



TECHNICAL ADVICES FOR BLIND MAKING - ORCHESTRA -

Following devices, or similar equipments, and following values of process parameters, may be used to make blinds with ORCHESTRA. 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 product manufactured in technical conditions defined on 2013, July 1st

| 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 |
|---------------------------|---|
| CIRCULAR KNIFE | TO AVOID |
| ULTRASONIC CUTTING | Recommended ; simultaneous cutting and cauterization |
| 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 | Calemard "G3-C" ; NOVUS "3.150W" ; DelphinUS ; portable generators |
| LASER CUTTING | Recommended for valances cutting |
| HOT CUTTING | |
| Machine | ENGEL-COUCPE portable "hot iron" |
| Linear speed | +/- 10 m/min (manual) |

| SEWING | SUGGESTION |
|---------------------------|--|
| DOUBLE-LINE SEWING | |
| Machine | PFAFF 1420 DÜRKOPP ADLER SCHULTE - MARKISPEED 2000-867 2 needle Dürkopp-Adler 867-16 mm NE double lockstitch machine |
| Yarn | TENARA M1000LTR-L-5 / M1000KTR-L5 / M1000HKTR-L5 100% oiled ePTFE / M1000XHTR (translucent yarns) TENARA M1000TR-(XX)-5 / M1000HTR-(XX)-5 (coloured yarns) 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 |
|--|--|
| Take care ! Width of the welding is important : 20 mm is a classical vluue ; 10 mm may be not enough (to validate or not on the machine) ; 40 mm may be suggested for structures with high strenght applied | |
| HIGH-FREQUENCY WELDING | |
| Machine | FORSSTROM TX 800 or other devices of TX 200-800 range, or other ranges : DR 200-800 ; TR ... AEM |
| Tape | reference PAF - 130 (Adhesive Fabrics Inc) or reference AU 130 SK (Gluetex) |
| Power / Frequency | 40% of 20 kW / 27 MHz |
| Overlap width | 25 mm |
| Welding time | 6 sec |

| ULTRASONIC WELDING | SUGGESTION |
|------------------------------|---|
| Machine | Weldsonic 2796-2-20 (Jentschmann/Swiss-Sonic) 1 head Ultrasonic Bonding System Weldsonic TWIN (Jentschmann) |
| Linear speed | 8 m/min 10 m/min |
| Pressure on lower roll | 2,9 - 3,5 bars (lower roll) 1 bar (roll 1) 1,5 bars (roll 2) on upper roll |
| Elongation | 85% 2,6% on 1st head ; 2,9% on 2nd head |
| Power (Sonotrode adjustment) | 85% 90% |
| Tape | AU 130 (Gluetex) AU 110 or AU 130 (Gluetex) |
| Overlap width | Tape 18 mm (available from 8 to 28 mm) |
| Temperature | Melting range of tape : 90-130°C |

| HOT WEDGE WELDING | SUGGESTION |
|-------------------|--|
| Machine | TRIAD or SPEC (SINCLAIR) CS-112 (MILLER) T300 Flex (MILLER WELDMASTER) |
| Tape | AU 130 (Gluetex) AF 115 (Gluetex or WDN) 22 mm |
| Overlap width | 25 mm |
| Linear speed | 3 - 4 m/min 5 m/min |
| Temperature | 485°C 430°C |
| Pressure | 2,5-3,5 bars 2,0 bars |
| Elongation | 101% 97,5% (roll/roll) |

| HOT AIR WELDING (possible but depends of accurate parameters) | SUGGESTION |
|---|--|
| Machine | CS-112 (MILLER) Air flow 8 l/min |
| Tape | AU 130 (Gluetex) Gap injector/roll 10 mm |
| Overlap width | 25 mm Injector height 7 mm |
| Linear speed | 3 - 4 m/min Pressure 2,5 - 3,5 bars |
| Temperature | 510 °C Elongation 0,1 cm / 100 cm (0,1%) |

| HOT-MELT GLUEING | SUGGESTION |
|------------------|---|
| Machine | SM.210.SA (SMRE) Markispeed 2003-1 (SCHULTE) |
| Total length | 5 linear meters standard ; 2 to 18 lm if needed |
| Hot-melt glue | hot-melt polyamide under normal atmosphere |
| Overlap width | 25 mm (10 to 30) ; glue layed on 14 mm (Schulte) or 22 mm (SMRE) |
| Linear speed | 8 - 9 m/min ; 15 m/min maximum |
| To notice | SMRE = machine fitted with a hot-melt glueing system + (options) hot air welding + ultrasonic welding |

| EDGES | SUGGESTION |
|-------------|---------------------------------------|
| HEMS | (NOT NEEDED) |
| Width | 3 cm overlap |
| Making | see above recommendations for welding |

| EYELETS | SUGGESTION |
|-----------------------------|------------|
| Size | 3 cm |
| Minimal distance from edges | 1 cm |
| 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