: UNIfloc A10 / UNIClean B11 / UNIflex B60 / FS 5
	Variant 3: UNIfloc A10 / UNIflex B60 / FS5

Technical Center Joining

Sewing machines

Lockstitch machines	1 and 2 needles Stitch types: 301, 304, 308
Chainstitch machines	1 and 4 needles Stitch types: 401, 406, 407, 602, 605
Overlock machines	1 and 2 needles Stitch types: 504, 512, 504, 401
Blindstitch machine	1 needle Stitch type: 103

Multi-head embroidery machine

2 heads	Number of needles/head: 12 Embroidery speed: max. 1,000 rpm Stitch type: 301
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Chenille embroidery machine

1 head	Number of needles/head: 1 Embroidery speed: max. 700 rpm For moss and chainstitch embroidery
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Needle penetration force measuring system

For sewing needles	Modified lockstitch machine Measuring range: 0 – 3,000 cN
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Multi-directional sewing

Computer-controlled sewing machine	Stitch type: 301 Measuring range: 300 x 200 mm
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Alternative joining processes

Ultrasonic welding machine	Pfaff 8312
Taping machine	Macpi 337
Bonding press	Macpi 346

Other processes

Composites

Methods for processing carbon fibers for composites
Manufacture of laminate plates using vacuum infusion

Other equipment

Fabric inspection team

Manufacturer:	La Meccanica
Typw:	LM 79 D/P
Max. fabric width:	3.000 mm
Max. diameter of fabric roll:	500 mm

Textile testing and analysis

Physical and chemical textile analyses of fibers and yarns/threads

Physical textile analyses of textile fabrics

Tests and analyses in the field of fiber composites

Image documentation (light and SEM)

Qualitative and quantitative chemical analyses (EDX, FTIR, DSC)

Process analysis for needle punching

Lab needle loom for pre-trials

Penetration force measurement for felting needles (measuring unit in cN and Nm)