

AIRJET WEAVING MACHINES**Comparative Statement showing the details of various Airjet Shuttleless Loom**

S.NO	Company	Somet Societa Meccanica Tessile S. P.A. Provinciale Valsertiana km 23, I-24020 Colzate	Sulzer Ruti AG CH-8630 Ruti
1.	Model designation	SOMET "Clipper"	I5200
2.	Weft insertion elements (Main jet, relay jets, profile reed)	Main & reply nozzles, profile reed	Profile reed, main nozzle and sub nozzles
3.	Fabric weight range; from – to (g/sqm)	From 50 gr/sqm to 500 gr/sqm	Up to 548 g/m ² (actual result)
4.	Weft yarns processed (staple or filament, natural or MMF)	Staple and filament, natural or MMF	Spun, wool, filament (flat and texturised), glass
5.	Yarn counts range from-to (tex[Nm],dtex[den])	Filament: from dtex 33 to dtex 400 spun yarns: from Nm 6.5 to Nm 135. Up to 3 wefts can be inserted simultaneously.	Spun: Ne 5-100/wool:Nm 16/1-50/1, Nm 30/2-70/2 Filament:33-1100 dtex/Glass: 2,8-135 tex
6.	Range of weft yarn processed simultaneously: from – to (tex[Nm],dtex[den])	Filament: from dtex 33 to dtex 400 Spun yarns: from Nm 6.5 to Nm 135 Up to 3 wefts can be inserted simultaneously.	The yarn count of simultaneously inserted weft yarns may vary 1:3
7.	Weft density range; from- to (pick/cm)	From 8 to 200 pick/cm. Special version from 1.3 picks/cm	Standard: 11.8-94.5 picks/cm Variation: 3.5-39.0 picks/cm
8.	Weft mixing (number of weft colours or yarn type)	Up to 8 colours	2-colour, 4-colour, 6-colour
9.	Possible pick frequencies	Electronically programmable	Freely programmable
10.	Air consumption per m of inserted weft (g)	It depends on the speed and the yarn	0.6-1.2 g, depending on fabric and machine specification
11.	Required air pressure in the distribution network (bar)	Minimum = 6 bar	Up to 6.5 bar, depending on fabric and m/c specification
12.	Power consumption of the compressor (kw)	-	Depending on air-consumption, location of wvg mill and compressor specification.
13.	Power consumption for the drive (kw)	3.75 kw (cam motion) or 4,5 kw (dobby) at max. Speed	1.8-5.0 kw
14.	Weft insertion rate: from-to (m/min)	Up to 2000 m/min	Up to 2000 m/min
15.	Weaving speed (pick/min)	Up to 1000 pick/min depending on the style woven	Up to 1000 pick/min
16.	Effective weaving width: from – to (cm)	190 up to 360 cm	140, 150, 170, 190, 210, 230, 250, 280, 336
17.	Possible modification of the width (cm)	700mm	Nominal weaving width –70 cm (up to 230 cm), 80 cm (up to 250 cm)
18.	Warp shedding (crank motion, cams, dobbie or jacquard)	Cam motion, dobbie, jacquard	Crank motion, negative & positive cam, dobbie, jacquard
19.	Shed height: from-to (mm)	From 36to42mm measure at the reed	Depending on the shedding type
20.	Selvedge formation (leno, tucked, fused)	Leno, rotary leno, pneumatic tucked-in, fused	Full leno, half leno, tucker
21.	Sley stop motion (adjustable, programmable)	Programmable	Programmable
22.	Miss picking facility on starting (yes/no)	Yes	Yes (TAPO, Toyoda Automatic Pick Operator)
23.	Warp let-off (mech, electronic)	Electronic	Electronically controlled, with frequency modulated motor
24.	Maximum warp beam Øin (mm)	Ø 1000 mm	Ø 1000 mm
25.	Cloth batching arrangement (on m/c or separate)	On m/c (std), separate (optional)	Both on m/c or Separate
26.	Quick style change (yes/no; method, effective time)	Yes	Yes

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27.	Other special equipment	Air control system, FAR (filling automatic repair), waste selvage elimination on both sides	Function panel: simply touching the on-screen icon in the desired window allows the operative to operate or maintain the machine or to observe production statistics. TAPO (Toyoda Automatic Pick Operator): This device removes the misspick and starts the m/c automatically to enhance the fabric quality and reduce weaving cost. Stop mark prevention: Several devices such as Fell-Forwarded, One-Shot Device etc. minimize stop marks. L5200 is distributed in Asia, Australia and part of Africa as JAT610 by Toyoda with whom Sulzer Ruti have a technology partnership.

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S.NO	Company	Toyoda Automatic Loom Work Ltd. J-Aichi-Ken	Tsudakoma Corp. J-921 Kanazawa
1.	Model designation	JAT610 (distrib.in Europe, America, part of Africa as L5200 from Sulzer with whom we have a technical relationship)	ZAX, ZA 209i
2.	Weft insertion elements (Main jet, relay jets, profile reed)	Profile reed. Main nozzle and sub nozzles	Main jet, relay jets, profile reed
3.	Fabric weight range; from – to (g/sqm)	To 548 g/m ² (actual result)	560 g/m ²
4.	Weft yarns processed (staple or filament, natural or MMF)	Spun, wool,, filament, glass-fibre, textured yarn	Staple fibre and filament of natural and man-made fibres
5.	Yarn counts range from-to (tex[Nm],dtex[den])	Spun: Ne 5-100s (R/S 190)/filament: 30d-1000d (R/S 190) Wool: Ne 19/2-60/1 (R/S 190)/glass: dtex 112-1350 (R/S 140)	6-118 tex (Nm 169-8.5) 33-667 dtex (30-600 den) Ne 5-100s
6.	Range of weft yarn processed simultaneously: from – to (tex[Nm],dtex[den])	The portion of yarn count up to 3 time simultaneously	6-118 tex (Nm 169-8.5) 33-667 dtex (30-600 den)
7.	Weft density range; from- to (pick/cm)	Standard: 11.8-94.5 pick/cm Variation: 3.5 –118 pick/cm	4.6-100.4
8.	Weft mixing (number of weft colours or yarn type)	Single, 2,4,6-colour	1-6 colour
9.	Possible pick frequencies	Freely programmable	Depending on style
10.	Air consumption per m of inserted weft (g)	It depends on the fabric and loom's specifications	Depending on yarn and fabric
11.	Required air pressure in the distribution network (bar)	It depends on the fabric and loom's specifications	5.5 bar
12.	Power consumption of the compressor (kw)	It depends on the fabric and loom's specifications	Depending on speed, width, yarn count, yarn type
13.	Power consumption for the drive (kw)	1.8 kw-5.0 kw	Depending on speed, style, weaving width & shedding
14.	Weft insertion rate: from-to (m/min)	Up to 2000 m/min	Up to 2000 m/min
15.	Weaving speed (pick/min)	Up to 1000 picks/min	1200 picks/min, depends on style
16.	Effective weaving width: from – to (cm)	140, 150, 170, 190, 210, 230, 250, 280, 336	150-390
17.	Possible modification of the width (cm)	Reed space-70 cm (-80cm)	0-80 cm
18.	Warp shedding (crank motion, cams, dobby or jacquard)	Negative & Positive cam, Crank (simple, multi-link), dobby, jacquard	Crank motion, cams, dobby, jacquard, m/c
19.	Shed height: from-to (mm)	Depends on the shedding type	Adjustable (55-140)
20.	Selvage formation (leno, tucked, fused)	Left/right rotary full-leno (klocker, schmein) high speed Air Tuck in (left/right/center)	Rotary leno, Half leno, Tuck-in
21.	Sley stop motion (adjustable, programmable)	Programmable	Programmable
22.	Miss picking facility on starting (yes/no)	Yes (TAPO-Toyoda Automatic Pick Operator)	Yes (TAPO-Toyoda Automatic Pick Operator)
23.	Warp let-off (mech, electronic)	Electronically (servo-motor)	Electronic
24.	Maximum warp beam Øin (mm)	Ø 1000 mm	Ø 1100 mm (on m/c), Ø 1500 (separate)
25.	Cloth batching arrangement (on m/c or separate)	Both on m/c or Separate	On m/c, Separate
26.	Quick style change (yes/no; method, effective time)	Yes	Yes, TSC article change, one operator, 30 minute
27.	Other special equipment	Function panel: simply touching the on-screen icon or window allows an operative to operate, maintain, observe each loom. It can display 2000 words at max. in 11 languages. TAPO (Toyoda Automatic Pick Operator): This device removes the misspick and starts the m/c automatically to enhance the fabric quality and reduce miss cost. TTCS: Toyoda Total Computer System: This system enables managers to monitor as well as control the production of weaving mill through host computer.	Automatic pick remover, Electronic take-up, weft brake system, Twin beam, Double beam, Fuzzy insertion control, Graphic intelligence board, Sucker motion, Terry motion

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S.NO	Company	Gunne Webmaschinenfabrik GmbH & Co. KG DE-59519 Mohnesee	Lindauer DORNIER GmbH D-88129 Lindau/Bodensee 1
1.	Model designation	Gunne Air-jet Wvg m/c AIR-F TERRYFLEX	LWV and LTV for flat fabrics LTNF for terry fabrics
2.	Weft insertion elements (Main jet, relay jets, profile reed)	Electronic self optioning main jets, preacceleration nozzles and relay nozzles	Main jet , relay jets, profile reed totally electronic controlled via patented PIC (Permanent Insertion Control)
3.	Fabric weight range; from – to (g/sqm)	Up to 1700 g/sq.m	Light interlining to dense denim, poplins and awning fabrics; multi-filling jacquards, glass fibre, terry fabrics, double width greige fabrics, all kinds of technical fabrics.
4.	Weft yarns processed (staple or filament, natural or MMF)	Cotton, viscose, effect yarns, fancy yarns, etc.,	Spun Ne 2.5 to 85
5.	Range of weft yarn processed simultaneously: from – to (tex[Nm],dtex[den])	-	-
6.	Warp density range; from- to (ends/in)	Up to 140 pile and 140 ground threads per 10 cm	3 fd/cm-120 fd/cm or 1.18-47.24 ends/inch
7.	Weft density range; from- to (pick/cm)	5 up to 100 pick/cm, automatic change by VARIOPICK device	0.67-120
8.	Weft mixing (number of weft colours or yarn type)	Up to 8 colours / weft yarn types pick a pick	Up to 8 Individually selected colours
9.	Possible pick frequencies	Up to 650 picks/min	Freely programmable
10.	Air consumption per m of inserted weft (g)	Depending on inserted weft yarn type	Depends on article and width
11.	Required air pressure in the distribution network (bar)	7 bar	6-7 bar
12.	Power consumption of the compressor (kw)	Depending on compressor	Depending on compressor
13.	Power consumption for the drive (kw)	Main drive up to 6.5 kw	Depends on speed, width, shedding motion
14.	Weft insertion rate: from-to (m/min)	Up to 1700 m/min	Over
15.	Weaving speed (pick/min)	-	-
16.	Effective weaving width: from – to (cm)	180-360cm	150-430cm
17.	Possible modification of the width (cm)	60 cm	Increments of 10cm
18.	Warp shedding (cams, dobby or jacquard)	Electronic dobby & jacquard	Positive cam up to 10 harness frames, positive and negative rotary dobby up to 20 harness framers, jacquard heads up to 10000 hooks
19.	Shed height: from-to (mm)	60-158 mm	-
20.	Selvedge formation (leno, tucked, fused)	Leno	(Leno, tucked, fused) two-end Disc-O-Leno device, Eco leno, Motoleno and MotoEco, thermally sealed selvedges with, tucked selvedges with PneumaTucker
21.	Sley stop motion (adjustable, programmable)	Programmable	Programmable
22.	Miss picking facility on starting (yes/no)	-	ASP(Automatic Start Mark) prevention with automatic shed leveling, warp tension correction when restart, increased start up speed for main motor and miss picking facility on starting
23.	Warp let-off (mech, electronic)	Electronically	Electronically with absolute sensor
24.	Maximum warp beam Øin (mm)	Pile: 1250 mm; Ground: 1000 mm	Bottom: 1100 mm Top up to 1600 mm
25.	Cloth batching arrangement (on m/c or separate)	Inside the loom (up to 600 mm) alternatively separately batching motion (up to 1500mm)	Yes (both types) up to 1800 mm

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26.	Equipped with/connected to data processing equipment (ye/no)	Microprocessor control system storing all weaving and m/c parameters displayed on user-friendly touch-screen display	Total network between m/c, host computer and DORNIER for spare parts ordering, user manuals, setting instructions, style and performance data and remote diagnostics, long distance bi-directional communication for any type of monitoring system (integrated)
27.	Additional features and other special equipment	VARIOSPEED drive for 8 preselectable loom speeds with VARIO PICK device for 8 preselectable weft densities, pile formation by swinging reed system, motor driven weft and split selvedge scissors	AT-Electronic with CAN-Bus since 1989 A wide variety of option is available. Please ask our sales personnel for details.

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Comparative Statement showing the details of various Airjet Shuttleless Loom

S.NO	Company	M/s.HANGZHOU YINCHUIN MACHINE CO.LTD, CHINA	DORNIER LOOMS
1.	Model designation	JA 900	AS
2.	Weft insertion elements (Main jet, relay jets, profile reed)	Main nozzles, relay nozzles, profile reeds with Permanent Insertion Control (PIL) & servo control	Main nozzles, relay nozzles, profile reeds with Permanent Insertion Control (PIL) & servo control
3.	Suitable Fabric for weaving	Light, Medium & Heavy weight fabrics.	Light, Medium & Heavy weight fabrics.
4.	Weft yarns processed (staple or filament, natural or MMF)	---Not Recommended---	Filament yarn (smooth, crepe, textured, microfibre, fancy yarn), Spun yarn (single, plied, crepe, chonille, lycra yarn)
5.	Yarn counts range from-to	---Not Recommended---	Fancy yarn = 40 – 2200 decitex Spun yarn = 5-130 Nm
6.	Range of weft yarn processed simultaneously: from – to	---Not Recommended---	---Not Recommended---
7.	Weft density range; from- to	17-208 Picks/Inch	
8.	Weft mixing (number of weft colors or yarn type)	2,4,6 colors	Upto 8 colors
9.	Weft insertion rate: from-to	Max-2650 mtrs/min (for single pick) Max-5000 mtrs/min (for double pick)	
10.	Weaving speed (pick/min)	---Not Recommended---	Upto 1000 rpm
11.	Effective weaving width: from – to (cm)	190 cm to 390 cm	150 cm to 540 cm
12.	Possible modification of the width (cm)	---Not Recommended---	40 cm symmetrical; 90 cm asymmetrical
13.	Warp shedding (crank motion, cams, dobby or jacquard)	Cam plain shedding – upto 8 frames; Dobby – upto 16 frames	Cam plain shedding – upto 10 frames; Dobby – upto 16 frames; Electronic jacquard- upto 10,000 hooks
14.	Selvedge formation (leno, tucked, fused)	Leno, tuck-in, 2/2 selvedges	Two-end disc leno device, motor leno, Moto Eco.
15.	Sley stop motion (adjustable, programmable)	---Not Recommended---	---Not Recommended---
16.	Miss picking facility on starting (yes/no)	---Not Recommended---	yes
17.	Warp let-off (mech, electronic)	Electrical let-off with kickback function, positive easing.	Electronic let-off with sensor unit.
18.	Maximum warp beam Øin (mm)	800 mm, 914 mm, 1000 mm	800 mm to 1250 mm & top beam stand upto 1600 mm with scholze mega top.
19.	Cloth batching arrangement (on m/c or separate)	---Not Recommended---	---Not Recommended---
20.	Quick style change (yes/no; method, effective time)	---Not Recommended---	---Not Recommended---
21.	Weft stop motion	---Not Recommended---	Triple weft stop motion
22.	Sley drive	---Not Recommended---	Bilateral reed drive (reed dwell time can set variably, eliminates starting marks)
23.	Cloth take-up	Mechanical, Electronically	Electronically
24.			