

## K.GE REEDS

### OBOE AND COR ANGLAIS REED

### MAKING MACHINE

## INSTRUCTION MANUAL

#### Foreword:

Unlike other "profile" machines previously designed and sold by other makers, this machine fully completes the reed to a fully finished and playable state. It is really not necessary to adjust the reed using a reed knife, as this machine has a variety of ways in which the reed can be adjusted to allow for the cane density and opening of the reed, which affect how hard a reed feels to blow. We believe that this machine is a revolutionary device, that will make the onerous task of reed making a much less time consuming one and more importantly, a more predictable and profitable process. Thanks to the computer designed template, you will be able to make perfectly balanced reeds time after time.

#### Machine Components:

Similarly, to profile machines made in the past, this machine has a template over which a roller travels. This roller or wheel is attached in a fixed way to a separate "arm" which slides back and forth. On this same "arm" the circular blade is also fixed, and it has a spring whose tension can be adjusted, to control how much force is exerted on a downward manner on the reed when it is being scraped. The reed is placed onto a fixed "plaque" and then clamped with a rotating device over the reed, to keep it absolutely still during the scraping process.

There is also a locking device or metal spoke attached to the base of the machine, which can be stood upright when the ring is slid down to its base and fits into a small hole at the base of the sliding arm. This metal spoke holds the sliding arm up and keeps it still, preventing damage of the blade and machine in general, while the machine is stored or carried around in its box. Be careful when putting the lid on, that the sponge attached to the inside of the lid rests on the handle, holding it steady. The lid will only go on neatly this way around.

There is a lever on the left hand end of the non sliding arm, which rotates the template and plaque from side to side, to allow the blade which slides only back and forth to scrape the sides and centre of the reed.

#### Operation of the Reed Making Machine:

Cut tip of your blank/tied on reed to length desired of finished reed.

To begin to prepare to scrape the reed, lift the sliding arm right up and rotate it all the way over so that the handle is resting on the base of the machine. Then look for the locking device, or upright metal spoke, that was just previously holding up the arm you just moved away from the template, and lift the metal ring at its base so that the spoke can be laid on its side on the base of the machine.

Slide the reed onto the plaque up to the mark or where desired. Be sure that the reed is exactly placed centrally upon the plaque.

Rotate the circular clamp by lifting slightly first and slide over throat or back of reed whilst holding reed completely still on plaque with your thumb and fore finger of your left hand very tightly. Then when the clamp has a gentle hold of the reed, place thumb and forefinger of the right hand each side of the clamp and use your thumb to slide the clamp to firmly grip the reed (about half way up the clamp should do it). If the clamp is too tight, the tip of the reed will lift away from the plaque, which will cause significant problems when scraping the reed.

**Note:** when the clamp is firmly in place, double check that the reed is still exactly centrally placed on the plaque before commencing the scrape.

Proceed to gently lower the sliding arm and blade onto the reed.

Commence scraping the tip very lightly with only gentle hand pressure on the sliding arm at first. Whilst scraping, use lever to the left of the template to rotate the arm where the blank reed is fixed from side to side under the blade, so that the reed is scraped evenly across.

**Warning; be careful not to scrape too large amounts of cane at once at the beginning of the reed making process at the tip of the reed. It is very easy to "tear" or "rip" the tip if too much is scraped too quickly there. Apply very light pressure to the sliding arm when scraping the tip area initially. When you have taken the bulk of the cane from this area, you can begin to exert equal pressure on the sliding arm over all parts of the reed whilst scraping.**

When the bulk of cane has been scraped from the tip, commence exerting even pressure down on the sliding arm handle in both directions while scraping with the sliding arm. Gradually, less and less cane will be coming off until all the cane that can be removed with the machine set up in its current state, will have been removed.

Slide the clamp off back the way it went on and repeat the entire process on the other side of the reed. You will notice a mark on the bark area of the reed which will be an aid to you to place the reed in the identical position on the plaque when you turn the reed over to scrape the other side. This indentation in the bark will fill out after you have finished the reed and played it a little.

Measure the thickness of the reed with a micrometer on both sides, particularly the tip, and adjust the machine accordingly to get the thickness of the tip to its desired measurement and then blow your reed. It should play straight away. If you wish to make it softer, try lessening the tension of the spring by releasing the screw above it a couple of turns and replace the reed precisely on the plaque and scrape again, and you should remove a further small amount of cane from the back of the scrape. Re-test the reed by playing until it is at the strength you desire.

### **Adjustable Aspects of the K.GE Reed Making Machine:**

1/ The height to which the roller is set in relation to the blade is controlled by a large rotating screw on the sliding arm with the roller directly underneath, which is above the template on the other fixed or non sliding arm. This large adjusting screw is locked in place by a smaller screw on the side of the sliding arm. To adjust the amount scraped overall on the blank, (in particular in relation to the thickness of the tip of the reed) rotate the adjusting screw anti-clockwise to take more cane from the reed and lock it into place immediately with the side screw to prevent it moving during scraping. Use a dial micrometer to measure the thickness of the tip as you go, so you know if you have this screw in the ideal place for your finished reed measurements.

2/ The screw on the other end of the sliding arm, above the blade, controls the tension of the spring right behind the blade. If you wish to take more cane from the back of your reed, release the tension of the spring by winding this screw out a turn or two. When the screw is fully turned in, the spring is at its greatest tension and pushes the reed firmly onto the plaque on the other fixed arm. If you release the spring, the reed sits off the plaque a little, allowing the blade to take more cane where the curvature of the reed is most i.e. at the throat or back of the reed.

3/ Sliding the reed further onto the plaque, will give a reed with a longer tip. (There is a mark across the plaque which you can use as a guide and if the reed is placed right up to this mark, the tip will be approximately 1.5mm long)

4/ Hand pressure is also a controlling feature of this machine, especially in regard to the use of the spring. You don't need to lift the blade away from the reed or the roller from the template after each scrape, so you are able to apply equal force

back **and** forth on the sliding arm handle. This allows for a much smoother and even scraping action.

5/ Length of scrape can be adjusted by unscrewing the clasp attached to the right end of the template and sliding the clasp back or forward to either lengthen or shorten the scrape of the reed, whichever you prefer.

### **Maintenance:**

The blade can be made best use of by loosening the screw that fixes it to the machine and rotating it to sharper side. If all sides or parts of the blade are finally used, remove the blade from the machine altogether by taking the screw completely off. Then, with a flat sheet of 1200 grit sandpaper, use your forefinger on the "top" of the hat shaped blade and rotate it around and around the sand paper, until it has regained its edge. Again, be careful when putting the lid on, that the sponge attached to the inside of the lid rests on the handle, holding it steady. The lid will only go on neatly this way around.

In addition, as part of the service that KGE REEDS extends to customers who purchase this machine, we offer one free "service: or maintenance" of this machine. We will adjust it and set it up to scrape reeds evenly as it was when it was sold to you. If any parts are damaged, we will replace them, charging only for the cost of the parts, but not for the time taken to fix them onto the machine and adjust it. The cost of the various parts are as follows; \$US50 for a new blade, \$US300 for a new template and \$US500 for a new plaque. (Cost of shipping the machine to and from our Shanghai workshop for its service, will be the responsibility of the customer)

In the future, after you have made use of your one free service, there will be a charge of \$US300 (on top of any parts needing replacement), to cover the cost of the time taken to service the machine in our workshop.

***Warning: Please do not attempt to adjust the alignment of the template and the plaque by yourself. The tolerances on this machine are very fine and you may cause more problems than those which you are trying to solve. If it is evident that the machine has been tampered with, then we will be unable to offer the one free service of this machine to you as stated above.***

### **Machine components as displayed in diagram: (see page 6)**

**a) template**

**b) roller wheel**

**c) sliding and lifting arm**

**d) circular blade for scraping reed**

**e) spring**

**f) fixed plaque**

g) rotating clamp

h) metal locking spoke

i) metal ring to fix metal locking spoke ("h") upright

j) hole in which metal locking spoke ("h") rests

k) rotating lever

l) adjusting screw for spring ("e") tension

m) adjusting screw for roller position ("b") (affects thickness of scrape)

n) handle (for controlling scraping and moving sliding arm)

p) locking screw for roller position adjuster "m"

q) adjustable clasp (affecting overall scrape length)

r) screw, that when released, allows adjustment of clasp "q"

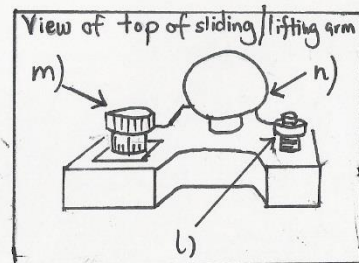
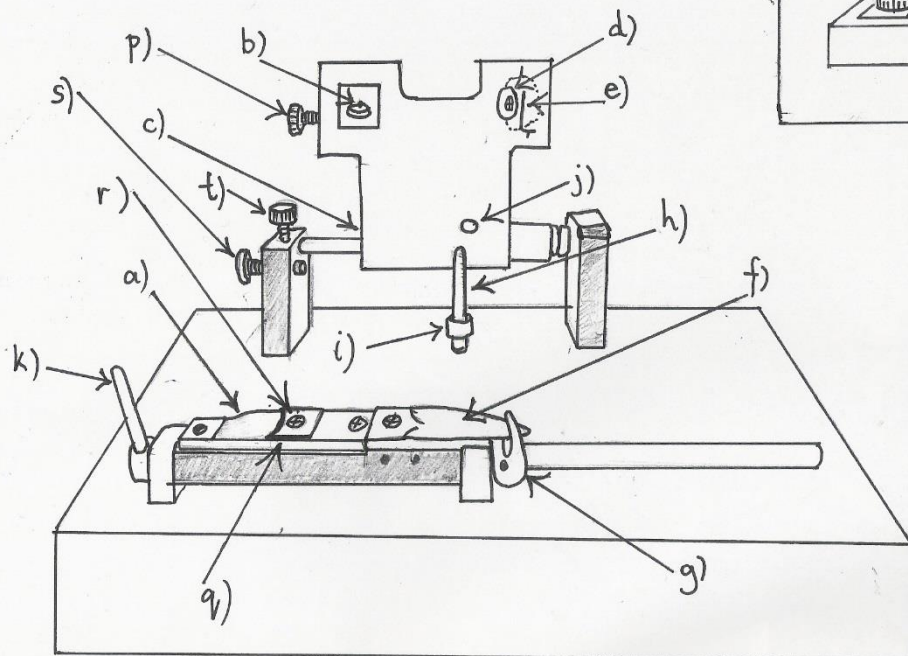
s) adjuster that controls distance blade travels passed the tip of the reed

t) locking screw for adjuster "s"

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Reed Making Machine Diagram

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## **Question&Answer**

**Q: What's the difference of the template designed for side-ratio 0.15 or 0.18?**

**A: The difference between the 0.15 and 0.18 template depends on the setting of your Gouging machine. It refers to the side/Centre ratio. If your gouging machine leaves a centre side ratio of 0.15, meaning, for a 0.60mm centre you have 0.45 thick sides (once shaped).**

**Q: If I adjust the length of the scrape, will it affect the overall proportion (the back in relation to the tip etc.) of the reed?**

**A: Adjusting the length of the scrape will not affect any other part of the scrape other than the length. Each variable parameter on the machine only affects the given parameter being changed.**