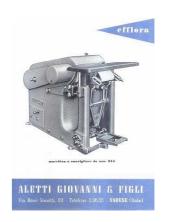


ALETTI GIOVANNI & FIGLI S.R.L. Via Tiepolo 14-21100 VARESE-ITALIA Telefono (+) 39 (0332) 33.46.64 Telefax (+) 39 (0332) 33.19.17 www.tannerymachines.com E - mail:aletti@aletti.it

SINCE 1947 IN THE VAN OF BUFFING MACHINES

We are specialised in the designing and in the manufacturing of tannery machines **since 1947**. The first machine produced by Aletti has been a traditional buffing machine of 250 mm working width, which is

still in operation. We produce now the widest range of leather buffing machines in the world, to meet the requirements of all tanners and to supply the most suitable and performing solution for all types of leather. Our range includes the traditional buffing machine of 800 mm, model VELOX (indispensable for crust and top quality suede), the through-feed roller buffing machine model SV, with working width from 1300 mm up to 3200 mm (covering most of the requirements of through-feed buffing either flesh side of grain side, on all types of leathers), the high tech end-less band buffing machine model VELOX SN 1800 mm, 2200 mm and 2500 mm (for high production of all types of leathers and skins including the DIFFICULT products as impregnated splits, vegetable tanned leather, pull-up, "nubuck", shoe upper leather and even regenerated leather, synthetic leather, rubber and fabric either in plates of in rolls) and the wet buffing machine model EFFLORA UNO 1500 mm (for double face skins, pig skins and suede in wet blue stage).



THE TOP BUFFING MACHINE IS OUR THROUGH-FEED END-LESS BAND BUFFING MACHINE MODEL VELOX SN which is actually the most advanced machine in the world. This machine is equipped by abrasive paper belts which can be easily found on the market, ready for use, in all types of abrasive, grit and paper support.



This type of heavy duty machine has been developed and improved during years of testing and experience and is now a landmark as far as performance, quality and reliability are concerned. The combination of the band buffing system with the special design of buffing roller and feed roller, enables the machine to process a wide range of products, with different features in terms of rigidity and thickness. The working thickness of the standard machine can be adjusted to process materials from 0,5 up to 5 mm of thickness (by request the machine can be set up even for greater thickness) with high precision system. You can process in the machine **very rigid** products, like sole leather, or very soft products, like garment leather.

The use of this type of machine is matchless on **vegetable tanned leather** (sole leather, shoulders, flanks etc.) thanks to the absence of overheating of the buffing roller, which is also very important in case of any heat sensible product. The advanced features of our band buffing machine allow to obtain, at same time, high working speed and superior quality of the buffing. Best results can be achieved on "**nubuk**" thanks to the rubber coat of the buffing roller, which enables to keep the **buffing pressure even all over the surface** of the leather, with smooth and regular buffing.





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On **"pull up"** and **greasy leather**, the natural cooling and the greater surface of the buffing paper allows superior working speed with better buffing effect. Moreover the frequency of the replacement of the paper is reduced, so as the **consumption of paper is lower** than on traditional machines. Finally we stress that the highest performances in terms of production are obtained in the buffing of all kind of **splits**, either in case they are finished for suede or in case they are prepared for further finishing treatments (**best on impregnated and pigmented splits**).

By means of the adjustment of the buffing pressure, by the selection of different abrasive papers and grits and by using appropriate hardness of rubber coating of the feed roller, you can obtain all types of buffing effects on all kinds of leather. The **buffing roller is coated by special rubber** and this allows a much higher grip between the roller and the abrasive paper, so that the buffing pressure can be considerably higher compared to the traditional roller buffing machines. This feature is particularly helpful when buffing sole leather (on reverse side), or similar materials and when you need high thickness removal. By using a special paper the machine can be used also like **leather polishing machine**.





The widest range of application of our band buffing machine can be achieved by the use of the inverter (which can be supplied as optional) for the continuous adjustment of the buffing roller speed. In that case, without need of changing the type or the grit of the abrasive paper, you can change the buffing effect on the same product. Low buffing roller speed is particularly important in case of heat sensible products (which can easily burn or melt in case of excessive friction is created with the buffing paper) whereas high speed helps to achieve top results in case of hard products or such products where the uniformity of the buffing effect is a must (like corrected grain).

We have recently introduced a **NEW VERSION OF MACHINE** with wider application range, including the very soft and thin leather. This new type of machine is equipped by **combined grip blade and driven grip roller**, to get easy feeding of the machine and easy spreading of the leather. To eliminate any fold before the de-dusting machine, the new model is equipped by a special **leather spreading device**. To eliminate idle times, the feed roller can be easily replaced thanks to the special system to open the grip roller (suitable **pneumatic tool** is supplied with the machine for faster operation of feed roller and abrasive paper replacement). The same machine can be used as **universal buffing** machine for all kinds of products



for **grain side and flesh side** buffing. The same machine can be used for an **aggressive buffing** (to get the surface of the product very rough to prepare the product for the application of cement and glue) and for a **very delicate and uniform buffing** (in case you need to improve the surface finish).



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The main advantages of our end-less band buffing machine are:

1. Fast and easy replacement of the abrasive paper. The replacement of the paper band takes only two minutes and the side opening of the machines makes the operation easy and safe. Moreover, in the case of a continuous working line, the ability to replace the buffing paper from the side, does not affect any feeding system or stacker. As the buffing roller is coated by rubber, there is no need to cover the buffing roller by backing paper, as on the traditional machines, to improve the grip between the paper and the roller (on traditional machines you need to replace the base paper quite frequently to avoid sliding and scratching of the abrasive paper). The easy and fast replacement of the paper is also appreciated in case of doing some trials on new products, when you have to test different papers and different adjustments in order to achieve the best result. The used paper (in case it is not completely worn out) can be removed from the machine without any damage and can be stored for further use.







2. Longer life of buffing paper. The yield of

the buffing paper is considerably higher on the band buffing machine thanks to the natural cooling and cleaning effect of the movement of the paper band between the buffing and the tracking roller. Of course the comparison has been done on same quantity of paper and we can state that, by the band buffing machine, **you can use less paper per unit of surface of product** than in the case of roller buffing machines. You can also save time thanks to the lower frequency of replacement of the abrasive paper.

3. Superior buffing accuracy. The buffing roller of our machine is not equipped with a longitudinal oscillation movement (which is indispensable on good quality roller buffing machines). That means that we can use high precision, gap free bearings which are not affected by rapid wear due to the oscillation and which can bear uninterrupted operation for years. The **oscillation of the buffing paper** is achieved by the paper itself and even the frequency and the longitudinal movement can be adjusted.





4. Higher uniformity of the buffing effect and absence of "shading" and "chattering marks". The use of pre-jointed

buffing paper belts, prevents any error in the fitting of the paper (chattering marks are frequently caused by overlapping of the buffing paper) and the absence of overheating of the buffing roller avoids any deformation of the buffing roller (the overheating of the roller is one of main problems of traditional buffing machines). On our machine you can be sure to get a constant buffing effect from starting up of the machine, until the end of the working shift, even in case of uninterrupted use of the machine. This is the main advantage of the band

buffing machine compared to roller buffing machines, as we avoid the frequent setting up of the work thickness, to compensate the fast wear of buffing paper and the heating of the buffing roller.



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5. Absence of overheating of the buffing roller. On traditional roller buffing machine the heat generated by the friction between the abrasive paper and the product is transferred to the buffing roller and causes a progressive overheating of the roller itself. Even cooling systems are not sufficient to keep the roller temperature under control, without affecting the performance of the machine (in case of excessive temperature of the buffing roller of the traditional buffing machines, you are compelled to reduce either the feeding speed or the buffing pressure). On our band buffing machine, the heat generated by the buffing friction is dispersed by the paper during its movement between the rollers and does not affect the



buffing roller. The temperature of the buffing roller keeps very near to the ambient temperature without the need for any cooling system. Consequently the performance of the machine is far better than the roller machine.



6. Safer use and operation of the machine. Thanks to the absence of longitudinal movement of the buffing roller, it is possible to fit a safety brake directly on the buffing roller shaft. The **disk brake can stop the machine in very short time**, in case of the operation of the safety device or in case of the interruption of power supply or a compressed air pressure drop. The **side replacement of the paper band protects the operator** from any contact with hazardous parts.



The precision and reliability of the end-less band buffing machine has allowed its use even for many kinds of **products in rolls** either for the **plain buffing** (nubuck, peach pile and velour) or for the exclusive "pattern buffing" (to reproduce on the surface of the product many types of designs only by an abrasive effect).

The absence of overheating of the buffing roller and the constant cleaning of the abrasive paper are indispensable to guarantee the production of **thousands of metres of products with absolute constant quality of the buffing.**

For the continuous products in rolls or in plaits, the buffing machine has to be

completed with some special **additional items like feed and tension control units** and PLC control to keep all buffing parameters under control. The continuous buffing lines can also be completed by **suitable de-dusting systems** that can provide a perfect cleaning of each type of product by means of to the combined action of blowing heads, rotating brushes and suction hoods.





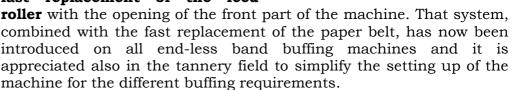
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Thanks to some long terms trials on many types of products, the buffing line can be **used for most of the flexible products like textile** (cotton, polyester, poly-cotton, wool, silk, denim, woven, tricot, warp knitted, velour, flock etc.), **non woven, microfibres, man made leather** (PU and PVC), **bonded leather, paperboard, cork, rubber, technical fabrics** (to improve the breathing and the touch) and many more types of products.

One of the exclusive features of the machine is the possibility of be used for the "pattern sueding" to get many types of products designed by means of the action of the abrasive paper on the product supported by a special engraved feed roller. That special finishing effect is really enhancing the flexibility of the machine making it the most advanced buffing machine in the world. Some trials of "pattern buffing" have also be done on leather with a real new and beautiful effect on grain side and on suede.



To enable a fast change of the design of the pattern buffing, we have studied a new system for the fast replacement of the feed



Aletti have always invested **many resources in the research and development** of all their machines and in the last years they have concentrated on the improvement of all their buffing machines, to become **world leaders in that field**. The high technology end-less belt buffing machine VELOX SN has been improved and renewed many times for the





Besides the tannery and textile field, this machine is used for the deep engraving of car seats warp knit fabric upholstery, with the "pattern exclusive sueding" technology that enables to get permanent effects on the fabric without affecting original features.



Other **special uses** of the belt buffing machine is on the **PU and PVC synthetic leather,** to get very uniform natural leather "nubuk" effect, with high production, regular quality and long life of abrasive papers.



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A special version of buffing machine has been designed for **extremely high precision calibration of PU and printing blankets** (required accuracy +/- 0,01 mm on the whole width of the product and from first to very last meter). This version of machine is provided by **digital control of work thickness** and PLC, forced cooling of buffing roller and of feed roller by sealed water circuit with **chiller.**

Great experience has been gathered also in the buffing of **bonded leather**, thanks to another special version of buffing machine and de-dusting machine. The main industrial producers of bonded leather in the world are using Aletti machines for the finishing of high quality products.

The non-woven field is another of the main market for the end-less belt buffing machine VELOX SN. The **extremely wide range of settings** (buffing roller rotation is adjustable from 150 to 1200 rpm), the many abrasive papers available, the natural cleaning and refreshing of the paper and the easy use of the machine allows to get top results in the thickness adjustment, in the preparation to finish and in the finishing of many **non woven products**.

The recent improvements of the feeding systems enable the machine to process also very **elastic products and very thin products.** All controls are designed to work in **both feeding systems**, i.e.





feed in (for most of textiles and for pattern sueding) and **feed out** (used for PU, PVC and sticky products (to get the buffing dust removed directly by the buffing machine, without need (in most cases) of any additional de-dusting.



