



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

Circular knitting single jersey

Manufacturer:	Mayer & Cie.	Monarch	Pai Lung	Vanguard Pai Lung	Terrot	Mayer & Cie.
Type:	S4 - 3.2	VXC - 3S	PL - KS 3.2 B	Delta SJ4A / DI3	SH 130	Relanit 3.2 HS
Gauge:	E 28 + E 44	E 28 + 32	E 28 + E 44	E 22 + E 32	E 18	E24 + E28
Diameter:	34"	34"	34"	18"	16"	30"
Feeders:	108	102	108	72	48	96

Circular knitting double jersey

Manufacturer:	Mayer & Cie.	Mayer & Cie.	Terrot
Type:	OVJA 1.6 ET 3 WT Jacquard electronic transfer	IV 2.0	I 3 P 572 8-cam / rib
Gauge:	E 16	E 18	E 28
Diameter:	34"	16"	34"
Feeders:	54 (36+18)	30	84

Flat knitting

Manufacturer:	Stoll	Stoll
Type:	CMS 330 TC	CMS 822 HP multi gauge
Gauge:	E 18	E 6.2
Nominal width:	50"	84"
Feeders:	3	2 x 2

Warp knitting

Manufacturer:	Karl Mayer
Type:	HKS 3-1
Gauge:	E 32
Nominal width:	180"
Guide bars:	3

Single cylinder sock knitting machine

Manufacturer:	Lonati
Type:	Goal GK616F „S by S“
Gauge:	E 14
Diameter:	3 ¾"

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	Tappet gear	Dobby

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

Drawing-in machine

Machine:	WarpMaster
Reed:	up to max. 500 dents per 10 cm
No. of frames:	up to max. 20
Heald types:	J and C-shaped healds

Frames, healds, warp stop motions and drop wires as required

Tying machine

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

Various additional machines

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

Technical Center Felting

Staple fiber needling line (general information)

Basis weight:	50–1,500 g/m ²	Titer:	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:	Multi-card, double doffer card with condensing unit
Working width:	1,500 mm
Additional set:	Basis weight regulation system

Cross lapper

Manufacturer:	Dilo Maschines
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 Maschines
Type:	DI-LOOM OD-II 20
Max. working width:	2,000 mm
Number of needles:	2x 4,500 needles/m

Finish needling

Manufacturer:	Dilo Maschines	
Type:	DI-LOOM OUG-II SB 15	
Working width:	1,500 mm	
Possible needle board pitches:	2,000 needles/m	One/Two needle boards above
	3,000, 5,000, 8,000 needles/m	Various needling options

Technical Center Joining

Sewing machines

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

Multi-head embroidery machine

4 heads	Number of needles/head: 12 Embroidery speed: max. 1,000 rpm Stitch types: 301
---------	---

Chenille Embroidery Machine

1 head	Number of needles/head: 1 Embroidery speed: max. 700 rpm Moss- and Chainstitch Embroidery
--------	---

Needle penetration force measuring system

For sewing needles	Lockstitch machine modified Measuring range: 0–3,000 cN
--------------------	--

Multidirectional stitching

Computer-controlled sewing machine	Stitch type: 301 Work space: 300 x 200 mm
------------------------------------	--

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 machine

Manufacturer:	La Meccanica
Type:	LM 79 D/P
Max. fabric width:	3,000 mm
Max. diameter of fabric roll:	500 mm

Textile testing and analyses

Physical and chemical textile analyses of fibers and yarns/threads
Physical textile analyses of textile surfaces
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
Needle penetration force measurement (measuring unit in cN and Nm)

