



## TECHNICAL ADVICES FOR BLIND MAKING - ORCHESTRA MAX -

Following devices, or similar equipments, and following values of process parameters, may be used to make blinds with ORCHESTRA MAX. For each type of awning, it is needed to define maximal dimensions, depending on roller tube and drive systems which may influence strenghts (these must be adjusted to get an optimized winding). Taking this information into account, it may be necessary in extrem cases to use the product in cross direction, to get the most satisfying results. Each maker must manage his own tests to assure right proceeding of systems, and final product guarantee.

This document is valid for ORCHESTRA MAX product manufactured in technical conditions defined on 2013, July 1st

This document is valid for ORCHESTRA MAX product certified conform to Self-Cleaning effect label

APPLICATION	RECOMMENDED
PERGOLA	X
FOLDING ARM / SLIDE ARM AWNINGS	X

TABLE WIDTH	400 cm x 400 cm minimum
LAYING DIRECTION	WARP generally ; each part of one awning must be oriented the same way : same face lookin at the sun ; same direction (direction of unwinding roll) for each part and the part beside

CUTTING	SUGGESTION
<b>CIRCULAR KNIFE</b>	<b>TO AVOID</b>
<b>ULTRASONIC CUTTING</b>	<b>Recommended ; simultaneous cutting and cauterization</b>
Machine	SM.300.TA (SMRE)   SM.400.TA (SMRE)   CS-112 (MILLER)   TRIAD (SINCLAIR)   2796-2-20 (JENTSCH)   ASCO
Linear speed	25 m/min
Frequency	40 kHz
Manual cutting	see Decoup+
Alternative generators	Calemar "G3-C" ; NOVUS "3.150W" ; DelphinUS ; portable generators
<b>LASER CUTTING</b>	<b>Recommended for valances cutting</b>
<b>HOT CUTTING</b>	
Machine	ENGEL-COUPPE portable "hot iron"
Linear speed	+/- 10 m/min (manual)

SEWING	SUGGESTION
<b>DOUBLE-LINE SEWING</b>	<b>Be careful : impermeability may be decreased at the place of sewing points (holes)</b>
Machine	PFAFF 1420   DÜRKOPP ADLER   SCHULTE - MARKISPEED 2000-867 2 needle Dürkopp-Adler 867-16 mm NE double lockstitch machine
Yarn	SERAFIL WR (Amann Group)   RASANT n°25WR polyester /cotton (AMANN GROUP)   EDEN TEX 82 "100% polyester core" (COUSIN)
Needles	134-35 CR (2134-35 CR / DPx35 CR)   reference 49-044 635-02 3 std   SES (Schmetz)   R (Schmetz)
Needle size	90-110 to 120-140 depending on TENARA yarn choosen
Overlap width	22 mm
Gap between lines	15 mm
Speed	10 - 12 m/min

WELDING (ADHESIVE TAPE NEEDED)	SUGGESTION
<b>Take care ! Width of the welding is important : 20 mm is a classical vlue ; 10 mm may be not enough (to validate or not on the machine) ; 40 mm may be suggested for structures with high strenght applied</b>	
<b>HIGH-FREQUENCY WELDING</b>	
Machine	FORSSTROM TX 800 or other machine of range TX 200-800, or other ranges : DR 200-800 ; TR ...   AEM
Tape	PAF - 130 or UAF-472 (Adhesive Fabrics Inc) ; AU 130 SK or AV115 "strengthened" (Glutex)
Power / Frequency	27 MHz / 40% of 20 kW
Overlap width	25 mm
Welding time	6 sec

ULTRASONIC WELDING	SUGGESTION
Machine	Weldsonic 2796-2-20 (Jentschmann/Swiss-Sonic) 1 head
Tape	Recommended = AV115 strengthened (Glutex) ; see also AU130 (Glutex) and PAF-130 or UAF-472 (Adhesive Fabrics Inc)
Overlap width	tape available in 8 to 28 mm width ; 18 mm for Jentschmann 1 head machine
Temperature	Melting range of tape : 90-130°C
Linear speed	5 m/min
<b>THERMAL IMPULSE WELDING (thermal impulse machine ; adhesive tape needed)</b>	
Machine	MATIC   MATIC   IL 315 (ASCO)   IL 430 (ASCO)   IMPULSE (DOREY)
Tape	UAF-472 or similar (Glutex)
Width	170 cm   400 cm   310 cm   420 cm   300 cm
Temperature	180°C   180°C   200°C
Pressure	+/- 6 bars   +/- 6 bars
Welding time	+/- 14 sec   +/- 14 sec   to define   to define   12,5 sec
Cooling time	+/- 120 sec

HOT WEDGE WELDING	SUGGESTION
Machine	T300 Flex (MILLER WELDMASTER)
Tape	AF 115 (Glutex or WDN) 22 mm
Overlap width	25 mm
Linear speed	5 m/min
Temperature	430°C
Pressure	2,0 bars
Elongation	98% (roll/roll)

HOT AIR WELDING (possible but depend on accurate parameters)	SUGGESTION
Machine	R01 (AUNOTEC)
Tape	AUNOTEC devices
Overlap width	22 mm
Linear speed	???
Temperature	???

COLLAGE HOT-MELT	SUGGESTION
Machine	Markispeed 2003-1 (SCHULTE)   SM.210.SA (SMRE)
Machine lenght	5 linear meters standard (from 2 to 18 lm possible)
Hot-melt glue	polyurethane hot-melt (used by Schulte under nitrogen : Henkel Marki-Fix CB 08/05-21) ; see also Getra PUR 7826
Accessories	needed : device under controlled atmospherer, and defined method to empty it between each operation
Temperature of glue on fabric	25°C
Overlap width	25 mm (10 to 30) ; glue layer on 14 mm (Schulte) or 22 mm (SMRE)
Linear speed	8 - 9 mm ; 15 m/min maximum
To notice	SCHULTE = simplified cleaning system for hot-melt track (partnership with a glue manufacturer) SMRE = machine fitted with a hot-melt glueing system + (options) hot air welding + ultrasonic welding

EDGES	SUGGESTION	EYELETS	SUGGESTION
<b>HEMS</b>	<b>(NOT NEEDED)</b>	Size	3 cm
Width	3 cm overlap	Minimal distance from edges	1 cm
Making	see above recomandations for welding	Minimal number of layers	2

STORAGE	SUGGESTION
Roll position	horizontal - in cardboard packaging
Temperature	5 - 40 °C
Handling	with care - manual, or handling machines

**NEVER FOLD A SOLAR PROTECTION FABRIC**

GD 17/10/2013