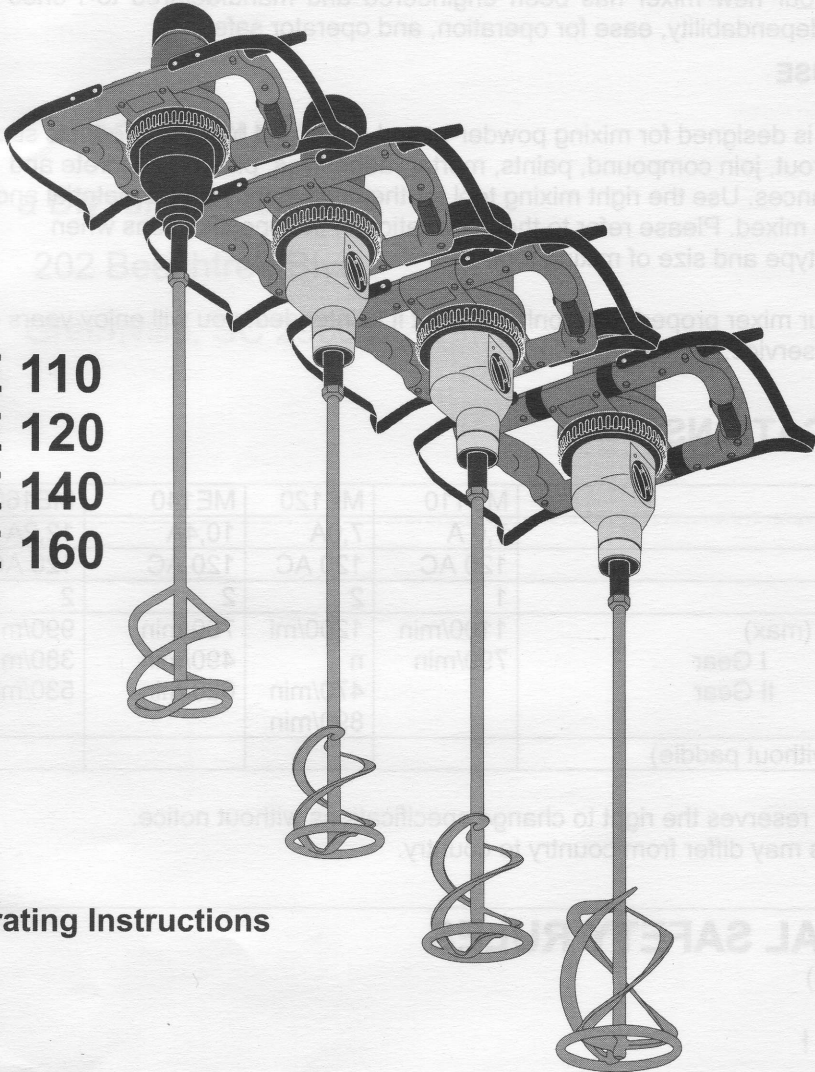


# PERLES

OF SWITZERLAND



ME 110  
ME 120  
ME 140  
ME 160

Operating Instructions

**WARNING !**

For your personal safety, **READ and UNDERSTAND** before using.  
**SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE**

## THANK YOU FOR BUYING A PERLES MIXER

Countless skilled professionals in a wide variety of industries say that PERLES electric tools not only represent technical perfection, but they are a pleasure to work with. Our company has remained true to this principle since 1936. We will continue to help your craftsmen fulfill their demanding tasks by providing you with products of the highest quality, supplied through carefully chosen distributors and serviced by experienced specialists. Your new mixer has been engineered and manufactured to Perles high standard for dependability, ease for operation, and operator safety.

### INTENDED USE

The machine is designed for mixing powder-based and liquid building products such as thin-set, grout, joint compound, paints, mortar, adhesives, plaster, concrete and similar substances. Use the right mixing tool for the consistency of the material and the quantity to be mixed. Please refer to the information in the specifications when choosing the type and size of mixing tool.

If you use your mixer properly and only for what it is intended, you will enjoy years of safe, reliable service.

### SPECIFICATIONS

Model	ME110	ME120	ME140	ME160
Current	7,0 A	7,0A	10,4A	12,2A
Voltage	120 AC	120 AC	120 AC	120 AC
Gears	1	2	2	2
RPM no load (max)	1100/min	1200/min	700/min	990/min
RPM I Gear	790/min	n	490/min	380/min
II Gear		470/min 890/min	620/min	530/min
Net weight (without paddle)				

Manufacturer reserves the right to change specifications without notice. Specifications may differ from country to country.

## GENERAL SAFETY RULES

(For All Tools)

### WARNING !

**Read and understand all instructions.** Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

# SAVE THESE INSTRUCTIONS

The purpose of safety rules is attracting your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.

## Work Area

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks, which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

## Electrical Safety

4. **Double Insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
6. **Do not expose power tools in rain or wet conditions.** Water entering in a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
8. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

## Personal Safety

9. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
10. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
11. **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

12. **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
13. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
14. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hardhat, or hearing protection must be used for appropriate conditions.

### **Tool Use and Care**

15. **Use clamps or other practical way to secure and support the work piece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
16. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
17. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
18. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
20. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

### **SERVICE**

23. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
24. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

### **DOUBLE INSULATED TOOLS:** Tools with Two Prong Plugs

Double insulation is a concept in safety in electric power tools, which eliminates the need for earth grounding. Whenever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation. Double insulation system satisfies OSHA requirements and complies with the applicable standards of Underwriters' Laboratories Inc, the Canadian Standard Association and the National Electrical Code.

## WARNING !

Servicing of a tool with double insulated system is intended to protect the user from shock resulting from a brake in the tool's internal wiring. Observe all normal safety precautions related to avoiding electrical shock.

## IMPORTANT:

Servicing of a tool with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service we suggest you to return the tool to Perles Authorized Service Center for repair. When servicing, use only identical Perles replacement parts.

**USE PROPER EXTENSION CORD:** Double insulated tools can use either a two or three wire extension cord. Make sure your extension cord is in good condition. Replace or repair damaged or worn cord immediately. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number the heavier is the cord.

Table 1: Minimum Gage for Cords Sets

Ampere Rating		Volts	Total Length of Cord in Feet			
		120V	0-25 ft.	26-50ft.	51-100	101-150
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not recommended	

Outdoor use Extension cords. When tool is used outdoors use only extension cords so marked.

## WARNING:

Some dust created by power sanding, sawing, grinding, and drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber (CCA)

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

# SPECIFIC SAFETY RULES

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to mixer safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.

- Do not mix any solvents or solvent- containing substances with a flash point of below 69 F
- Keep hands away from rotating parts
- Always hold the mixer with both hands.
- Do not wind cables or leads around any parts of the body.
- Use only extension cables approved for outdoor use.
- Start up and run down the machine in the mixing container only. Ensure that the mixing container is placed in a firm and secure position.
- Do not reach into the mixing container with your hands or insert any other objects into it while mixing is in progress.

We recommend that you wear work gloves and protective goggles when using the mixer. Wear close -fitting clothing.

# SAVE THESE INSTRUCTIONS

## WARNING !

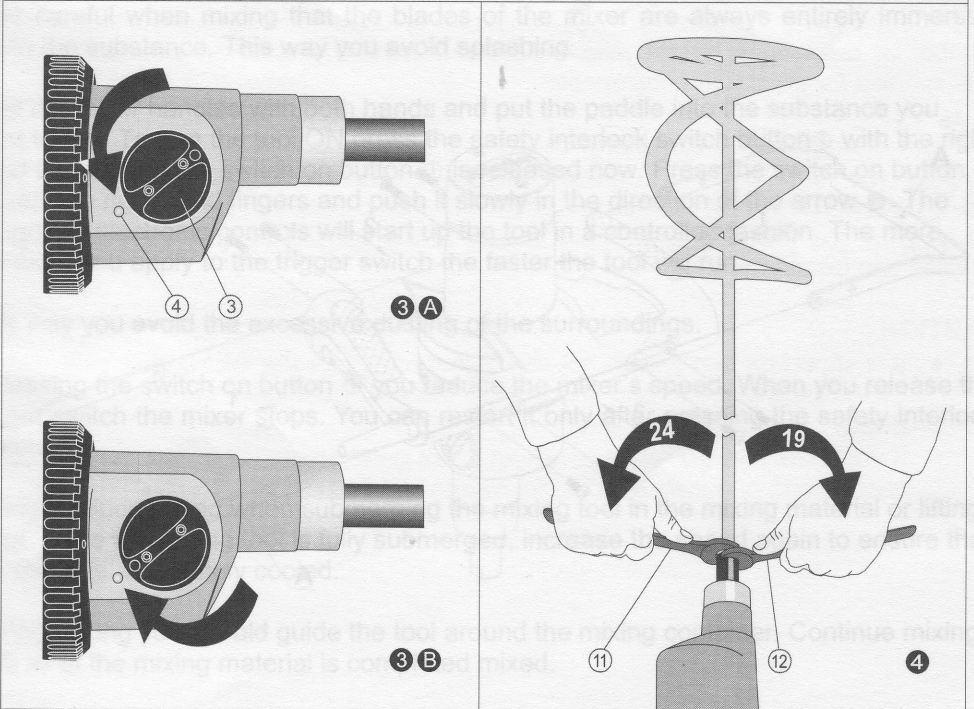
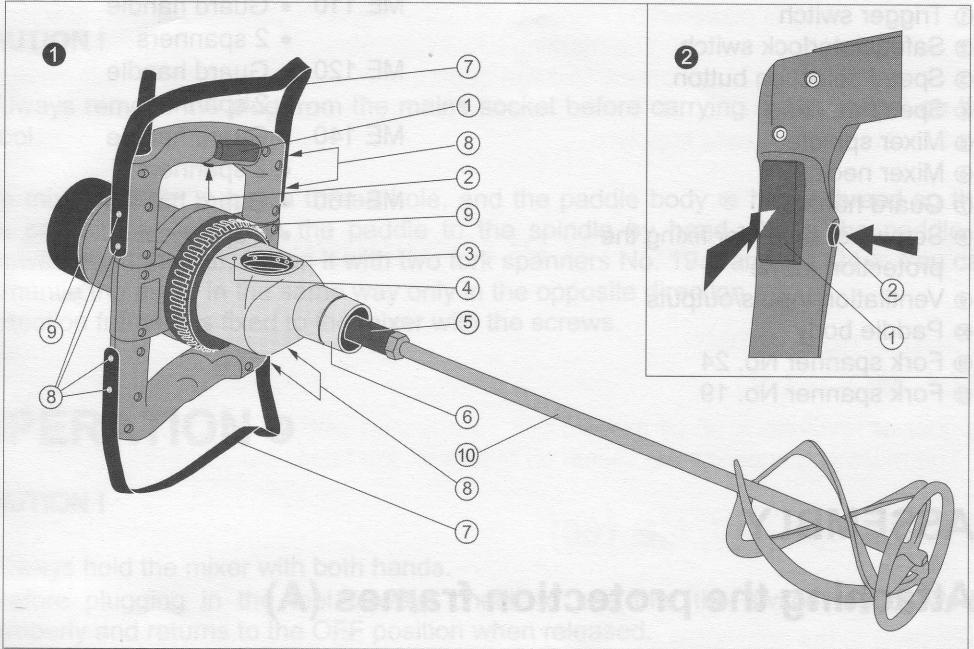
**MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.**

## SYMBOLS

The label of your tool may include the following symbols:

- V ..... Volts
- A..... amperes
- Hz ..... Hertz
- W ..... watts
- /min..... revolutions per minute
- $n_0$ ..... no load speed
- ~ ..... alternating current

# FUNCTIONAL DESCRIPTION



## Tool description ①

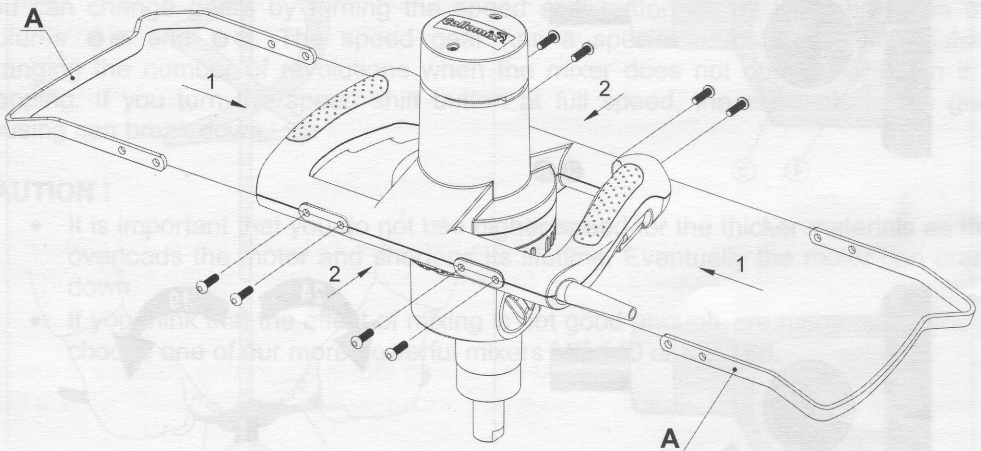
- ① Trigger switch
- ② Safety interlock switch
- ③ Speed selection button
- ④ Speed marking
- ⑤ Mixer spindle
- ⑥ Mixer neck
- ⑦ Guard handle
- ⑧ Screws or holes for fixing the protection frame
- ⑨ Ventilation inputs/outputs
- ⑩ Paddle body
- ⑪ Fork spanner No. 24
- ⑫ Fork spanner No. 19

## Standard equipment

- |        |                |
|--------|----------------|
| ME 110 | • Guard handle |
|        | • 2 spanners   |
| ME 120 | • Guard handle |
|        | • 2 spanners   |
| ME 140 | • Guard handle |
|        | • 2 spanners   |
| ME 160 | • Guard handle |
|        | • 2 spanners   |

## ASSEMBLY

### Attaching the protection frames (A)





# Setting the paddle to the mixer

## CAUTION !

- Always remove the plug from the mains socket before carrying out any work on the tool.

The mixer spindle ⑤ has a thread hole, and the paddle body ⑩ has a thread so that you can simply screw on the paddle to the spindle by hand. When the paddle is screwed on to the nut, fasten it with two fork spanners No. 19⑪ and No. 24⑫. You can dismantle the mixer in the same way only in the opposite direction.

Protection frame⑬ is fixed to the mixer with the screws.

## OPERATION ②

### CAUTION !

- Always hold the mixer with both hands.
- Before plugging in the tool, always check to see that the switch trigger works properly and returns to the OFF position when released.
- Be careful when mixing that the blades of the mixer are always entirely immersed into the substance. This way you avoid splashing.

Hold the mixer handles with both hands and put the paddle into the substance you want to mix. To turn the tool ON press the safety interlock switch button⑭ with the right hand thumb, and the switch on button ① is released now. Press the switch on button ① with two right hand fingers and push it slowly in the direction of the arrow ②. The integrated electronic controls will start up the tool in a controlled fashion. The more pressure you apply to the trigger switch the faster the tool will run.

This way you avoid the excessive dusting of the surroundings.

Releasing the switch on button ① you reduce the mixer's speed. When you release the trigger switch the mixer stops. You can restart it only after pressing the safety interlock switch ⑭.

Always reduce speed when submerging the mixing tool in the mixing material or lifting it out. Once the mixing tool is fully submerged, increase the speed again to ensure that the motor is adequately cooled.

During mixing you should guide the tool around the mixing container. Continue mixing until all of the mixing material is completely mixed.

Clean the mixing tool after you have finished your mixing work.

## **Motor**

Your Perles mixer is powered by Perles built motor. Be sure your power supply agrees with the nameplate marking. The markings 120 volts 50/60 Hz mean that your mixer will operate on alternating current. Voltage decrease of more than 10% will cause loss of power and overheating. All Perles tools are factory tested; if this tool does not operate, check the power supply.

## **Changing the number of revolutionsⓄ.**

### **Electronic switch (ALL MODELS)**

Number of revolutions on all models can be adjusted with an electronic switch button ①. The more you squeeze the switch on button ① the faster the rotations.

### **(ME 120, ME 140, ME 160)**

Mixers ME 120, ME 140, ME 160 have two mechanical gears. You can adjust mixer's revolutions to the substance you mix. The first gear is set like shown on the picture ⓄⒶ. This means lower number of revolutions and is used for thick substances. Higher number of revolutions, which means second mechanical gear as shown on picture ⓄⒷ, is used for thin liquid substances.

You can change gears by turning the speed shift button ③, as it is shown on the pictures ⓄⒶ and ⓄⒷ. The speed gear has a special mechanism that enables changing the number of revolutions when the mixer does not operate or when it is stopping. If you turn the speed shift button at full speed, the elements in the gear housing can break down.

### **CAUTION !**

- It is important that you do not use higher speed for the thicker materials as this overloads the motor and shortens its lifetime. Eventually the motor can break down.
- If you think that the effect of mixing is not good enough, we recommend you to choose one of our more powerful mixers ME 140 or ME 160.

# Putting down the mixer

## CAUTION !

- We do not recommend leaning the mixer to the wall for it can easily fall and be damaged.

The mixer is designed for easy, safe and reliable use. Therefore, the mixer has a protection frame that has a double role:

- It protects the sensitive parts of the mixer from braking, especially if the mixer falls down
- It is used for putting down the mixer.

Put down the mixer correctly as it is shown on picture **1** on the protection frame and the paddle. The protection frame prevents the handle of the tool from dirt.

# MAINTENANCE

## CAUTION !

- Before you carry out any operations on the machine, including changing the mixing tool, always turn off tool and disconnect power supply.

Keep the tool and mixing paddle clean.

Keep the ventilation slits clean.

The tool is equipped with self-deactivating carbon brushes. This means that the tool will shut itself down once a certain level of wear is reached. The carbon brushes can be replaced by an authorized service center.

Have repairs carried out only by an approved workshop.

Only use original Perles replacement parts.

## Lubrication

All bearings used are factory lubricated to last the life of the tool.

# ACCESSORIES

## CAUTION !

- Use of any accessory not recommended by the manufacturer for use with this tool could be hazardous.

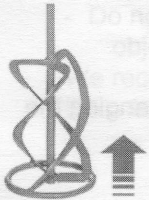
Recommended accessories for use with your tool are available from your local dealer or authorized service center.

- ME 110
- paddle FM 100
  - paddle WK 120
  - paddle MK 120
  - paddle LX 120
  - paddle RK 120
  - paddle MM 115
  - paddle KR 120

- ME 120
- paddle WK 140
  - paddle MK 120
  - paddle MK 120 neg
  - paddle LX 150

- ME 140
- paddle WK 160
  - paddle MK 140
  - paddle MK 140 neg
  - paddle KR 140

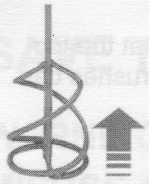
- ME 160
- paddle WK 200
  - paddle MK 160
  - paddle MK 160 neg
  - paddle KR 160



### Paddle MK

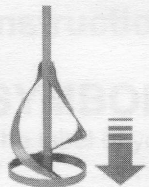
For heavier substances such as: **grout, cement, various mortars, cement floor etc. Can be used for thin-set, joint compounds.**

The paddle directs the current of material from below upwards, and enables quick, thorough and simple mixing of substances.



### Paddle MM, KR

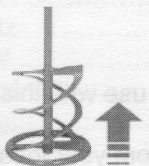
For pulverized materials, which are mixed with higher RPMs: **thin-set, tile grouts and prepared mortars, and similar.** The mixing blades made of round profiles stir very gently, and have at the same time a great effect.



### Paddle FM, RK, LX, MK neg

For effective work with liquid materials, especially for mixing **self-leveling compounds, paints and varnishes.**

The paddle directs the current of material from upside down.



### Paddle WK

This paddle has the widest range of use: for **building adhesives, final roughcast and mortars, for substances that are applied with a trowel like joint compound, cement floors etc.** Gradually rising wide mixing blades enable optimal mixing of at light load material.

## IMPORTANT

To assure product **SAFETY** and **RELIABILITY**, repairs, maintenance and adjustment (including brush inspection and replacement) should be performed by authorized service centers or other qualified service organizations, always using identical replacement parts.

### PERLES LIMITED ONE-YEAR WARRANTY Warranty Policy

Every Perles tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to Perles's Authorized Service Center. If inspection shows the trouble is caused by defective workmanship or material, Perles will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others,
- repairs are required because of normal wear and tear,
- the tool has been abused, misused or improperly maintained,
- alterations have been made to the tool.

IN NO EVENT SHALL PERLES BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

PERLES DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

PERLESUSA  
a Div. of HT USA INC.  
202 Beechtree Blvd.  
Greenville, SC 29605

