

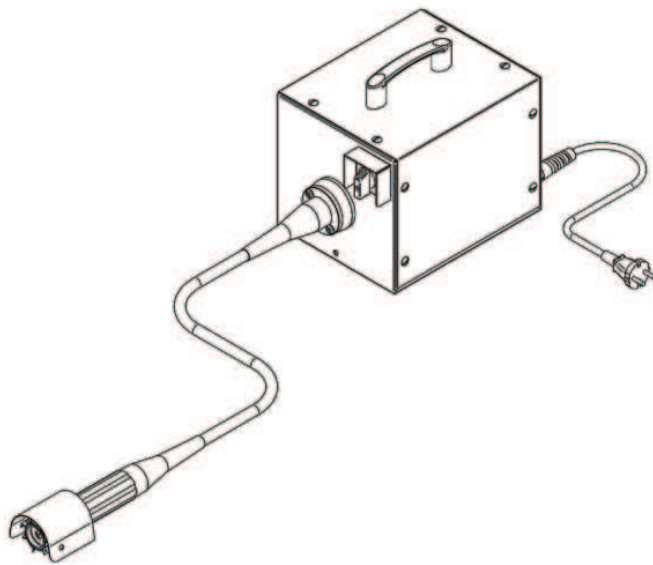
# metos

Fish scaler  
Metos KT-S  
2021064

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User manual

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10.03.2011

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## **Warning!**

Safety above all else!

The fish scaling machine is designed specifically for scaling of fish. The machine is capable of inflicting damage to the user, unless the right precautions are observed. Therefore, it is important that utmost care is taken when using this machine.

- \* DO NOT use the machine, unless you have read and completely understood this manual. Your attention is drawn in particular to the part which concerns the safety.
- \* DO NOT use the machine, unless all the guards and safety devices are fixed firmly into place.
- \* DISCONNECT the power source before maintenance, cleaning or adjustment of the machine. Never let go from the handle, when the machine is switched on.
- \* REPORT all faults immediately.
- \* REMEMBER always when using the machine, that common sense is the best safety precaution.
- \* IF IN DOUBT contact your local occupational safety inspector, or ask the advice of the labour protection authorities.

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## **1. Introduction**

Read this instruction manual carefully before using the machine and ensure also that all other users, service mechanics and cleaners have also read and completely understood this manual and that they have familiarized themselves with the following:

- Dismantling, cleaning and reassembly of the machine.
- All users must be given the correct training in the safe use of the machine.
- The parts of this manual, which deal with safety, must be read with particular attention.

### **1.1 General description**

KT-S Fish scaling machine is designed for quick and easy scaling of fish. **Using the machine to anything else, than scaling of fish is prohibited!** The machine has been insulated and tested to 4000 V.

The machine functions quietly and evenly. The design also ensures that it is easy to clean.

### **1.2 Technical specifications**

<i>Power</i>	0,18 kW	<i>Width</i>	190 mm
<i>IEC</i>	230/50/1 or 110/60/1	<i>Height</i>	230 mm
<i>Weight</i>	9 kg	<i>Depth</i>	240 mm
<i>Length of scaling end</i>	1620 mm	<i>Length of flexible shaft</i>	1515 mm

## **2. Unpacking**

If the packaging has been damaged in transportation, contact your dealer or the manufacturer. Unpack the machine carefully and beware not to damage the machine. It is possible to lift the machine from the handle located at the top of the machine. The scaling machine may be stored in the cold store. The machine must be cleaned before first use.

## **3. Installation**

The working table must be suitable for the purpose. When choosing the worktable due consideration must be given to the height of the table, hygiene and the safety of the user. The table must be steady and even and there must be enough space for the safety use of the machine.

### **PLEASE NOTE**

1. Ensure that the supply voltage corresponds with the voltage marked on the rating label.
2. This machine may be used with an earthed or unearthed wall socket. The machine has been insulated and tested to 4000 V.
3. Ensure that the electrical supply is disconnected before any maintenance, adjustment or cleaning work is carried out.

## **4.1 Direction of rotation**

When viewed from the front, the scaler should rotate counter-clockwise. The connection diagram is found from the annex 2.

## **4.2 Location**

The scaling machine must be installed away from corridors and doors. There must be enough light for the safe operation of the machine. It must be in a place where passers-by are not able to disturb the operator. For the safety of the operator the floor must have a non-slip surface.

## **5. Operation**

### **5.1 Safety measures**

Your personal safety is more important in any situation, than the quick operation of the machine. Scaling machines are capable of inflicting bodily damage to operators. However, by using his/her common sense and by being careful, as well by following all safety measures in the operation of scaling machines, the operator will get the best possible performance out of this machine and minimize the risk of accidents. It is recommended that only a person who have received the correct training in the operation of machines such as this one may operate them. Keep your fingers at a safe distance from the rotating scaling end. When using the machine, make sure that it gets your full attention, do not discuss with other people while using the machine.

Despite all the safety measures if an accident happens, the machine must be stopped immediately using the power switch and the machine must be unplugged. Before using the machine again, you have to clarify what was the reason for the accident (sloppy usage, human mistake or did the machine broke up).

### **PLEASE NOTE!**

All safety instructions in this manual are the manufacturer's recommended practices. Local safety regulations and measures must always be observed. If you are in doubt about something, please contact your local occupational safety inspector or the labour protection authorities.

### **5.2 Before use**

1. The scaling machine is delivered with the scaling end removed from the machine.
2. Attach the flange of the scaling end to the machine using the two screws provided.
3. The machine may also be installed on the wall through the two screw holes in the bottom of the machine. The machine must be installed at a height, which is suitable for the operator. Make sure that the flexible casing is not kinked. The screw fixing to the wall must be absolutely firm and reliable.

4. It is absolutely forbidden to use the machine, if there is a fault in the machine. Contact the service personnel, supplier or the manufacturer.

### **5.3 During use**

Check that the flexible casing is not kinked.

### **5.4 After use**

Turn the power switch to stop the machine. If necessary, remove the plug from the wall socket in order to prevent accidental starting.

### **5.5 Starting up**

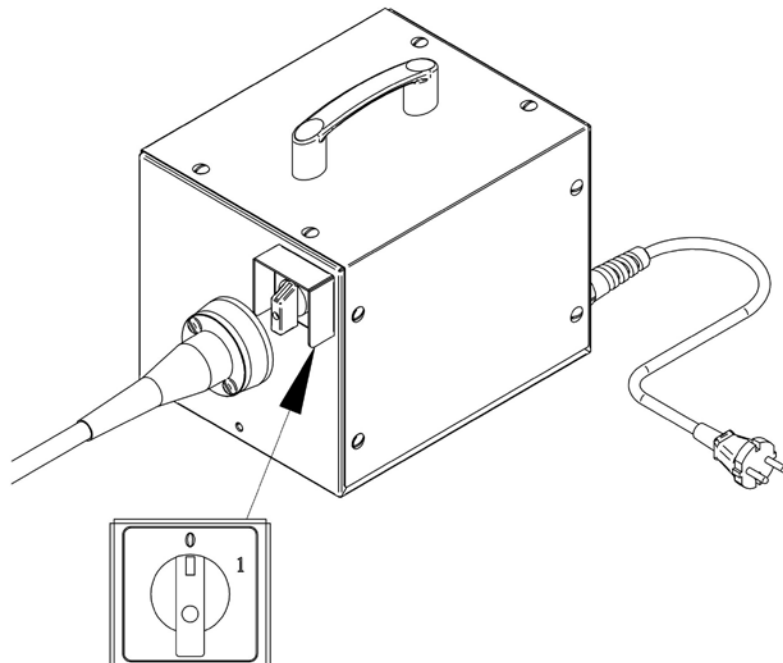
Provided that all the conditions in sections 5.1 and 5.2 are fulfilled, you may start the machine:

1. Take a firm hold of the scaling end of the machine..
2. Using your other hand, start the machine from the star switch (Picture 1).

**BEWARE!** The scaling spindle will start to rotate immediately!

### **5.6 Stopping**

Stop the machine by turning the switch lever from zone one to zero (vertical position).



**Picture 1. Power switch.**

## **5.7 Scaling**

1. Start the scaling operation by placing the fish on a sturdy table.
2. Using your left hand, take hold of the fish by its head. Hold the scaling head in your right hand and move it gently along the body of the fish, from the tail towards the head.
3. Do not press the scaling head too hard against the fish, so as not to break the skin of the fish.
4. Do not kink the flexible shaft.
5. If the rotating spindle gets clogged with scales, it can be rinsed clean with running water. Always stop the machine for cleaning operation.
6. Never put your fingers, or any other object, which may cause an accident, in the way of the rotating spindle.

## **6. Cleaning and washing**

Disconnect the plug from the wall socket. The scaling head may be washed with warm water, using detergent and a cleaning brush. The casing of the machine itself may be wiped clean using a damp cloth. Do not use running water to clean the casing or the motor. Do not use pressurized water. Do not wet the power switch.

Regardless of the cleaning methods used, to remove coarse dirt it is necessary to first clean the scaling head by hand using warm water (40-50 °C) at a low pressure.

After this, the actual cleaning procedure may be started by adding detergent to hand-warm water (approximately 20 °C) and clean the machine using a cleaning brush.

Always rinse after washing. It is important to disinfect the machine if necessary.

If detergent, rinsing water or disinfectant remains in the scaling machine, it must be dried off in an appropriate manner.

### **6.1 Recommended detergents**

Detergent:

- Kärcher RM 81

Regardless of detergent or method used, ensure that you observe the manufacturer's instructions. Observe the recommended concentrations and soaking times to avoid damaging the machine.

Disinfectant:

- Kärcher RM 32
- Kärcher RM 35

## **7. Maintenance**

Apart from daily cleaning, the scaling machine does not require maintenance. However, observe the parts, which may get worn out, and replace them if necessary.

### **7.1 Wear-and-tear**

The casing and the flexible shaft are subjects to wear and tear. Keeping them as straight as possible during use can increase their service life. They must be replaced if necessary. Only an appropriately competent person can replace them.

## **8. Fault finding**

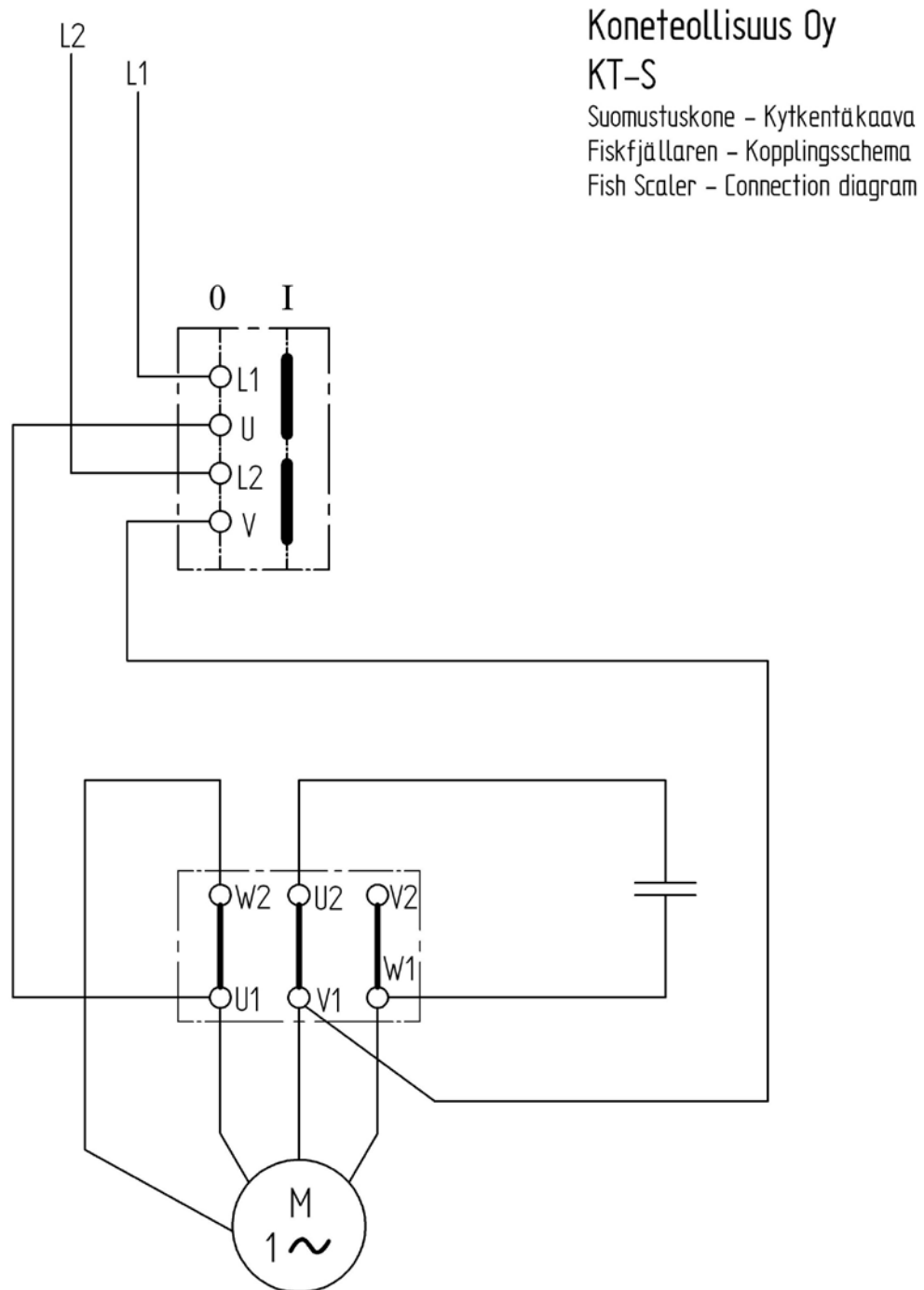
<b>FAUL</b>	<b>CAUSE</b>	<b>REMEDY</b>
The machine does not start.	<ul style="list-style-type: none"> <li>• The plug is no attached to the socket.</li> <li>• The switch is broken.</li> <li>• The electrical cord is broken.</li> </ul>	Contact an authorized electrician or the manufacturer.
The scaling spindle does not rotate.	The flexible shaft is broken.	Replace the flexible shaft.
The flexible casing is fractured.		Replace the casing and the shaft.
The scales will not come off the fish.	The scaling spindle is blunt.	Use a fine file to sharpen the teeth of the disk.

## **9. Noise emission values**

The A-weighted emission sound pressure level at workstation does not exceed 70 dB(A).

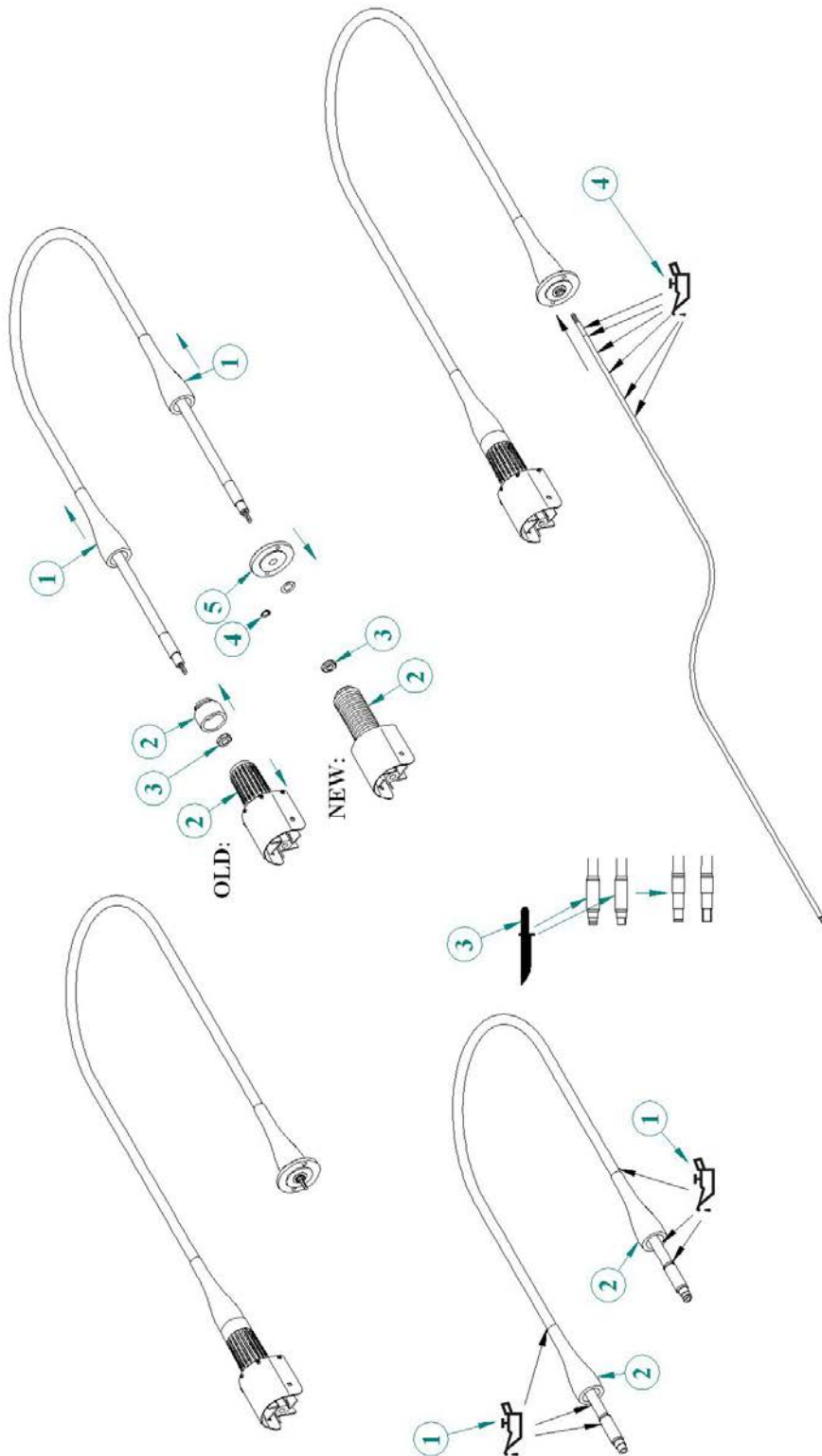


## ANNEX 1. Connection diagram



Type	KT-S	No	
V	220-240	A	1,3
kW	0,18	Phase	1
RPM	1400	Hz	50/60
Weight	9 kg		

### ANNEX 3. Replacing the flexible shaft









**KONETEOLLISUUS OY**

## **EC DECLARATION OF CONFORMITY**

We hereby declare that the following machinery complies with the essential health and safety requirements of the Machinery Directive 2006/42/EC.

**Manufactured by KONETEOLLISUUS OY**

**Technical File Held At KT**

**Address**

**below**

**Address**

**below**

**Machine Description and type:**

**Serial No 139000-150000**

**MEAT MINCERS: LM-5/P, LM-10/P, LM-22/P, LM-82/P, LM-32/P, LM-98/P, LM-42, LM-130  
MIXER GRINDERS: LM-22A, LM-82A, LM-32A, LM-98A, LM-42A, LM-130A, LM-130/280A  
KT-MS1, KT-MS2, KT-MS3 CLIPPER MACHINE  
KT-PK MEAT TENDERIZER  
KT-S FISH SCALER  
KT-ALP MEAT PRESSER  
F19S MEAT SLICER  
HB-4, HB-3 SEALER  
HB-10 BAG SEALER  
KT-KB2 KEBAB GRILL  
KT-KB3 KEBAB GRILL**

This machinery has been designed and manufactured in accordance with the following harmonised European Standards:

*EN 12100-1:2003+A1:2009, 12100-1:2003+A1:2009 Safety of machinery - Basic concepts, general principles for design*  
*EN 60204- 1:2006+A1:2009 Safety of Machinery – Electrical equipment of machines – Specification for general requirements*  
*EN 1088:1995+A2:2008 Safety of Machinery – Interlocking devices associated with guards. Principles for design and selection*  
*EN ISO 13857:2008 Safety of Machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs*  
*EN 953:1997+A1:2009 Safety of machinery – Guards. General requirements for the design and construction of fixed and movable guards.*  
*EN ISO 14121-1:2007 Safety of machinery – Risk assessment. Part 1: Principles.*

Furthermore, this machinery has been designed and manufactured in accordance with the following standards and directives:  
*SFS 5107, Slaughterhouse and meat dressing machines. Machines and equipment for cutting. Occupational safety.*  
*E.M.C. Electro-magnetic compatibility directive 2004/108/EC*

Furthermore meat & mixer grinders have been designed and manufactured in accordance with the following transposed harmonised European Standard:  
*EN 12331:2003+A2:2010 Food processing machinery. Mincing machines. Safety and hygiene requirements.*

**Signed**

**Date 2011-01-01**

**Name**

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**Position: Management**

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The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of life. This applies to your device but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste.