

PSE30 PSE31

CENTRAL MOTOR
FOR ROLLING SHUTTER

1. WARNINGS AND GENERAL SAFETY INSTRUCTIONS

This manual contains important safety information.

An incorrect installation or an improper use may cause serious damages to persons or objects.

Read this manual carefully and completely.

Pay particular attention to the sections marked by the symbol: 

The installation of automatic doors and gates must comply with the Machine Directive 2006/42/ CE, in particular EN 12453 and has to be performed by qualified personnel only..

 Make sure the main power line is equipped with state of the art safety earth wiring; check for the whole installation to be protected by a power cut switch and against overcurrent.

 Make sure the area is clear from flammable gas and/or electromagnetic interferences: it could lead to very dangerous injuries.

 Always cut off main power supply before performing any maintenance or cleaning.

After installation remove any packaging and waste material (cardboard, metal parts, plastic) and keep it out of children's reach as it can be potentially dangerous.

For maintenance and repairing, use original spare parts only.

Any alteration of the product is strictly forbidden.

Proteco Srl declines any liability in case non-original spare parts use or additions not expressly listed in this manual.

Before final commissioning the system, deliver this manual to end-user for future reference.

Proteco S.r.l. reserves the right to make changes to the product without notice.

Pursuant to Annex II B of 2006/42/EC Machinery Directive
The legal representatives of



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Declare that the following products :
PSE30 e PSE31

Electromechanical gear motors for balanced rolling shutters comply to Safety Essential Requirements provided for in 2006/42/EC Directive, Annex II, part 1, section B

1.1.2 – 1.1.3 -1.2.1 -1.2.6 – 1.5.1 – 1.5.2 – 1.5.5 – 1.5.6 – 1.5.7 -1.5.8 – 1.5.10 -1.5.11

The a.m. products comply with the requirements provided for in the following directives:

2014/30/EU (EMC) according to harmonised standards: EN 55014-1:2017+A11:2020, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013+A1:2019
2011/65/EU (RoHS2)
2014/35/E

The above listed products also comply, limited to the applicable parts, to the following standards:

- **EN 12453** Industrial, commercial and garage doors and gates. Safety in use power operated doors. Requirements.
- **EN60335-1** Household and similar electrical appliances - Safety - Part 1: General requirements.
- **EN60335-2-97** Household and similar electrical appliances. Safety Particular requirements for drives for rolling shutters, awnings, blinds and similar equipment

They also declare that:

- the relevant technical documentation is compiled in accordance with part B of Annex VII of directive 2006/42/EC
- the relevant technical documentation is compiled and preserved by Proteco Srl which undertakes to transmit it by mail in response to a reasoned request by the national authorities.
- the partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the directive 2006/42/EC

Castagnito, 20 January 2023

Marco Gallo
C.E.O.

IMPORTANT SAFETY WARNINGS

 Do not allow children to operate or play with opener controls. Keep remote controls out of children or unauthorised users' reach. Frequently examine the system to detect any unbalances or signs of wear or damages to cables and springs.

 This product was designed and manufactured strictly for the use indicated in this manual. Any other use is forbidden as it may lead to damages, injuries and will void the warranty. This product is designed for residential use only and for indoor installation.

 **WARNING Incorrect installation or improper use may cause serious damages to persons or objects.**

 Do not use controls that may start the motor in opposite directions simultaneously.

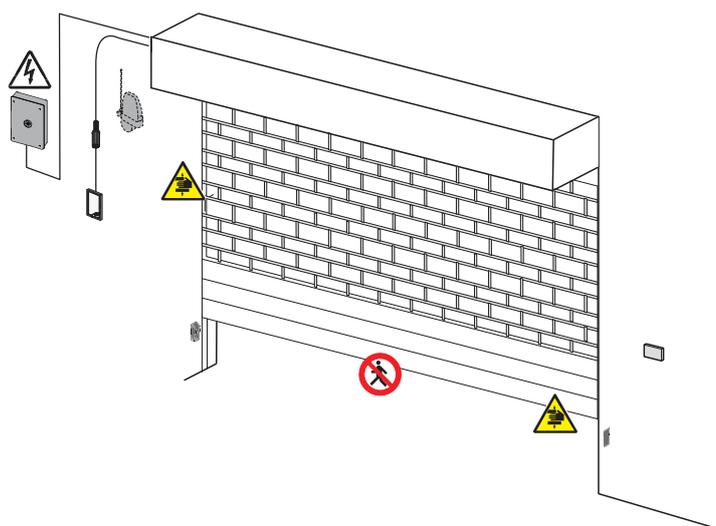
Do not control more than one opener with a single button.

The product shall not be installed lower than 2.m high from the ground or other access level.

Before installation remove any redundant wiring and turn off any unnecessary device wired to the system. All direct opening commands must be installed at least 1.5m high from the ground or access level, far from any moving parts and in sight of the moving area of the rolling shutter.

The product is designed for a non-continued use; a thermal protection will intervene and temporarily stop the motor in case of overheating for overworking.

The motor will automatically restore itself after few minutes and normally work after cooling off.



Foot-crushing danger



Hand-crushing danger



High-voltage danger



Do not cross when system is moving

 Preliminary checks before installation

- Make sure that the rolling shutter and the installation place are suitable for automatic movement, free from hazard.
- Equip the system with an omnipolar switch, 3mm minimum distance between contacts, for power cut-off
- Set up suitable cable ducts to protect wires from mechanical damages.
-  Make sure that any additional wiring inside the box (i.e. protection circuit) are equipped with extra isolation from other circuits
- Check the rolling shutter is good mechanical conditions, correctly balanced, opens, and closes without frictions.
- Make sure that springs and guide rails are in good conditions and without deformations.

2. TECHNICAL SPECIFICATIONS

2.1 Intended Use

PSE30 and **PS31** openers are designed for any kind of rolling shutters for residential and commercial use. Use and operations not listed in this manual shall be considered forbidden and will void the warranty terms.

2.2 Technical Data

	PSE30	PSE31
Main Power	230 V 50/60Hz	230 V 50/60Hz
Consumption	2,6 A	2,6 A
Motor Power	580W	580 W
Weight	10,5 Kg	10,5 Kg
Shaft Ø	60 mm	60 mm
Peak Torque	180 Nm	180 Nm
Crown Ø	200/220 mm	200/220 mm
Max lifting	190 Kg	190 Kg
Crown speed	10 rpm	10 rpm
Working time	4 min	4 min
Operating temperature	-20°C +50°C	-20°C +50°C

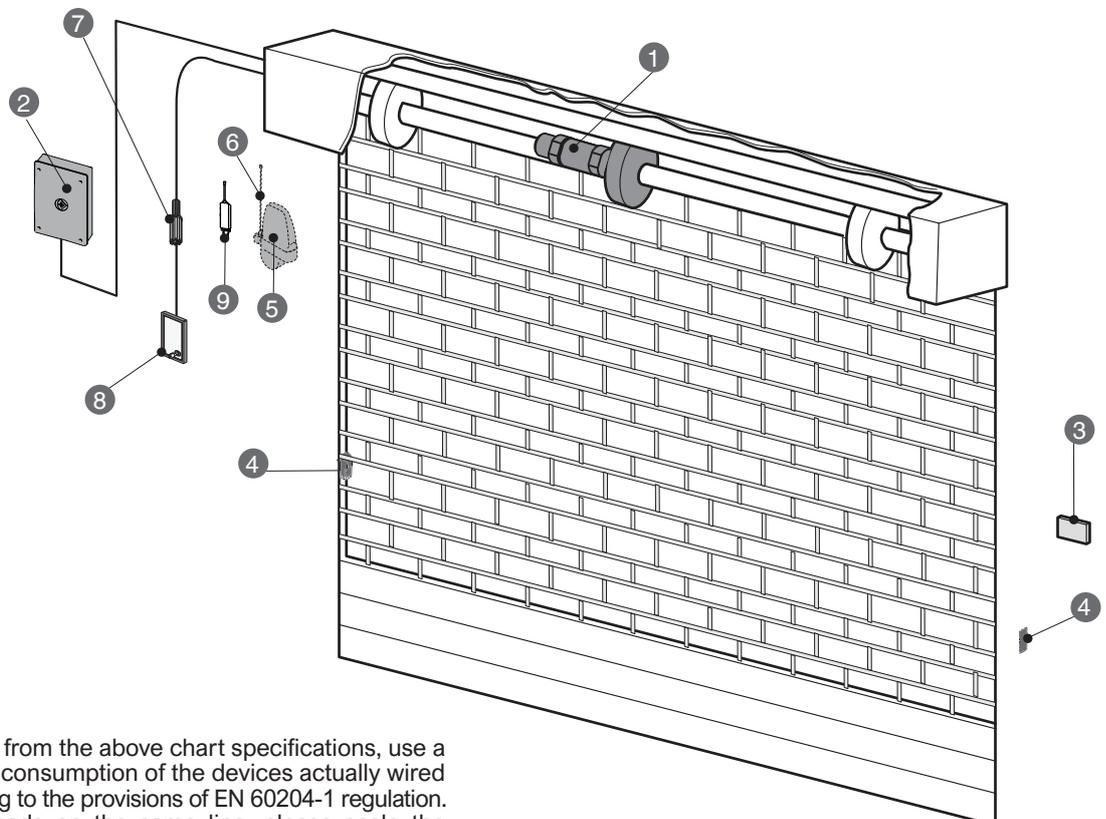
Gear motor and crown in die-cast aluminium
Crown rotation on rolling bearings
Steel gearbox
Drive shaft on ball bearings
4-pole induction motor: 1400-rpm
Motor's insulation class B
Heat protection limit: 160°C
Easy to adjust limit-switches
Maximum door height: 6m

2.3 Cables Requirements and Sizes

Wiring	Cable	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Motor power supply	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Flashing Light		2 x 1,5 mm ²	2 x 1,5 mm ²	2 x 1,5 mm ²
Photocell transmitters		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Photocell receivers		4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
Accessories power supply		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 1 mm ²
Commands and safety devices		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Aerial	9806	max. 10 m		

Standard Installation

1. Motor
2. Control Panel
3. Indoor push-button
4. Photocells
5. Flashing Light
6. Aerial
7. Pull-cord release handle
8. Case box for Release handle
9. Radio Receiver



If the cables length differs from the above chart specifications, use a cable size suitable for the consumption of the devices actually wired to the system and according to the provisions of EN 60204-1 regulation. For multiple sequential loads on the same line, please scale the cables size according to the actual consumption and distances. For connection of other devices not listed in this manual, please refer to manuals of the said devices.

3. INSTALLING THE PRODUCT

3.1 Fitting the motor on the shaft

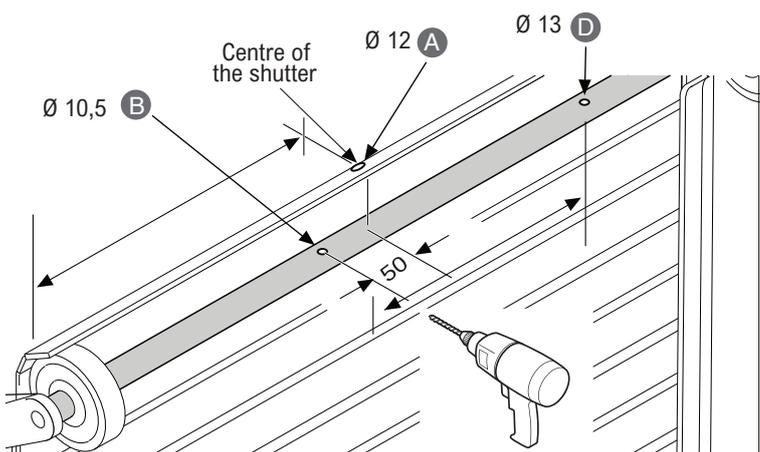
The installation position for the motor may vary depending on the installation area.

It is up to the installer to choose the most suitable solution on an individual basis.

The motor is designed for left side installation on the shaft (indoor view); in case of right-side installation drill opposite to the side (from the shutter's centre) described hereafter.

Drill the rolling shutter (A) and the shaft (B) according to the sizes shown in the picture below.

Hole (D) must be drilled only if an electro-brake is fitted.



3.2 Assembling the motor

Once drilling has been performed, please proceed as follows.

- Remove M10 hexagonal-head screw from the motor's crown. Unscrew the two M8 screws to remove the half-crowns from the motor. Carefully remove the black plastic band avoiding any folding. Unscrew the four M8 screws to separate the upper part of the gear motor from the lower half (fig. 1). If the shaft's size is smaller than 60mm use the provided shaft adapters to adjust the diameter and place them at the Ø10.5 mm hole previously drilled. Assemble back the upper part and the lower part of the gear motor on the shaft using the four M8 screws.
- Install the M10 hexagonal head screw in the Ø 10.5 mm hole previously drilled on then shaft (fig. 2). Tighten the screw and put back the black plastic band.
- Assemble the two half-crowns using the two M8 screws (fig. 3). Use the M10 hexagonal-head screw to fix the motor on the shaft and tighten the screw nut (fig. 4).
- Place the shutter screen on the shaft and the motor and drill an Ø12 mm hole on the first strip of the screen aligned with the M10 threaded hole on the motor crown. Spin the crown manually for approximately 1.5 revolution to the plastic wheel close to the micro-switch 1 (closing), make sure that the system spin smoothly. (Fig. 5)
- Fix the shutter to the motor with the M10 hexagonal head screw and washer (fig.6)

Fig. 1

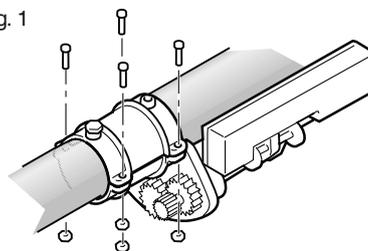


Fig. 2

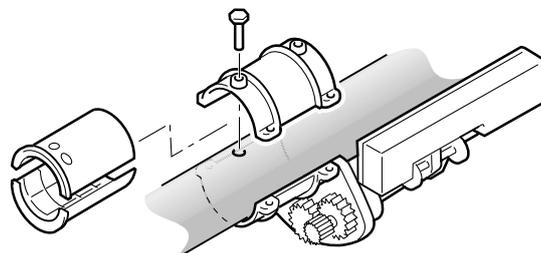


Fig. 3

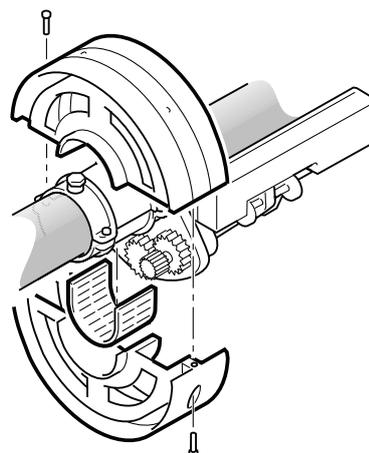


Fig. 4

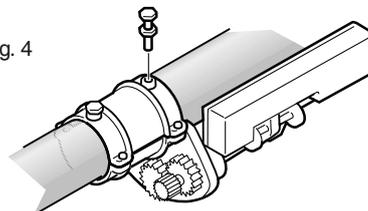


Fig. 5

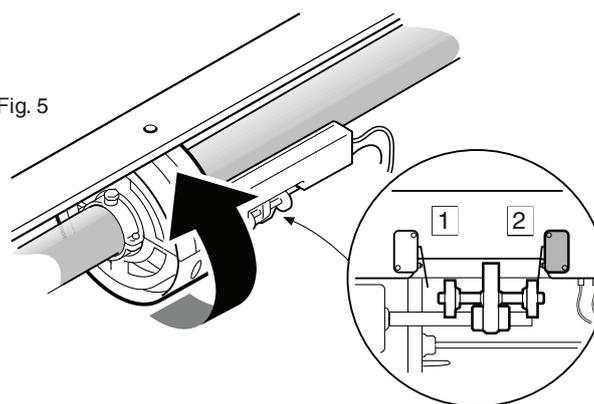
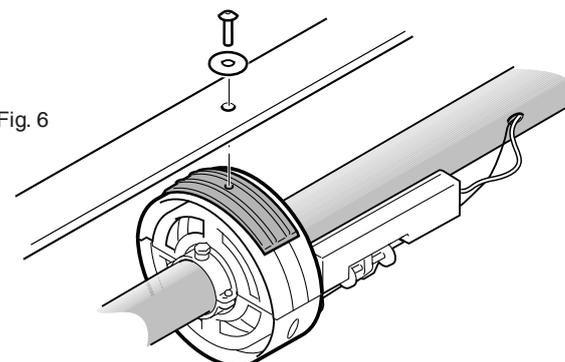
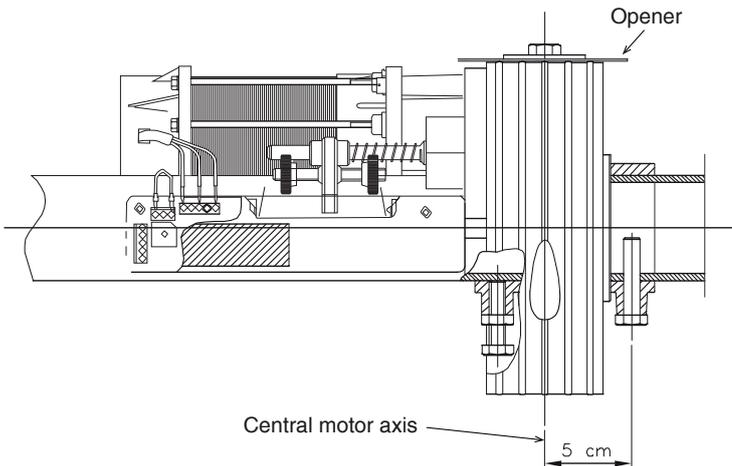
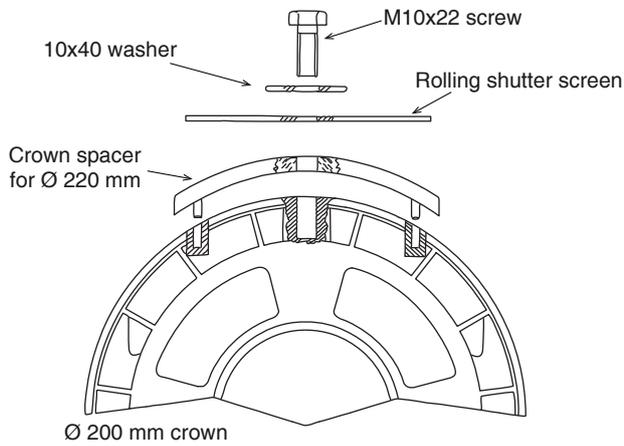


Fig. 6





4.2 Adjusting the limit-switches

Please adjust limit-switches setting only when the assembling of the motor and the electrical wiring have been completed properly.

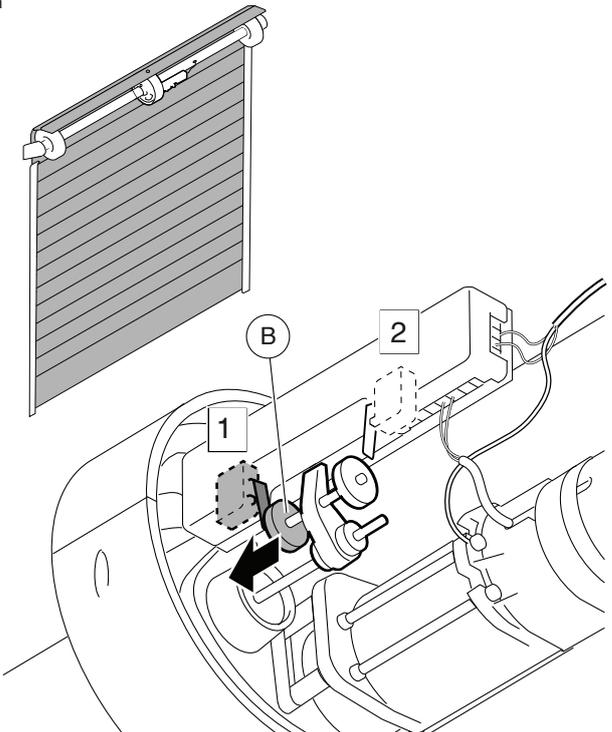
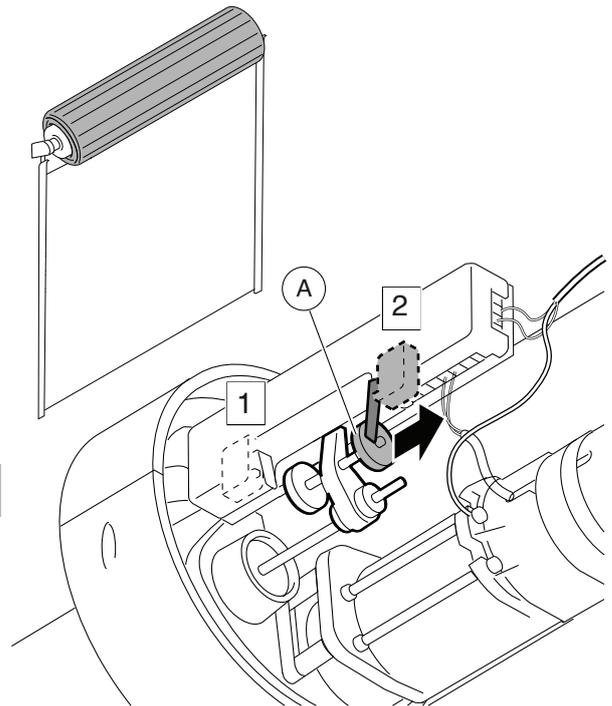
Follow below procedure for left-side mounted motor.

Always off the main power while carrying out any adjustment on limit-switches

Open the shutter and rotate the adjusting wheel (A) until it reaches the micro-switch [2] to adjust the opening (up) setting.

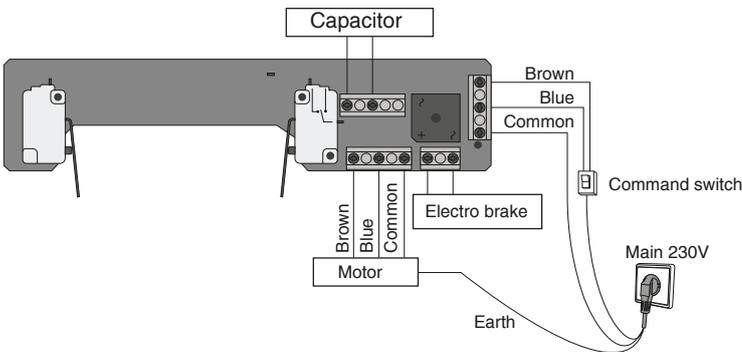
Then close the shutter and move the adjusting wheel (B) until it reaches the micro-switch [1] to adjust the closing (down) setting.

In case of right-side mounted motor, please note that the micro-switches will work the other way around: micro [1] for opening position and micro [2] for closing position.



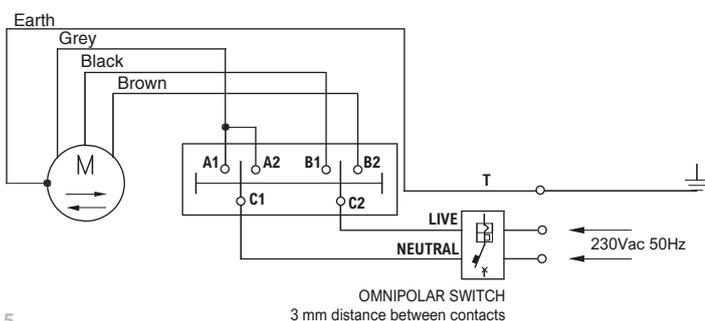
4. WIRING AND SETTINGS

4.1 Electrical Wirings



Set up the electrical wiring according to the wiring diagram below. Slip the 4x1 mm cable of the motor inside the shaft avoiding any contact with rotating parts of the system.

WIRING DIAGRAM



7. DISMANTLING AND DISPOSAL

7.1 Dismantling and disposal of the product

Most of product's components is classified as solid household waste and they can be recycled by separating them before dumping at authorised municipal plants.

Other components (control boards, batteries, etc.) may contain hazardous pollutants.

These must be therefore disposed of by authorized and certified professional services.

Before disposing always check with the specific laws applying in your area.

7.2 Disposal of the packaging

Packaging materials (cardboard, plastic, etc.) should be disposed as solid household waste and simply separated from other waste for recycling.



Before disposing always check with the specific laws applying in your area.

DO NOT WASTE IN THE ENVIRONMENT!



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