

“BORGOSESIA NYLON 4 and 5” SINTERED METAL RINGS

START UP, CARE AND MAINTENANCE



PROSINO S.r.l. - BORGOSIESIA RINGS P.O. BOX 20 I-13011 BORGOSIESIA (VC) - ITALY TEL.:+39 0163 418444 - FAX: +39 0163 418445	CUSTOMER ASSISTANCE		
		Rev. 1	2014-06-25
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INSTALLATION

BORGOSIESIA NYLON 4 and 5 sintered metal rings have been conceived and developed to work with nylon travellers. If used properly will have a long life and will require little maintenance thanks to their robust construction and to their generous oil flow.

Our sintered metal rings are packed one by one in individual plastic bags; they are already impregnated. They should not be removed until immediately prior to installation into the ring rails or individual adopters or ring holders.

Until when the rings remain in their plastic bags they are protected from oxidation. It is advisable to store the rings in a horizontal position in order to avoid that the oil would accumulate only in one part of the plastic bag.

If the rings remain in their plastic bags for a period exceeding 3 months, it is recommended to re-impregnated them by one of the two methods detailed in this instruction

After unpacking, handling of the rings with bare hands should be avoided. If this is not possible hands should be washed thoroughly and a light coating of oil applied to the whole surface of the ring before handling. On installation, special care must be taken to ensure that no undue pressure is exerted on the ring, otherwise it may crack, distort or cause final fracture. Check that the fixing screws of the ring holders are secure. If the screws have to be re-tightened special care must be taken to ensure over-tightening does not result in the ring cracking, distorting or breaking. It is essential that the centralising of the ring and spindle, balloon control ring and snail wire pigtail are set accurately. If the ring and spindle are not central, then the twisting tension will show a variation that could cause early problems and result in a shorter ring life. Care should also be taken when fixing the rings onto the ring rail that the washers will not touch the travellers while running. The washers should be flush with the ring shoulders.

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START UP INSTRUCTIONS

1. At the moment of starting up the machine, due to possible different room temperature situations, the rings can appear very wet, wet or almost dry. In the first two cases, it is advisable to clean the rings with a clean and soft dry cloth. In the third case the rings must be reimpregnated again by any of the methods detailed in this instruction, or completely immersed in an oil bath for 48 hours prior to installation.
2. BORGOSIESIA NYLON 4 and 5 sintered rings used with nylon travellers, don't require the classical running in procedure, however, some care is requested:
3. Put the oil for travellers on the machine at least 24 hours before starting the production. Checks that the wicks are free to bring oil to the rings.
4. With the first traveller (with normal weight adopted on wished final speed), we suggest, if possible, to start the machine at the lowest possible speed. This suggestion is helpful to verify that the traveller match properly the ring, that the ring is correctly mounted on the ring holder and that the travellers does not touch any part of the ring holder.
5. After two doffings check some travellers. They must show wear traces on the vertical part, on the top and on the bottom. If they appear too oiled, dry again the rings with a dry clean cloth. If the travellers looks to dry, wip the rings with a oiled cloth.
6. Start the machine at the normal final speed and replace the traveller according the yarn quality parameters requested.
7. Some of ours customer producing fiber glass has found advantages in the following procedure: when they start the machine, they put two travellers together, a metal one (ISO 25) and a nylon one. In this case the fiber glass yarn must not pass inside the metal traveller. In this way the nylon traveller "push" the metal traveller. The purpose of this procedure is to improve the quality of the ring surface.
8. In case of use of the additional metal traveller is suggested to replace the first metal traveller at the first doffing and then once a week for at least one month.

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9. In case of use of the additional metal traveller, the nylon traveller weight can remain the usual one, for the following reasons: a metal traveller has half-coefficient of friction than a nylon traveller. In the case of metal traveller ISO 25 the resistance of the metal traveller is identical to the resistance of nylon traveller ISO 12.5. Supposing that the normal nylon traveller in use is ISO 400, the resistance of the two travellers is identical to the resistance of one theoretical nylon travellers $400 + 12,5 = 412,5$, acceptable. If we intend use one lighter number nylon traveller (ISO 355) , the final resistance results $355 + 12,5 = 367,5$, too less.

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RECOMMENDED OILS AND TRAVELLERS

Our rings are usually impregnated with TEXTOL RSL ISO 15 oil from messers ZELLER + GMELIN (see below the complete address)

TEXTOL RSL ISO 15 OIL

ZELLER + GMELIN
 Schlosstrasse, 20
 73054 Eislingen/Fils
 GERMANY
 Phone: +49 7161 802-0
 Fax: +49 7161 802-546

Alternative oil:

SYNTHESO XOL 12 OIL **KLÜBER LUBRIFICATION**

Geisenhausenstrasse, 7
 81379 München
 GERMANY
 Phone: +49 89 7876-0
 Fax: +49 89 7876333

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CARE AND MAINTENANCE

“BORGOSIESIA NYLON 4 and 5” rings must be kept clean and oiled with an oily clean cloth, possibly at every doff, being the rings warm. If this is not possible, clean the rings at least once per week. When this cleaning operation is undertaken, we would recommend that the ring holder or ring rails should also be cleaned to remove dust or yarn fibre debris.

Always ensure that the travellers do not touch any part of the holders or the fixing screws of the ring itself. This could alterate the correct running of the traveller on the ring damaging the ring itself and reducing the traveller life.

Always verify that the oil feeding wicks are not broken.

Make sure that the rings are firmly mounted in a horizontal position and that they fit perfectly their holders or ring rails.

It is essential that grease should never been applied to BORGOSIESIA NYLON 4 and 5 rings as this will clog the surface pores and ruin the function of the ring.

Care should be taken when fitting or removing travellers to ensure that there is no scratching of the bearing surface.

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IMPREGNATION

Sintered metal rings must be reimpregnated regularly to ensure a correct and continuous oil flow. The impregnation frequency is strongly related to the working parameters. The impregnation process can be achieved in several methods, but two methods are enough to achieve excellent results.

A. Impregnation by vacuum.

This method is surely fast, but it doesn't help the cleaning of the rings

B. Impregnation by warm oil.

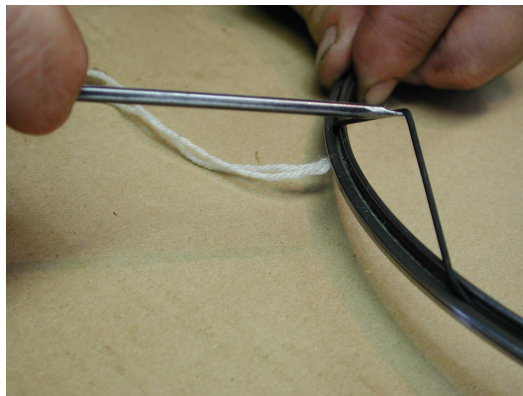
1. Immerse the rings in a tank of warm oil (90-110 °C) and let the tank cool down. When the oil returns to the room temperature, it enters in the pores free of the air that has been gone away thanks to the dilatation caused by the heat.
2. Repeat the operation with clean oil. The oil of the first impregnation will get out of the rings bringing all the dirt residuals accumulated by the rings during working and entered in the ring at the stop of the frame. When the rings are removed, they are ready for re-wicking as detailed in the wicking section.

WICKING (“S.I. LUBRICATION”)

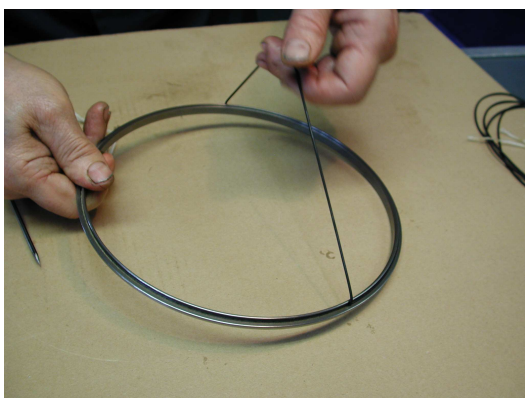
The replacement of wicks and wick covers should follow the detailed procedure shown below:



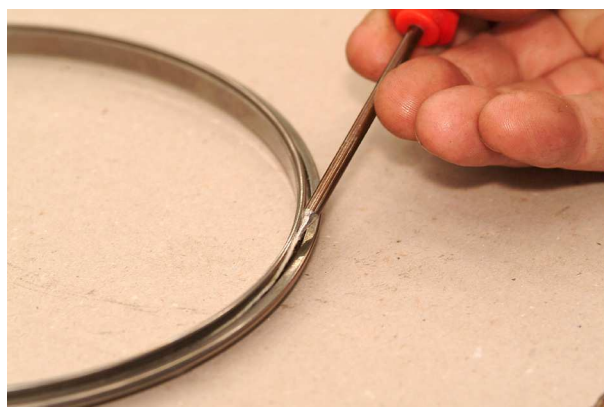
Remove the wick cover with a sharp needle.



Pull gently the wick cover



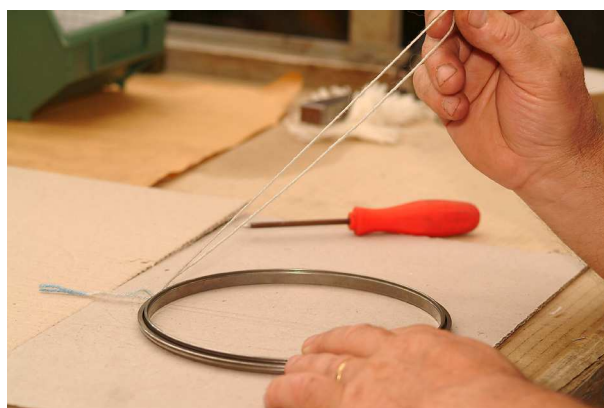
Remove completely the wick cover



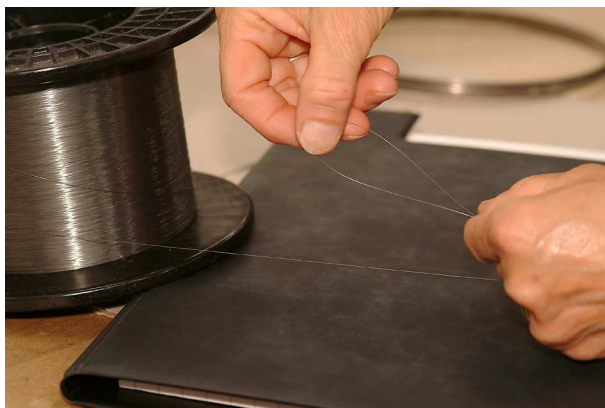
Remove the wick with a needle



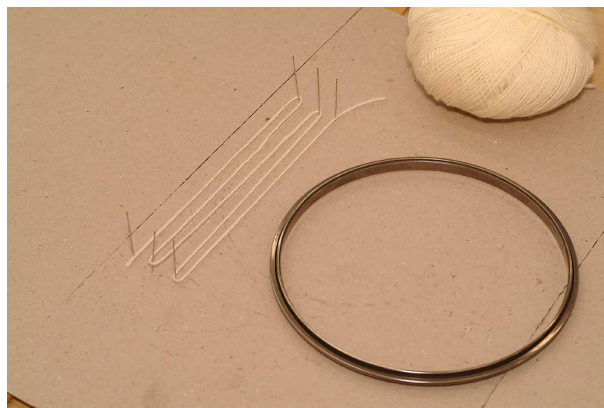
Continue to remove the wick with a needle



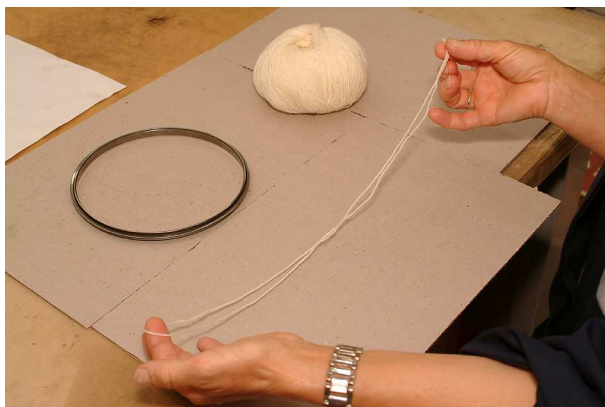
Remove the wick with the fingers



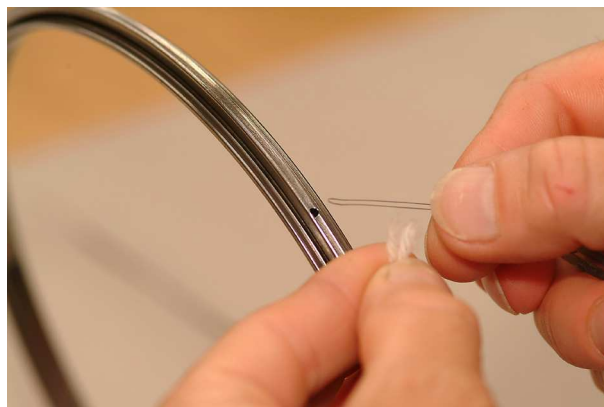
Create a sort of a needle with thin steel wire



Prepare the wick (5 times the ring diameter length).



Fold the wick in half



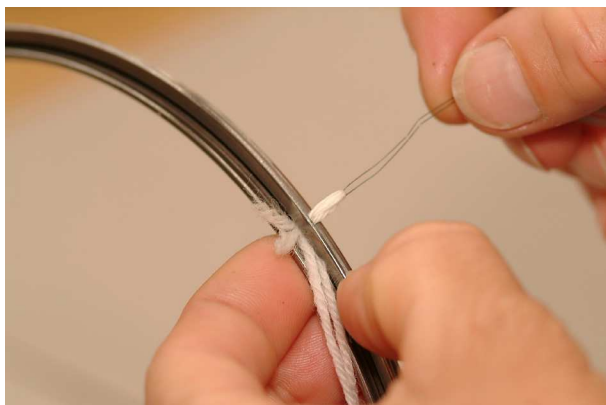
Prepare the needle



Insert the needle in the hole of the ring.



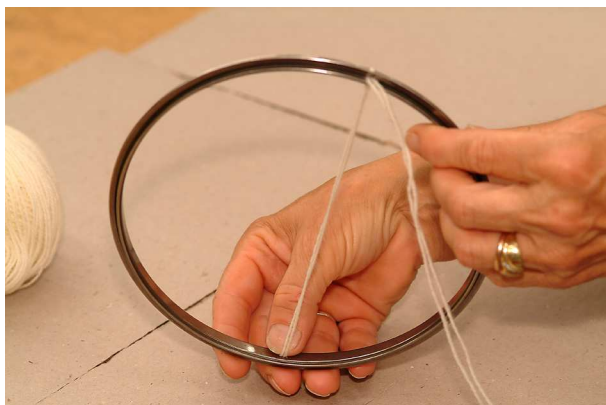
Insert the wick in the needle



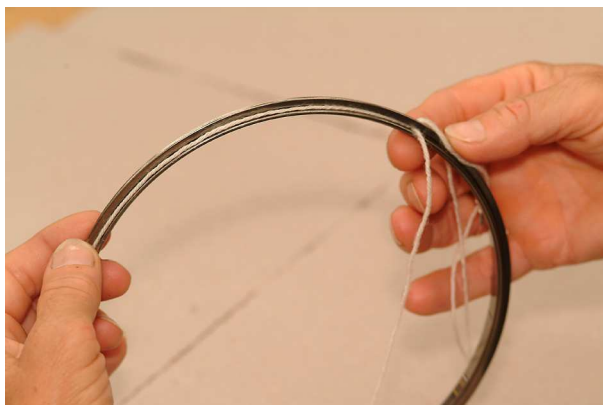
Pull the needle in order to have the wick in the hole.



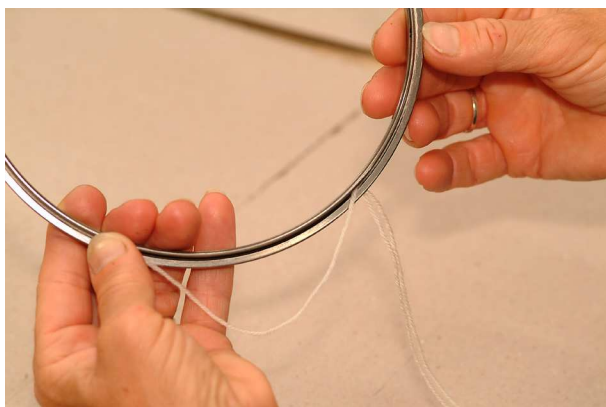
Pull the wick with the fingers



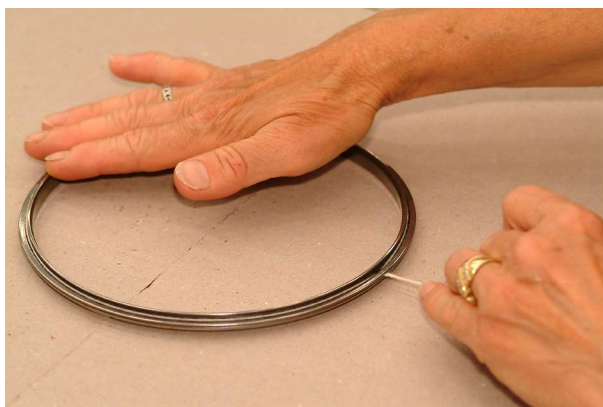
Measure the wick tail (it must be equal to the ring diameter)



Wrap the ring with the wick



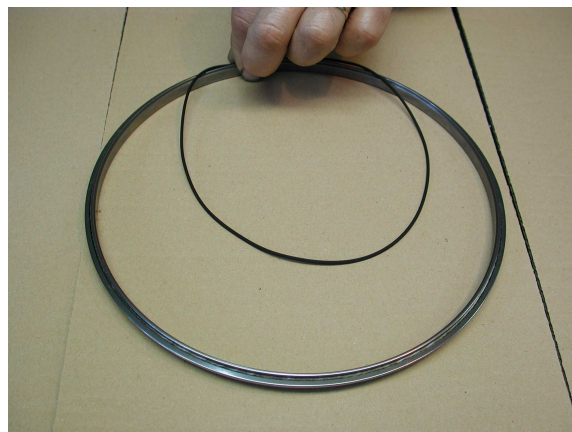
Continue to wrap the ring with the wick.



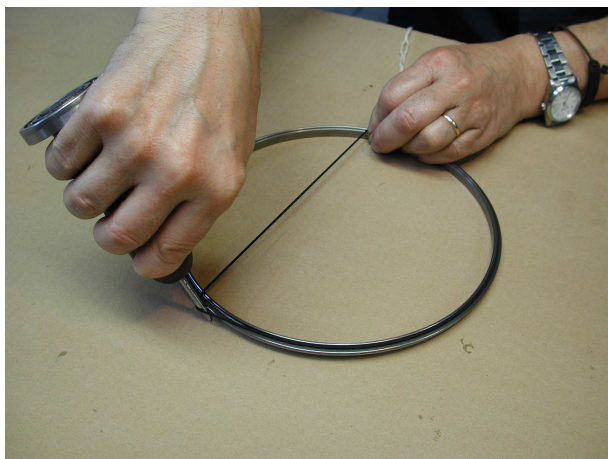
Pull gently the wick through the hole



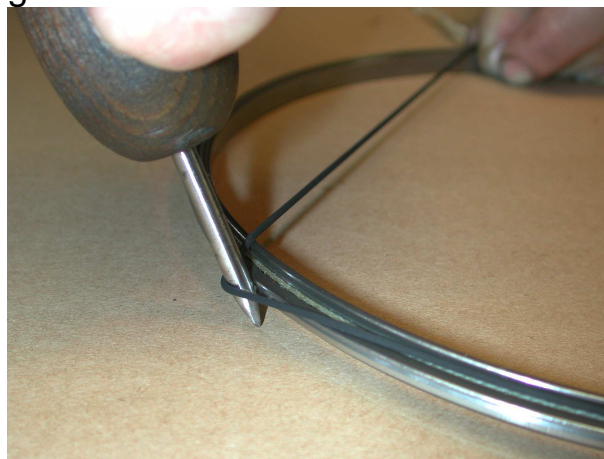
In order to complete the wicking use a stick



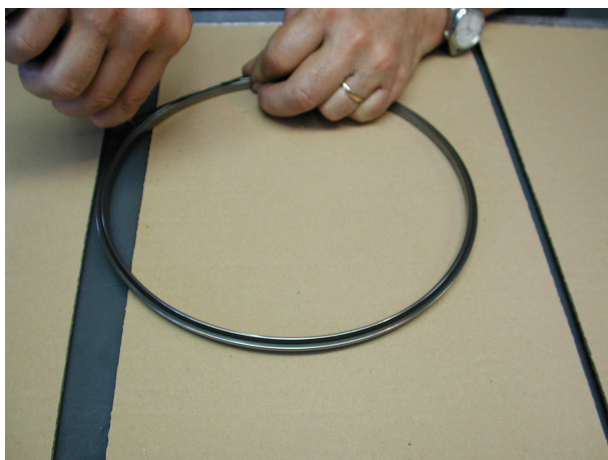
Wick cover mounting. Insert in the groove the rubber seal



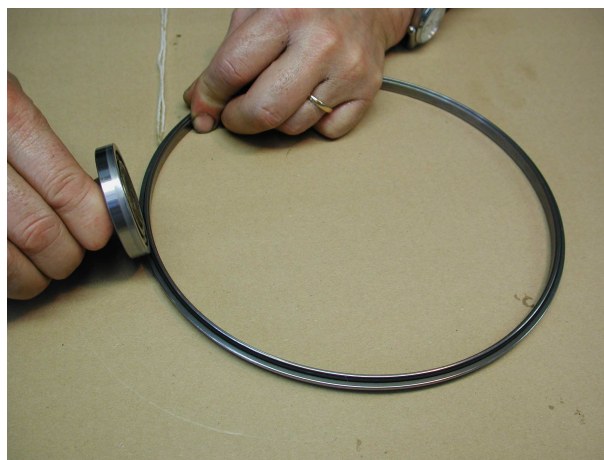
With the help of not sharpened steel stick wrap the ring with the rubber seal



Detail of the previous described operation



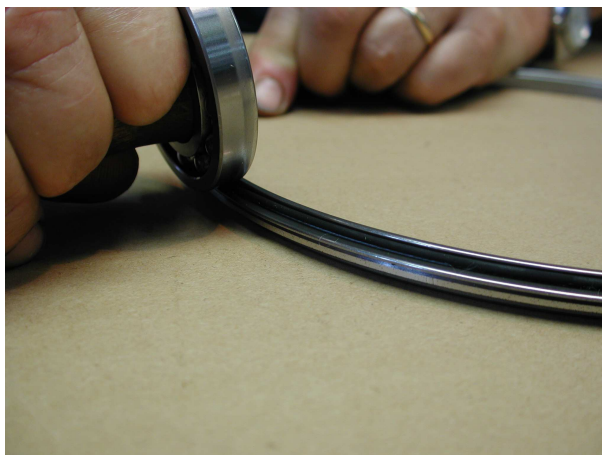
Continue slowly to insert the wick cover in the groove, until you reach the starting point.



Once completed the mounting press gently the rubber seal into the groove with the help of the tool



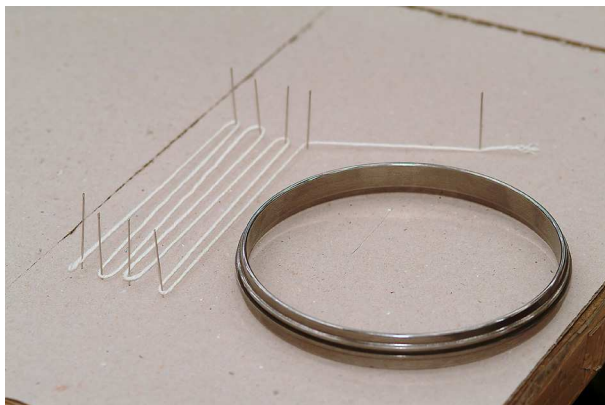
Continue until the end



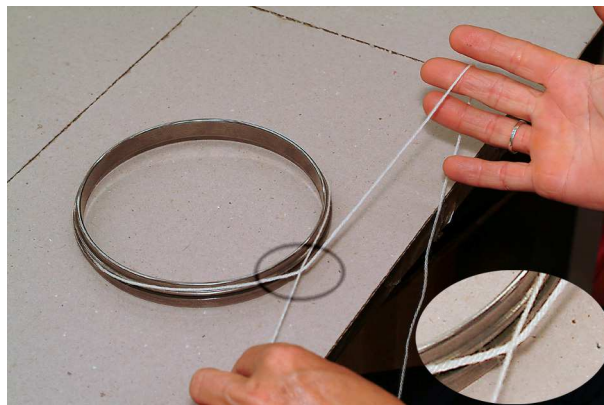
Make sure that the rubber seals is
well pressed into the groove !

WICKING ("S.E. LUBRICATION")

The replacement of wicks should follow the detailed procedure shown below:



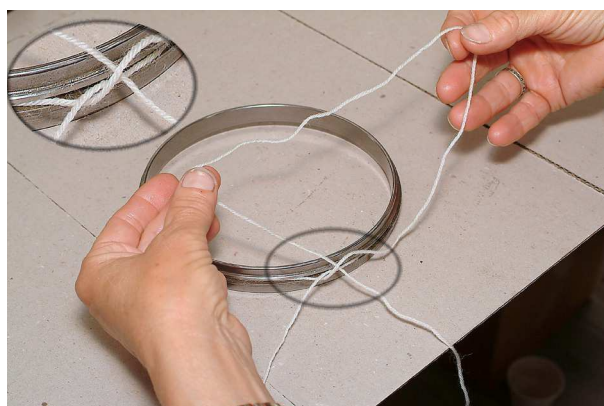
Prepare the wick (8 times the ring diameter length).



Wrap the ring with the wick



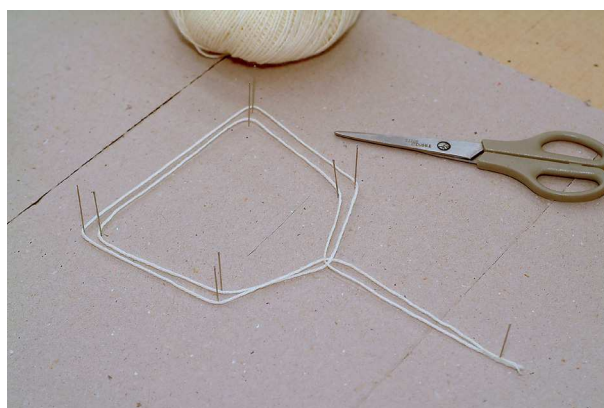
Wrap the ring with the wick another time.



Make the knot described by the picture



Insert the wick in the ring's groove



The wick around the ring should be wrapped in this way.



Verify the correct mounting of the wick, by gently pulling the wick itself.



The wicking is finished