

ERCOLINA

INSTRUCTIONS MANUAL

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figure 1

WD-40 (or similar) can be used to loosen and lubricate the mechanism. Spray the lubricant, using the supplied tube, directly on the part affected by the friction while simultaneously operating the mechanism to work the oil in. If the mechanism is jammed, check that the fan screws are not tightened too much. If so, loosen them ½ a turn (Figure 2). Try to move the mechanism again. Wipe away any excess WD-40 before using the Ercolina.

Whenever the fan screws are loosened (or become loose). Thread-locking compound (Figure 3) must be reapplied before they are retightened.

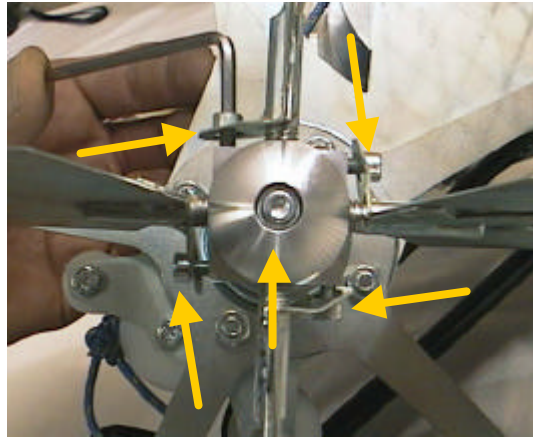


figure 2



figure 3

Sale conditions

By buying the Ercolina, the buyer acknowledges the following:

- **The Ercolina is built to give partial protection from damage caused by its movable parts when in use. This should be sufficient to avoid accidental contacts.**
- **A wrong use of the Ercolina and/or careless interference with its parts when in use, or incorrect installation may cause damage to people or objects. Also, please keep children away from moving parts. Use by children should be closely supervised by a responsible adult.**
- **The Ercolina has been built with precision to be a valuable training aid, but it is not guaranteed to be in conformity with all international safety regulations. Use common sense when working with this machine.**
- **The manufacturer will not be liable for any damages incurred by the use or misuse of the Ercolina. The user is solely responsible for assuring that this machine is used in accordance with the manufacturer's instructions and for carrying out regular maintenance on the machine in order to keep it in good, safe working order.**
- **No implied warranties are granted by the manufacturer.***
- **Users must be aware of the present conditions.**

(*) Components with manufacturing faults will be replaced at no charge except for shipping fees. Parts which are damaged by misuse or normal wear-and-tear are not included in this warranty. This warranty is effective for one year from the date of purchase.

How to unpack Ercolina

To unpack Ercolina without damaging the wrapping, do as follows:



- 1- Put the box on a flat surface with the arrows pointing upwards.



- 2- Open the box and then lift out the middle section of the foam packing material.



- 3- Lift Ercolina out of the box together with the end sections of the foam packing material.



8 mm spanners. On the right is the T-type socket spanner. On the left is a hex nut-driver. Open end and box end spanners shown in the middle.

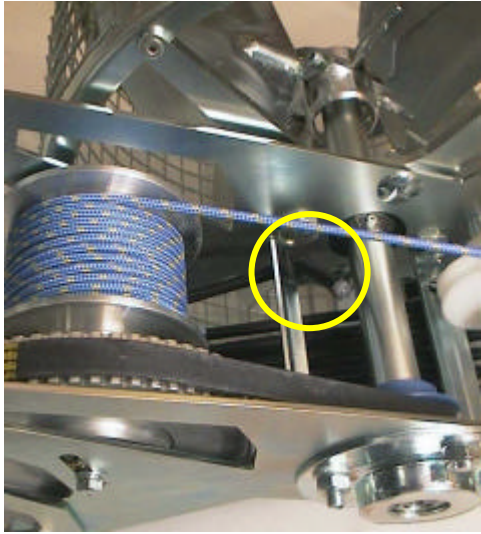


10mm spanners. T-type socket spanner in the middle, nut driver on the right and open-end spanner on the left.



3 mm Allen keys. T-type key shown on the right.

Since the fan-blade adjusting mechanism is exposed to high levels of dust, it may become stiff and require cleaning and lubrication.



20- Cut away any excess cord and make a knot in the end of the cord.

Adjust the pulleys as described in the chapter [Adjustments](#).

[Cord replacement](#)

Cord wear is inevitable.

Standard 3mm static climbing accessory cord works well.

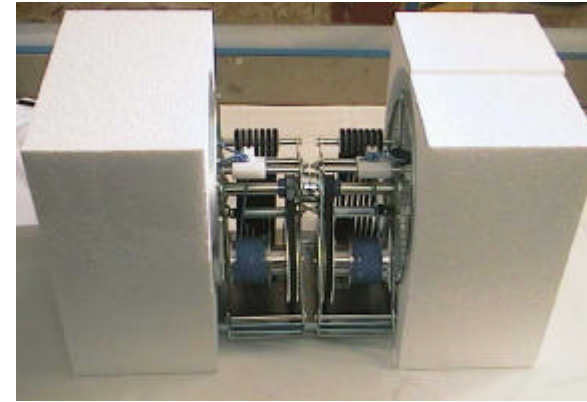
Ercolina requires 2.6 meters of this cord on each side, which is available at most outdoor sporting shops which sell rock climbing gear.

When replacing the cord, take note of the original installation and be sure to install the new cord in the same way as the original.

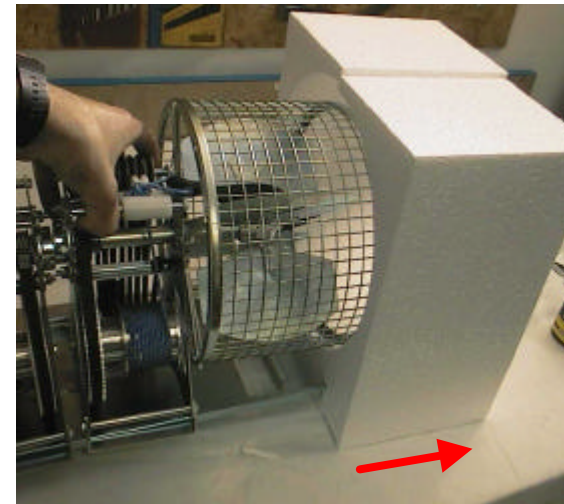
[Tools and useful products](#)

The tools needed to perform the above-mentioned maintenance are not supplied with the Ercolina. If you do not already own the needed tools, most hardware stores or workshops should have them available.

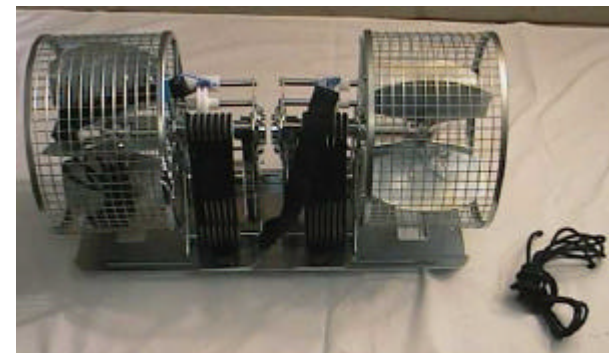
Two socket spanner sizes (8, 10mm T-type, box and open-end shown, ratchet types with extensions are also appropriate) as well as a 3mm Allen key should be sufficient to carry out all tightening and maintenance operations.



4- Put the box aside.



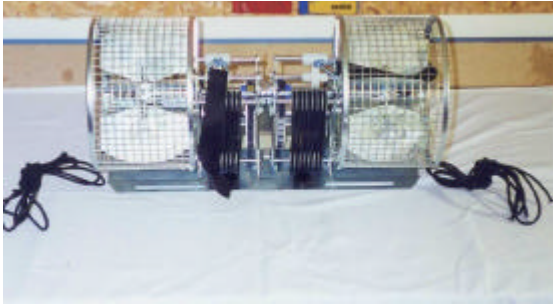
5- Lift Ercolina while moving the end sections of the foam packing sideways.



6- Remove the spare elastic cord (if included) and the loop handles from the fan cages.

Components

After unpacking the Ercolina, let's learn about its components. This will allow for its easy installation, use and maintenance. To disassemble the Ercolina do as follows:



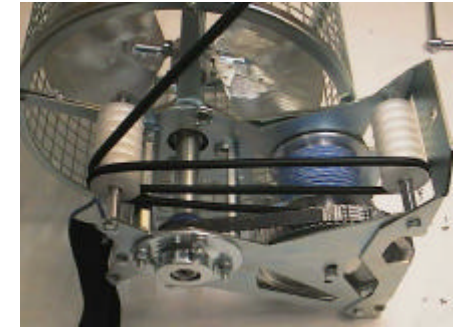
- 1- Place the Ercolina on a clean work bench that is at a comfortable height.



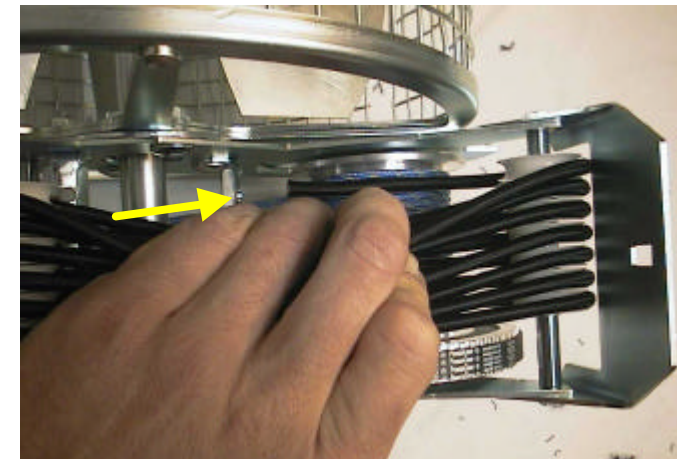
- 2- Loosen the blockage knobs and take out the screws.



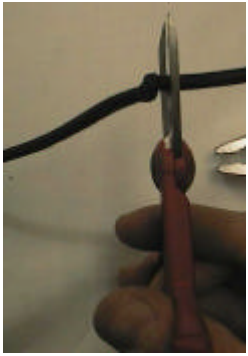
- 3- Slightly lift the fan and slide it through the supporting panel. This should happen smoothly. If not, don't force it, but check the reason for the blockage. Repeat the procedure for the second fan.



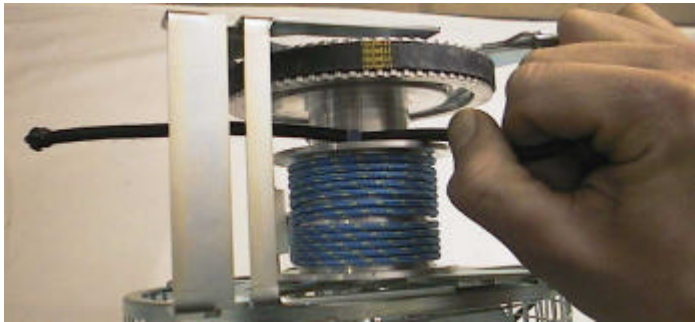
17- Wrap the cord around the pulley assembly as shown in the figures



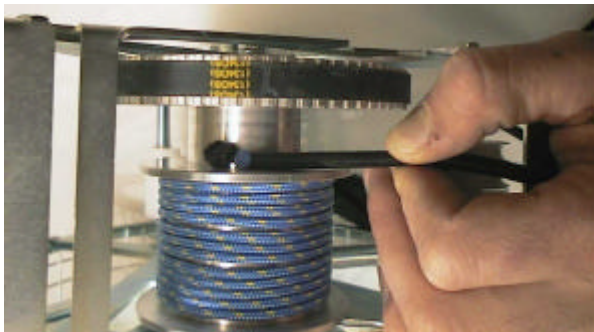
18- Insert the end of the cord through the hole in crossbar (see the arrow).



14- Cut away the extraneous cord close to the knot and use a lighter or match (carefully) to seal the cut end of the cord so the no loose threads are present.



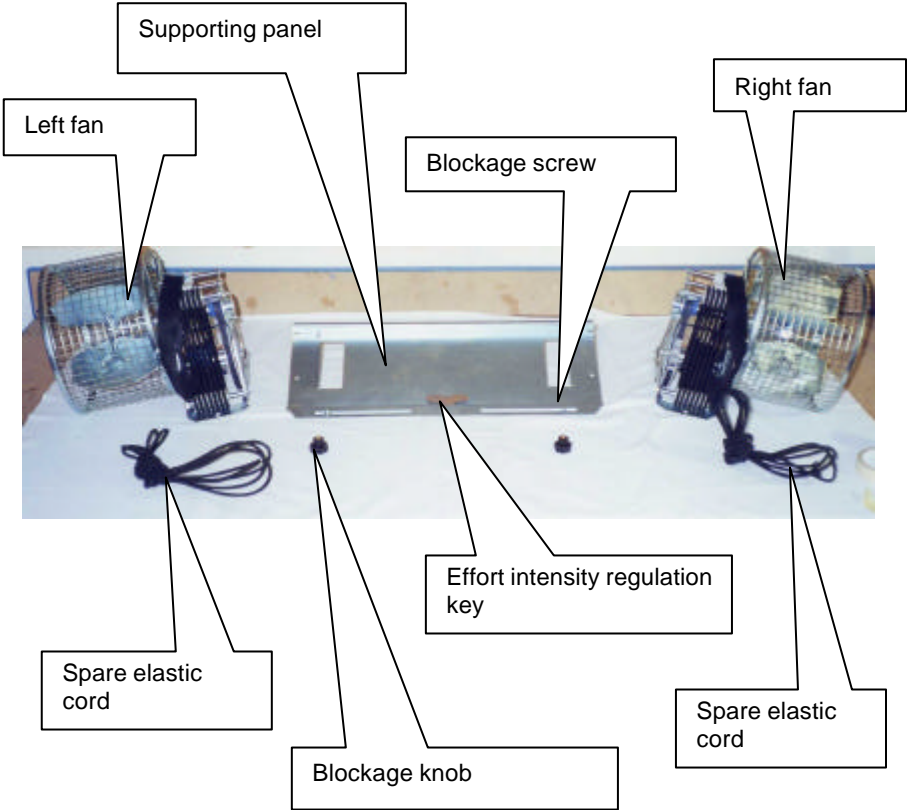
15- Pull the cord through the eyelet until the knot rests in its operating position.



16- Make sure the knot rests close to the eyelet.



4- Proseguire come punto 3 anche per il secondo ventilatore. Insert the regulation key in the slit in the supporting panel.



Installation

Installing the Ercolina requires skills equal to those necessary for basic house maintenance/repair.

For height adjustment see the chapter [Caution and advice for correct use](#).

Installing the Ercolina depends on the type of surface it will be installed on: cement wall, wooden wall, gym wall bars, tree, fence, etc.

CAUTION

In all cases, the Ercolina must be firmly fixed to its supporting surface. If installed properly, it should be able to carry a weight equal to the user's weight without the support moving.

A safe installation requires adequate fasteners (see Figure.1): metal or plastic expansion screws, wood screws metal hooks, etc.

Holes have been predrilled in the supporting panel to be used when fixing the Ercolina to a wall.

Preferably, use the hole indicated by arrow A in Figure 2.

The gap indicated by "arrow B", originally conceived to hold the machine when transporting it, can be utilized for a quick or temporary installation on hooks screwed to the wall (available in all hardware stores).

The square hole (Figure 2, arrow C) (designed for use with the height adjustment optional kit) can also be used to make the installation more secure.

In Figure 3 you can see how to correctly fasten the supporting panel using a metal hook (D in Figure 3) using an M6 screw (hole in Figure 2, arrow A).

The hooks (flat iron 20mm x 4mm- various shapes according to need) can be provided upon request or self made.

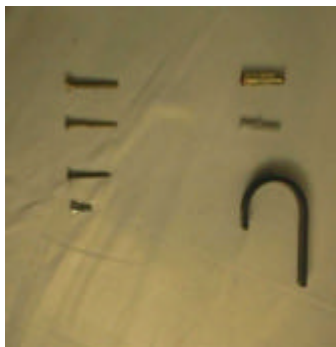


figure 1

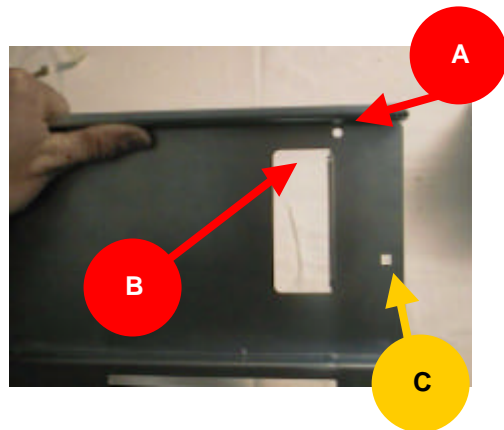
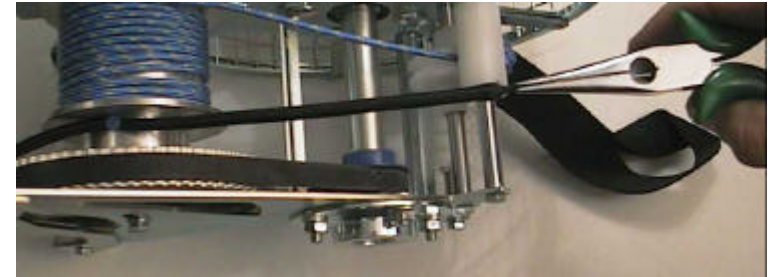


figure 2



11- Thread the cord through the eyelet and pull a sufficient amount through so that a knot can be easily made.



12- Tie the cord off securely using a simple overhand knot.



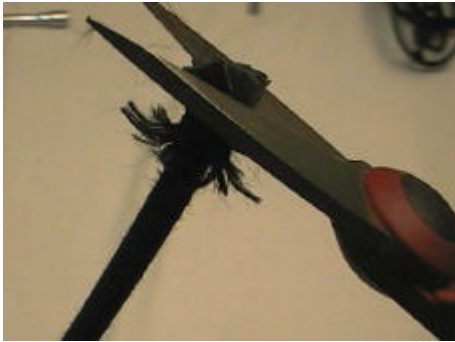
13- Without damaging the cord or eyelet, pull the knot tight with pliers.



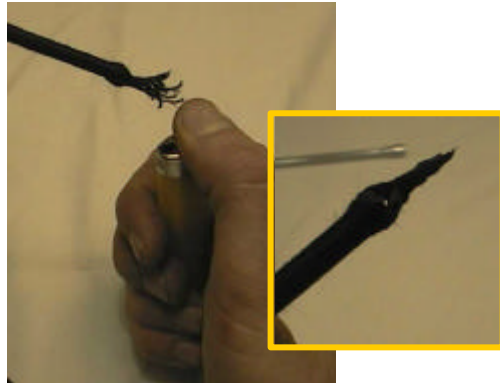
6- In order to facilitate the mounting of the cord, the ends need to be prepared as follows. ...



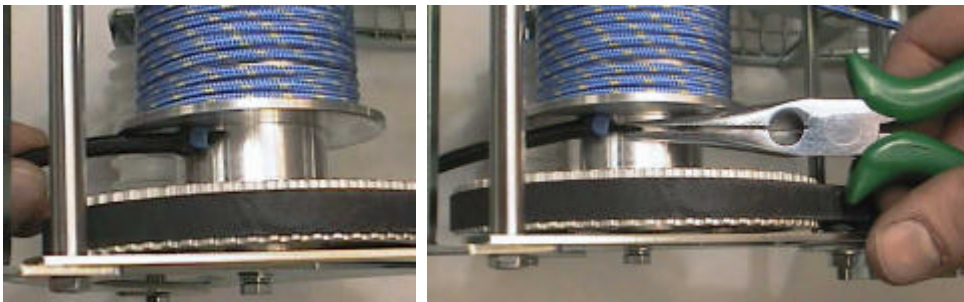
7- Roll the sheath back from the end of the cord so that several millimeters of the core are exposed.



8- Cut about 10mm from the end of the core, then pull the sheath back into place so that the end



9- ... of the sheath can be melted and moulded to a pointed shape.



10- This pointed end should be inserted through the eyelet in the drum..

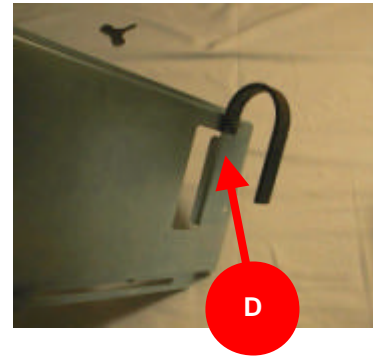


figure 3



figure 4

It is very important that the fixing screw (Figure 3, arrow D) be very tight so that the hook and the supporting panel behave like a one piece system. Before using the Ercolina, be sure that you have met all safety requirements and all fasteners are tight.

In Figure 4 you can see the Ercolina supporting panel installed on a wall using expansion bolts and screws.

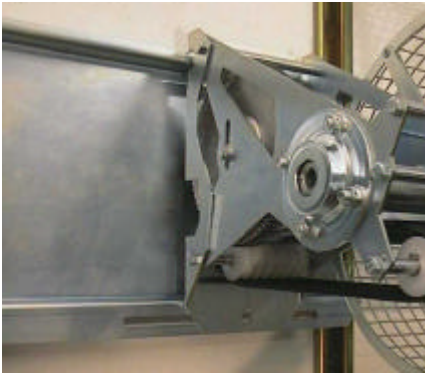
After fixing the supporting panel to the wall you can reinsert the fans as follows:



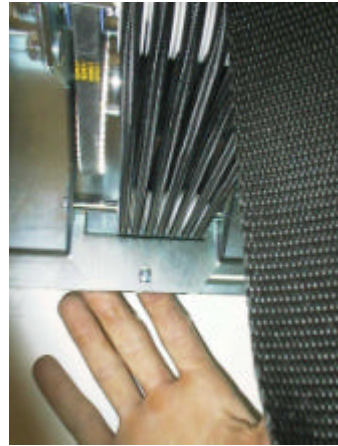
1- Lift the fan until close to the upper ridge of the supporting panel. (pointed out by the arrow)



2- Lower the fan keeping it angled so that it can be easily hooked onto the ridge of the supporting panel.



3- Rotate the fan assembly downwards until it rests fully on the supporting panel. This should happen smoothly, if not, don't force it, just repeat 1 and 2 until the assembly sits properly on the supporting panel.



4 Now that the fan assembly is hooked on the supporting panel, it needs to be fastened with the blocking screw.



5- Assure that the square seat under the head of the screw sits properly in the square hole of the fan assembly. Holding the screw with your fingers, put on the blocking knob and tighten securely.



6- Repeat points 1 to 5 for second fan.

intensity and duration of use. If the average use is ½ a day, the cord can last for several years without needing to be replaced. If the usage is intense, then its lifetime could be 6 to 8 months. Short cord lifetimes are usually attributed to defective cord. Ercolina is now sold with a spare elastic cord. Replacement elastic cords can be provided at a cost to the customer.

The elastic cord used in the Ercolina has the following features.

- Can be stretched to twice its original length.
- Unstretched diameter is between 5mm and 5.5mm
- Cord sheath is of soft material.
- Required length for each fan: 3.5m.

Dismount the fan from the supporting panel as described in [Components](#) section and proceed as follows:



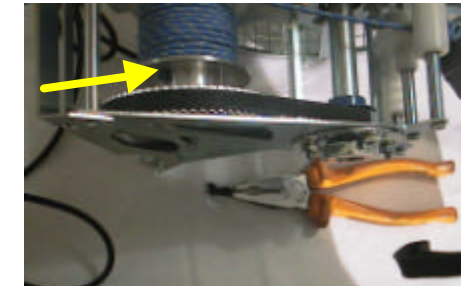
1- Cut the elastic cord to be replaced near the hole shown in the figure.



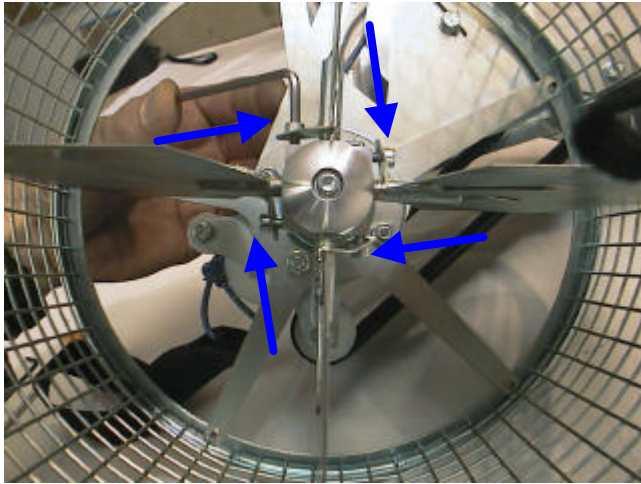
2- Remove the old cord from the pulleys.



4- Remove the cord from the eyelet in the drum.



5- The new cord needs to be hooked into the eyelet in the drum in the direction of the arrow.



All fan screws are held in place using a liquid thread-locking compound. These screws are checked using a 3mm hex (Allen) key with only gentle force to be applied. **These screws must not be overtightened.** If they tend to become loose, use a stronger thread locking compound.



The use of a hex key with a T-handle could be more practical than the standard hex key for this adjustment.

[Elastic cord replacement](#)

The life span of the elastic cord depends on the quality of the cord as well as the

Installation with height adjustment device (optional)

The height adjustment device allows for correct use of the Ercolina when used by athletes of different heights.

This device consists of two rails that are fixed to the wall (see figure 1). The mounting panel is inserted through the rails and then can be moved up or down to adjust the height of the Ercolina.

When the correct height is achieved, the panel can be blocked by using the provided screws. (see Figures 1 and 2)

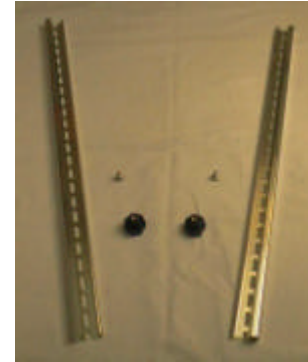


figure 1



figure 2

The two rails need to be mounted parallel to each other on a flat, even wall following the safety instructions as in [Installation](#). Assure that each rail is firmly fixed with at least two expansion screws so that a force equal to the weight of the athlete can be applied to it without any movement in the mounting.



figure 3

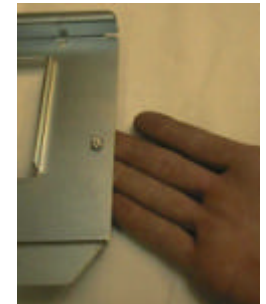


figure 4

In figures 3,4 and 5 one sees how to apply screws and blockage knobs to the mounting panel.

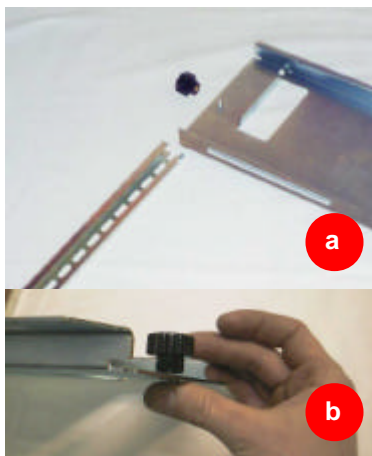


figure 5

After fastening the rails to the wall, slide the panel through, either from top or bottom (Figure 6a) When the desired height is reached, tighten the blocking knobs securely to fix the position of the machine (Figure.6b).

Caution: Each rail must be mounted by using at least two sturdy fasteners that allow a force equal to at least to the weight of the athlete to be applied without movement in the mounting.

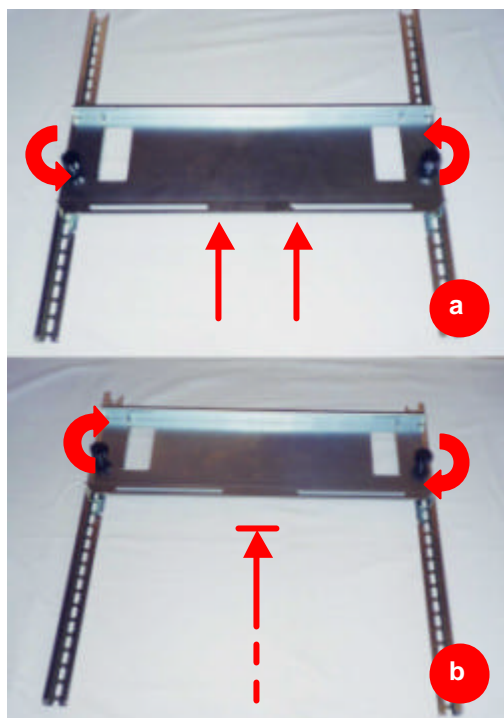


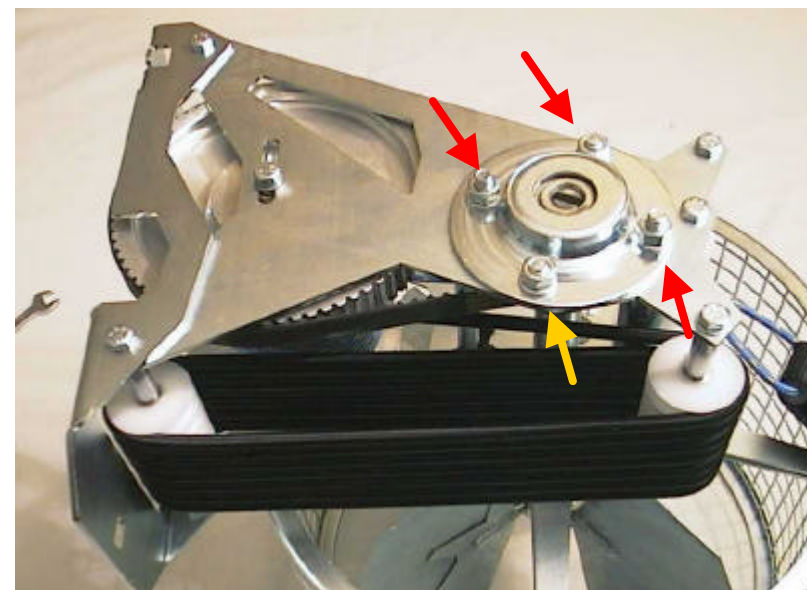
figure 6

Mount the fans as indicated in **Installation**.

Height adjustments can normally be made without removing the fans by just loosening the blocking knobs when the fans are in the minimum shoulder width position. (Figure 7).



figure 7



M10 screws need to be tightened with a 10mm hexagonal (box-end) spanner.



In the above picture, the screws are checked with an 8mm hex-key (Allen key) spanner.

All the abovementioned screws are on the opposite side of the fan.

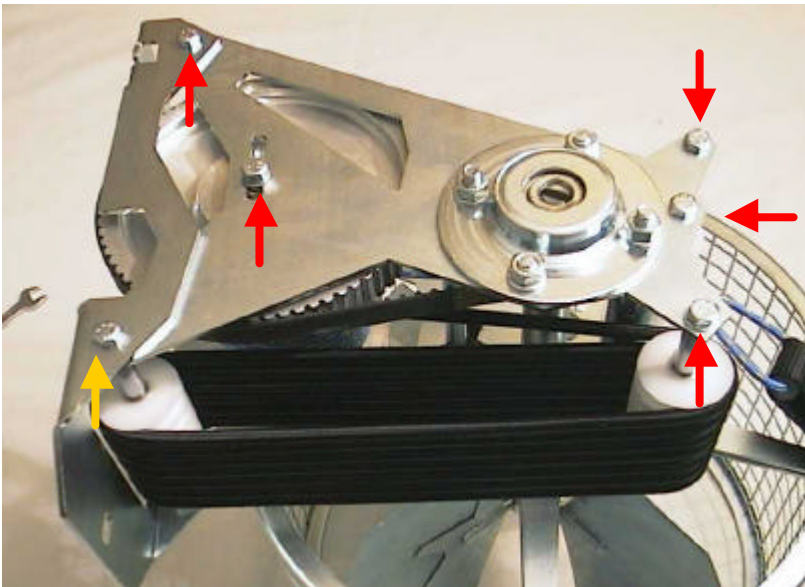
Checking for loose fasteners and screws

All screws are already tightly fastened when Ercolina is assembled. Each Ercolina is checked and tested before being sold. However, it is recommended that all screws and fasteners are checked for tightness and integrity on a regular basis, especially after hard, extended use.

Often, unusual noises or vibrations are caused by loose screws. If you notice any abnormal behavior (vibration, noises), check that all fasteners are tight .

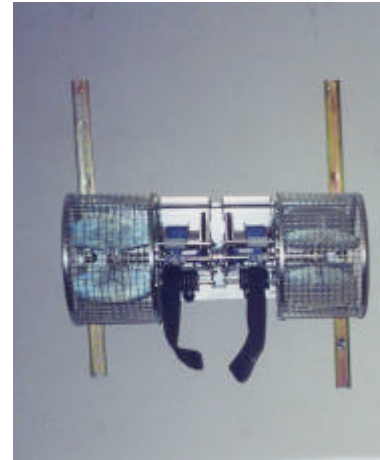
To do this, the fans must be dismantled from the supporting panel as described in the **Components** section.

Check the fasteners indicated by the arrows in the following figures.

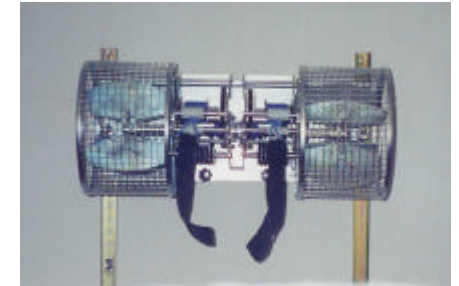


M5 screws need to be tightened with an 8mm hexagonal (box-end) spanner.

Considering the weight of the Ercolina (8kg) all height adjustments must be made by adults. (It is recommended that two people perform this adjustment, one to support the machine and the other to loosen and tighten the knobs.)



1- Lift and hold Ercolina while loosening knobs .



2- Lift and move Ercolina up or down to reach desired height and then tighten knobs

Cautions and instructions for correct use

SALE CONDITIONS

By buying the Ercolina, the buyer acknowledges the following:

The Ercolina is built to give partial protection from damage caused by its movable parts when in use. This should be sufficient to avoid accidental contacts.

A wrong use of the Ercolina and/or careless interference with its parts when in use, or incorrect installation may cause damage to people or objects.

The Ercolina has been built with accuracy to be a valid training aid, but it is not guaranteed to be in conformity with the existing safety regulations.

The manufacturer will not pay for any damage to people or things (*) that may be caused by the use of the Ercolina.

Users must be aware of the present conditions.

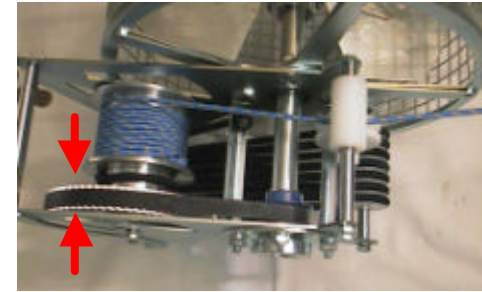
(*) Except for Ercolina parts damage due to manufacturing faults and not deriving from normal consumption. Faulty parts will be replaced at no charge except for shipping fees.

Installation height

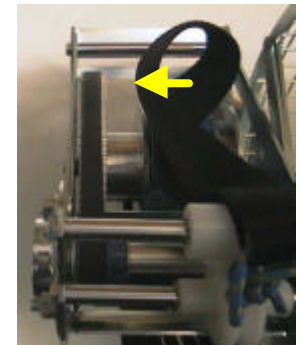
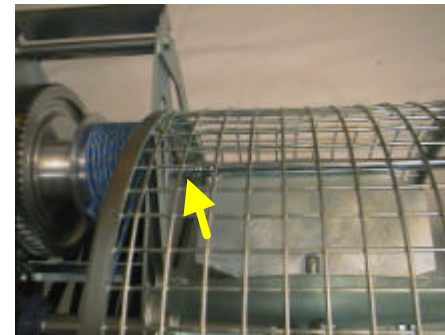
The height of installation is at the discretion of the athlete (or coach) depending on whether a standing or sitting training position is desired. It is recommended that the Ercolina is mounted in such a way that the training movements closely mimic the actual movements of the particular sport. For nordic skiing or skirolling, the fan axle should be at the same level as the athlete's height. If there is a need to have the machine higher than this (for safety reasons, etc.), training can be carried out by standing back from the machine more than if the machine was mounted at the recommended height.

The following suggestions can also be useful in determining the correct height:

- Every Ercolina can be personalized by varying the length and/or diameter of the elastic cord. such that the training emphasis can be transferred to different parts of the stroke.



11- Pull the cord slowly to check that positioning of the transmission belt on the pulley is correct.



12- If the positioning of the transmission belt needs adjustment, loosen the second fixing screw. Moving it upwards or downwards allows one to obtain proper positioning and operation of the transmission belt.



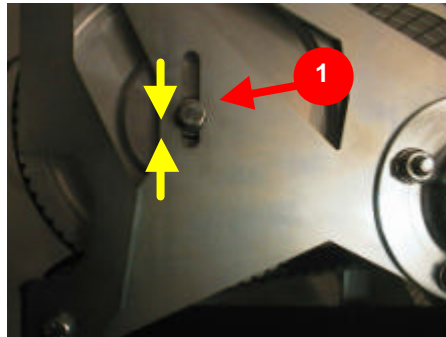
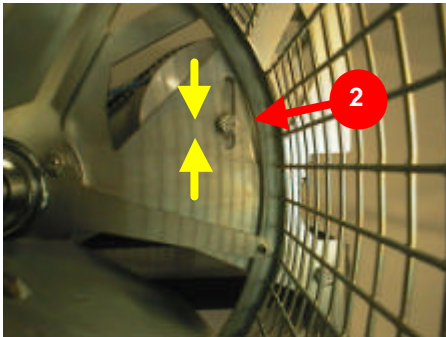
7- Again, the lubrication hole can be seen.



8- Apply 4-5 drops of normal engine oil using the dropper bottle.



9- Reinsert the fixing screw, making sure it is properly inserted before tightening it with the socket spanner.

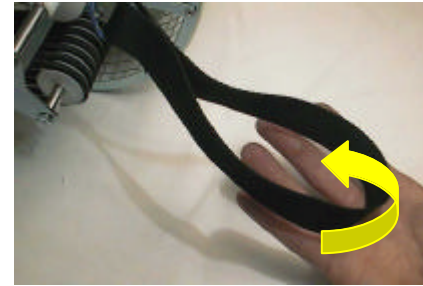


10- Check that this fixing screw is at the same height as the first fixing screw on the other side.

- The height and distance from the athlete also affect the distribution of training emphasis in the stroke by changing the relationship between horizontal and vertical forces.

How to grip the handle

In order to grip the handles properly, do as follows:



1- rotate the handle...



2-until the loop looks like this



3- Insert your hand through the loop. The loop must not be folded or kinked.

Break-in period

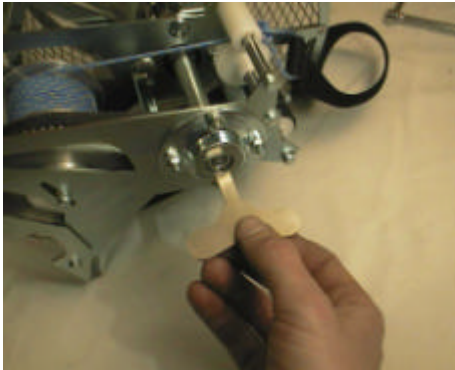
The machine is normally tested before sale. Some types of elastic cord can twist or stretch during the first few hours of use. If this happens, it will have to be adjusted by elastic cord rotating of all length.

If this happens repeatedly, the cord needs to be replaced. Cord replacement

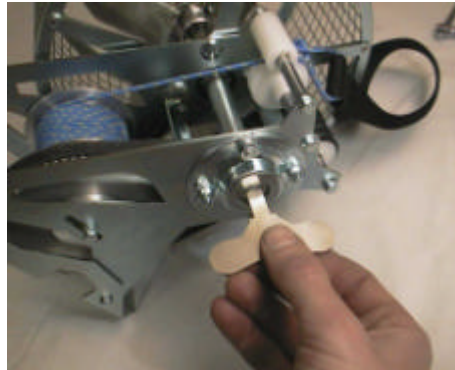
Adjustments

Effort intensity adjustment

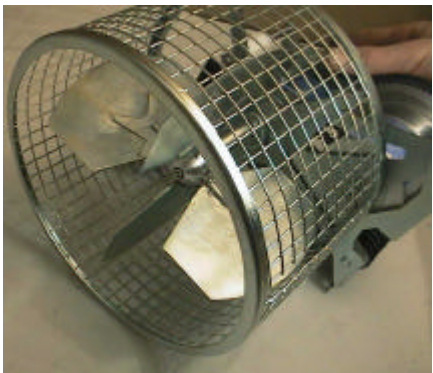
To adjust the effort intensity, do as follows:



1- Adjustments are normally made while the Ercolina is mounted on its supporting panel.



2- Insert the provided regulation key into the slot in the end of the fan axle

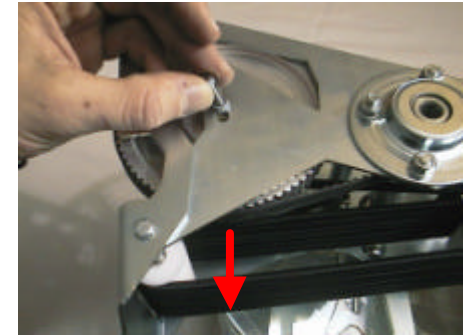


3- This is the maximum effort position. To reduce the effort, turn the key clockwise while preventing the fan from turning using your other hand.

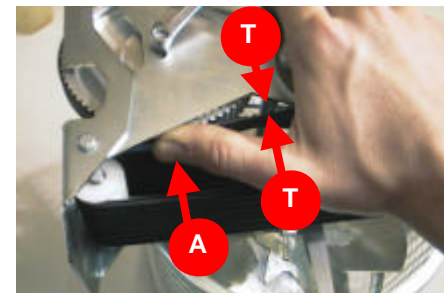
4- Make sure you count the number of key turns, so that you can do the same with the second fan. Starting from the maximum effort position you can make a training table containing different effort intensity values according to the type of training you want to do.



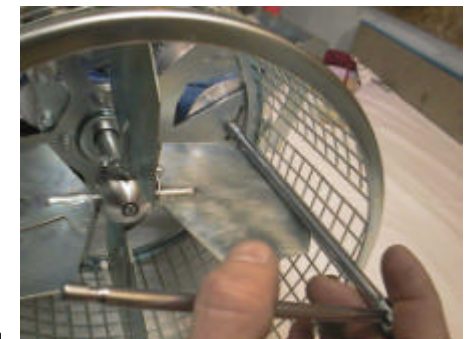
The two fixing screws are mounted using spring locking washers to prevent accidental loosening of the screws during use. The locking washer must sit on top of the flat washer (i.e. locking washer between the bolt head and the flat washer).



4- Reinsert the fixing screw. If needed, move the pulley a little to assure correct insertion of the screw.



Tighten the screw while pushing the pulley in the direction of arrow A, so that the belt is in tension. The correct tension is indicated by a belt deflection of 3-5mm in the direction of T



6- Repeat the procedure on the other side of the pulley using a hexagonal 8mm socket spanner (with extension).

Maintenance

Ercolina's maintenance depends on the amount of usage and ambient conditions. If used indoors for about half an hour a day, it does not require any specific maintenance except for regularly tightening loose parts.

If used by a team or group of athletes, both indoor and outdoor and with harsh climatic conditions, moved from one place to another, used in a gym, etc. for several hours a day, a complete check should be carried out at least once a year. All maintenance should be performed on a clean workbench at a comfortable height.

Lubrication

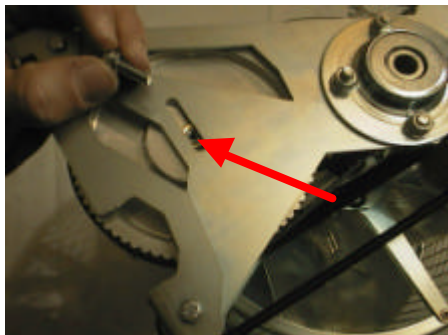
Dismount the fan from the supporting panel as shown in

Components

Then proceed as follows for each fan:



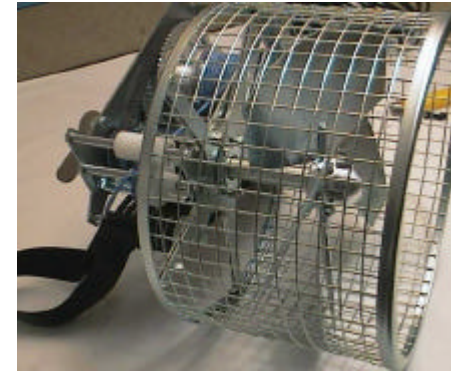
- 1- Unfasten the fixing screw using an 8mm box-end (hexagonal) spanner.



- 2- By doing this, you uncover the lubrication hole.



- 3- Use an oil bottle with a dropper attached, so that about a dozen drops of normal engine oil can be easily inserted.



- 5- Here, the fan blades are in the minimum effort position: to increase effort turn the key anti clockwise, while preventing the fan from rotating with the other hand.

Shoulder width adjustment

Ercolina can be adjusted to fit different shoulder widths in order to allow pulling with parallel arms. Width can also be adjusted to train different muscle groups (with diagonal movements for example).



- 1- Loosen the blocking knobs:
- 2- Move the fans outwards or towards the center according to your need. Normally they are positioned at the same distance from the center of the supporting panel.
- 3- Tighten the knobs blocking the fans in the desired position.

Height adjustment

See chapter **Installation with height adjustment** (optional)

Elastic cord pulley adjustment

You only need to make this type of adjustment when replacing the elastic cord or when using different size elastic cords.

When the Ercolina is stationary, the elastic cord should just brush the cross-bar, (see Figure 1, arrow A). The position of the pulley can be adjusted by loosening the screws (Figure 1, arrow B) and then raising or lowering the pulley assembly until the correct position is achieved. When the adjustment is complete, be sure the screws are tightened securely.

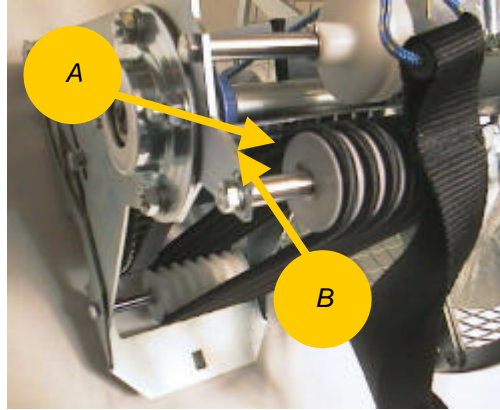


figure 1

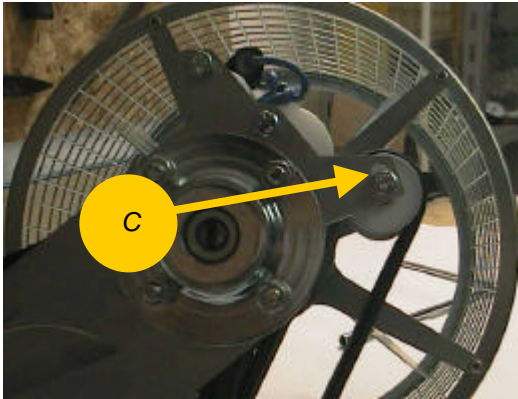


figure 2

Advanced adjustment

The pulling phase can be further personalized also by adjusting the fan diameter and the elastic cord size

The use of a thicker elastic cord stiffens the resistance and requires more strength, particularly at the end of the stroke.

Conversely, a thinner elastic cord will offer less resistance at the end of the stroke. This is beneficial if the athlete wishes to concentrate the effort at the beginning of the stroke.

The user of Ercolina will have to experiment with different settings to discover what works best for training.