

RAPIER WEAVING MACHINES

Comparative Statement showing the details of various Rapier Shuttleless Loom

Company	Lindauer Dornier Gmbh D-88129 Lindau	Picanol NV B-8900 Ieper	Smit Spa I-36015 Schio	
Model	PS	GamMax	GS900	G 6300F(Terry)
Nominal width (cm)/weft insertion rate (m/min)	150-430 cm (in steps of 10cm) depending on nominal width, shed motion and style	190-210-220-230-250-300-320-340-360-380; insertion rate up to 1800m/min	170/360 1540	220/360 1500
Rapier drive: A=cam, B=differential, C=push rod, D=crank motion, E=other	E= Conjugated cams	Proprietary balanced rotary linkage	B (spherical)	B (spherical)
Weft insertion element: A=flexible rapier, B=rigid rapier,(I-one side/both side) (II-telescopic, III-tip/loop transfer)	B III	A I (tip transfer)	A I	A I
Weft end transfer: A=negative, B=positive, C=selectabler	B	A	A	A
Rapier guiding: A=left, B=no	B	A	B	B
Adjustable rapier stroke: A=yes, B=no, possible width change (cm):	A 40% symmetric 10% asymmetric	Up to 100cm dependent on reed width	A, 80	A, 80
Weft waste (cm): A= left, B=right	According to style	5cm; electronic regulation RHS optional	A=3, B=4/5	A=3, B=4/5
Shedding Unit: A=heald frame, B=jacquard	A, B	A, B	A, B	A, B
Maximum No.of heald frames	28	8 (cam motion), 24 (dobby)	20	20
Maximum heald frame pitch	18 mm	12 mm	330/380	330/380
Selvage formation	Motoleno, Ecomoto, outside and center tucking devices	Leno formation (ELSY (patented): independently electronically controlled or mechanical	Independent Mech./Elec	Independent Mech./Elec
Prevention of starting marks by: A= lost pick, B=fabric edge displacement, C= warp let-off and density correction, D=other	B, C, D= Automatically, time adjustable motor acceleration	Correction of warp let-off, fabric take-up and density; full pick finding; starting without filling insertion; "sumo motor"	A, B, C, D	A, B, C, D
Maximum warp beam diameter (mm):	1250	1100	1000	1250
Maximum cloth beam diameter (mm): A=inside the machine, B= outside the machine	A 540 B 1800	A= Up to 700mm (standard 600mm); B= Up to 1500 mm	A=600 B=1800	A=600 B=1800
Warp let -off control: A=mechanical regulator, B=electronic: sensor type and position (I= force sensor, II= displacement sensor)	B with load cell and adjustment accuracy of +/- 1 eN	Load cell controlled electronic warp let-off	B, I	B I, B II
Back rest roller motion: A=passive (spring or spring/damper system), B=active (driven), C=active and passive (selectable)	A, B, C	Passive	A	A
Drive technology: A=main drive, B=sley drive (cam/crank motion), C=warp let-off, D= fabric take-up	A permanently running motor with electro magnetic clutch/brake unit, B Two high precision synchronized drives on both sides of the machine, C Electronic, D Electronic	A, positive cam and cam followers sley drive; electronic let-off and take-up (servo motor driven)	A, C, D	A, B, C, D

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Model	PS	Gam Max	GS900	G6300F(Terry)
Automation: Warp and product change (QSC), Cloth beam change, C=weft storage changeover.	A, B, C	Quick style change with split frame design; easy warp gaiting and cloth doffing; Prewinder Switch off	C	C
Measure for reducing yarn loading: A= warp, B=weft	A: low weft acceleration and electronic weft brake, B: self-adjusting warp tension, active back rest roller	Weft: PFL electronic filling tensioner, quickstep straight-insertion position	A, B	A, B
Fabric weight from/to [g/m2]:	10 to 4000	50-800	Up to 1500	Up to 1000
Possible weft yarns (fiber material): A= staple fibre yarns B = filament yarns	A: 7 den – Nm 0.3 (tex 3333) B: 20 den – Nm 03 (tex 3333)	A, B and different kinds of fancy yarns	A, B	A, B
Weft yarn count range from/to [tex], [Nm], [dtex]	Tex 0,78-3333	Spun yarns: Nm 200-Nm1; Filament yarns: 22 den-4000den	500/5 tex	250-10 tex
Count range of simultaneously insertable weft ends from/to [tex] [Nm], [dtex]	Tex 0,78-3333	Yarn dependant	Regular	-
Weft density from/to [ends/cm]	0,4-200	Up to 130 picks/cm; with cramming higher densities are possible	1/>, 120	4/>120
Possible number of: A= weft colour, B= weft yarns	A 16 B 16	12	A=8 B= 12	A= B=8
Possible picking sequence:	Pick at will	Pick at will	Pick-pick	Pick-pick
Remote diagnosis possible A= yes, B=no, C=option	A	A	A	A
Machine interconnection possible A= yes, B=no	A	A	A	A
Other models available A= yes, B=no	A type Easy Leno Drehergewebe	A	A	A
Other supplementary equipment	AT- electronic with CAN-bus integrated Ethernet connection, DoNet global communication network, remote diagnosis, maintenance free universal harness motions and dobbies, Fast Dobby Change FDC, pattern change while running	Electronic setting of the crossing moment, water-cooling, electronic right gripper opener, filling presenter with insertion position, tucking in, off-loom software for settings and pattern management, all necessary auxiliary equipment and weaving accessories	Upon request	Upon request
ONS-No.	4-228	4-229	4-232	4-233

RAPIER WEAVING MACHINES

Company	Sultex AG CH-8630 Ruti	Promatech I-24020 Colzate (BG)	VAN DE WILE NV B-8510 Marke
Model	G6200 E	LEONARDO SILVER	UNIVERSAL CUT LOOP UCL83
Nominal width (cm)/weft insertion rate (m/min)	140-280 Up to 1260	170-380,670 rpm, up to 1500	Up to 420 cm in pile-1764 (3x140 rpm)
Rapier drive: A=cam, B=differential, C=push rod, D=crank motion, E=other	D	E: (original "propeller" system)	Conjugated cams
Weft insertion element: A=flexible rapier, B=rigid rapier,(I-one side/both side) (II-telescopic, III-tip/loop transfer)	A, B	A	Triple rigid rapiers- bilateral tip transfer
Weft end transfer: A=negative, B=positive, C=selectable	A	A	A
Rapier guiding: A=left, B=no	B	A: transfer EK version, B: FTS version	Yes
Adjustable rapier stroke: A=yes, B=no, possible width change (cm):	B 150mm	A 100mm	Yes 100mm
Weft waste (cm): A= left, B=right		A: 30 mm (average), B: depending on yarn type, shedding, speed	<3
Shedding Unit: A=heald frame, B=jacquard	A, B	A, B	A
Maximum No.of heald frames	24	20	20
Maximum heald frame pitch	12mm	12mm	Reed 320 dents/m
Selvedge formation	Electronic/mechanical tucking device	Independent Electronic Leno device, Melted selvedge, Lateral and intermediate tuck-in device	Filling catch device on selvedge
Prevention of starting marks by: A= lost pick, B=fabric edge displacement, C= warp let-off and density correction, D=other	A, B, C, D	A, B, C, D	Pick density correction
Maximum warp beam diameter (mm):	1016	1100	1250
Maximum cloth beam diameter (mm): A=inside the machine, B= outside the machine	A/570	A: 500 B: 140	Folding in 2 carts
Warp let –off control: A=mechanical regulator, B=electronic: sensor type and position (I= force sensor, II= displacement sensor)	B/I	B, I: load cell	Electrical let-off
Back rest roller motion: A=passive (spring or spring/damper system), B=active (driven), C=active and passive (selectable)	A, B what is C?	A	Damper system
Drive technology: A=main drive, B=sley drive (cam/crank motion), C=warp let-off, D= fabric take-up	A: Clutch/brake unit B: Cams C: Servomotor D: Servomotor	A: standard motor + clutch/brake, A: HI-DIRECT DRIVE with brushless motor, B&C: electronic with brushless motor, B: conjugated intermediate cam boxes	A: AC motor (steplessly adjustable) B: Cam C: electronic D: servomotor
Automation: Warp and product change (QSC), Cloth beam change, C=weft storage changeover.	A, B, C	QSC	Weft & pile bobbin change during weaving weft changer possible
Measure for reducing yarn loading: A= warp, B=weft	A: Electronic weft brake EFB, optimized motions, straight-line weft insertion in center of shed, self-adjusting cutting timing, B: symmetrical shed geometry, No rapier guides, positively driven warp tensioner,	B: electronic weft brakes	A: electrical beam let-off B: programmed weft brakes

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Model	G6200 E	LEONARDO SILVER	UNIVERSAL CUT LOOP UCL83
Fabric weight from/to [g/m ²]:	-	From 15 up to 800	Up to 3000
Possible weft yarns (fiber material): A= staple fibre yarns B = filament yarns	A, B	A, B	A, B
Weft yarn count range from/to [tex], [Nm], [dtex]	Nm 1-Nm 200, dtex 11-dtex 3300 Monofilaments up to 0.3mm Fancy yarns up to 3mm	Nm 2 to Nm 200	3x50 tex up to 2x560 tex
Count range of simultaneously insertable weft ends from/to [tex] [Nm], [dtex]	-	Double, triple for max Nm 200	1 to 2
Weft density from/to [ends/cm]	0.5-300	From 4 to 150	4/cm to 10/cm
Possible number of: A= weft colour, B= weft yarns	8	12	2x2
Possible picking sequence:	Any	Any possible sequence, electronically controlled	1/1
Remote diagnosis possible A= yes, B=no, C=option	B	A: remote technical support loopmp@rtner	A: with we@velink network
Machine interconnection possible A= yes, B=no	A	A	A: with we@velink network
Other models available A= yes, B=no	B	A	A (see other)
Other supplementary equipment	Special equipment for terry fabric, delicate fabrics, air bags, aramide, labels and hair yarns	-	Multiple patch weaving for carpets & area rugs, triple rapier version for sisal look carpets SLX83, carpets with cut pile, loop pile and flat wave effects: Most flexible carpet weaving m/c, text and logo's possible in loops.
ONS-No.	4-234	4-230	4-231

Company	Gunne Webmaschinen GmbH & Co.KG DE-59519 Mohnsee	Nuova Vamatex SPA I-24020 Villa di serio	
Model Designation	Rigid Rapier Wvg m/c for double pile fabrics PZR plus	Leonardo	P 1001 SUPER ek
Nominal width (cm)/weft insertion rate (m/min)	160,180,230,240 up to 2x640 m/min (up to 2x400 rpm)	170-190-21 (-220-230-260-280-300-320-340-360-380-39)	160-190-210-230-260-300-320-340-360-380
Rapier drive: A=cam, B=differential, C=push rod, D=crank motion, E=other	A	Propeller system (patterned device)	Propeller system (patterned device)
Weft insertion element: A=flexible rapier, B=rigid rapier,(I-one side/both side) (II-telescopic, III-tip/loop transfer)	B	A	A
Weft end transfer: A=negative, B=positive, C=selectable	A	Up to 1500	A
Rapier guiding: A=left, B=no	Yes, All side precision guidance of rapier rods	Yes	Yes
Adjustable rapier stroke: A=yes, B=no, possible width change (cm):	A up to 70cm	A	A
Weft waste (cm): A= left, B=right	-	35mm, 40mm	35mm, 40mm
Shedding Unit: A=heald frame, B=jacquard, C= Dobby	A, B, C	A, B, C	A, B, C
Maximum No.of heald frames	Up to 10 pile shafts	20	20
Maximum heald frame pitch	18mm/pile & ground: 18mm; selvedge: 12mm	-	-
Selvedge formation	Leno device	Independent from heald frame/tuck-in device/heat welled for synthetic yarn	Independent from heald frame/tuck-in device/heat welded for synthetic yarn
Prevention of starting marks by: A= lost pick, B=fabric edge displacement, C= warp let-off and density correction, D=other	D-by positioning of cloth fell	All these corrections are available; set-up by microprocessor	All these corrections are available; set-up by microprocessor
Maximum warp beam diameter (mm):	1250	1100	1000
Maximum cloth beam diameter (mm): A=inside the machine, B= outside the machine	A= no, B= 1250	50, (150 with batching unit)	50, (150 with batching unit)
Warp let-off control: A=mechanical	B-by servomotors/positive,	B-proximity sensor to weight the	B-proximity sensor to weight the

regulator, B=electronic: sensor type and position (I= force sensor, II= displacement sensor)	Microprocessor controlled	warp load, load cell for top beam.	warp load,
Back rest roller motion: A=passive (spring or spring/damper system), B=active (driven), C=active and passive (selectable)	A	A	A
Drive technology: A=main drive, B=sley drive (cam/crank motion), C=warp let-off, D= fabric take-up	A-motor and brake clutch system; B-pair of complimentary cams, C&D-servo motors.	A= asynchronous motor and clutch-brake; B=Both sides (with third central drive for nominal width 3000-3800mm); C&D=brushless motor	A= asynchronous motor and clutch-brake; B=Both sides (with third central drive for nominal width 3000-3800mm); C&D=brushless motor
Automation: Warp and product change (QSC), Cloth beam change, C=weft storage changeover.	- - C=yes	Yes No No	Yes No No
What setting aids for quick, precise and reproducible (transferable from m/c to m/c) shed geometry setting? Backrest roller/ warp stop motion/heald frames/harness/cloth support and for warp tension?	By scale disc, gauge	Electronic setting data/ With graduated scale/ With graduated scale/ With ergonomic set-up	Electronic setting data/ With graduated scale/ With graduated scale/ With ergonomic set-up
Which features are designed to reduce yarn stress (warp,weft)	-	Reduced dimension shed-positive weft brakes	Reduced dimension shed-positive weft brakes

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Company	Gunne Webmaschinen GmbH & Co.KG DE-59519 Mohnsee	Nuova Vamatex SPA I-24020 Villa di serio	
Fabric weight from/to [g/m2]:	80-1500	15-800	15-800
Possible weft yarns (fiber material): A= staple fibre yarns B = filament yarns	A-cotton, B-PE, PA, viscose and other	All yarns	All yarns
Weft yarn count range from/to [tex], [Nm], [dtex]	Nm 5-Nm 160	2 Nm-20 Nm, 10 dtex-3000 dtex	2 Nm-20 Nm, 10 dtex-3000 dtex
Count range of simultaneously insertable weft ends from/to [tex] [Nm], [dtex]	Nm 5-Nm 160	2 Nm-150 Nm, 20 dtex-3000 dtex	2 Nm-150 Nm, 20 dtex-3000 dtex
Weft density from/to [ends/cm]	10-50	4-120	4-120
Possible number of: A= weft colour, B= weft yarns	A-up to 2X4 colors; B- up to 2x4 weft type	A=4-8-12; B=4-8-12	A=4-8-12; B=4-8-12
Possible picking sequence:	Pic a pic	All	All
Remote diagnosis possible A= yes, B=no, C=option	-	-	-
Machine interconnection possible A= yes, B=no	-	-	-
Other models available A= yes, B=no	-	-	-
Other supplementary equipment	-	-	-
ONS-No.	-	-	-