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POWERDUCTION 10R

SAFETY INSTRUCTIONS



This manual contains safety and operating instructions, to be followed for your safety. Please read it carefully before using the device for the first time and keep it in a safe place for future reference. Read and understand the following safety recommendations before using or servicing the unit. Any change or servicing that is not specified in the instruction manual must not be undertaken. The manufacturer is not liable for any injury or damage caused due to non-compliance with the instructions featured in this manual. If there is any issue or uncertainty, please consult a qualified individual to operate the equipment correctly. This machine should only be used for operations comprised within the limits indicated on the machine and in the instruction manual. The operator must observe the safety precautions. In case of inadequate or unsafe use, the manufacturer cannot be held liable for damage or injury. Any other uses not specified in this manual is forbidden, and possibly dangerous. The product is semi automatic and requires the presence of an operator.

This unit can be used by children aged 8 or over and by people with reduced physical, sensory or mental capabilities or lack of experience or knowledge, if they are properly monitored or if instructions for using the equipment safely have been read and risks made aware of. Children must not play with the product. Cleaning and maintenance should not be performed by an unsupervised child.

Ne pas utiliser l'appareil, si le cordon d'alimentation ou la fiche de secteur sont endommagés.

Ne pas couvrir l'appareil.

Fire and explosion risks!



- Do not use the device in an explosive atmosphere.
- Keep airbags, gas canisters or other pressurised gas containers away from the induction heating machine.

Warning, heat and flame risk.



- Do not overheat parts and adhesives.
- Be wary of fire, keep a fire extinguisher in the vicinity.
- Do not position the machine on, or near flammable surfaces.
- Do not position the machine near flammable materials.

Warning ! Very hot surface. Risk of burns.



- The parts and pieces that have just been heated are hot and may cause burns when manipulated.
- Do not touch any hot parts with your hands.
- Wait for the parts and pieces to cool down before handling them.
- Check that jewellery (such as wedding rings) or other metal pieces do not get close to the induction heating machine or the inductor when switched on.
- Remove any jewellery or any metal object from yourself before using this machine
- People with metal implants should not use this machine.
- In case of burns, rinse with water abundantly and see a medical doctor as soon as possible.

Dangerosity of the gas fumes

- Keep the head away from the fumes, do not inhale.
- If working inside, ventilate the area or use a fume extractor to evacuate the gases and fumes.
- Induction heating of certain materials such as adhesives and flux can generate fumes and gases. Breathing these fumes and gases can be dangerous for your health. For example, heating urethane generates a gas : hydrogen cyanide, potentially mortal for hu-mans.
- If the ventilation is insufficient, use an approved respiratory unit.
- Read the safety data sheets (MSDS) and the manufacturer's ins-truc-tions for adhesvies, flux, metals, consumables, coatings, clea-ning agents, corrosives, and paint strippers.
- Do not use the heater on parts being degreased or sprayed.The heat might react with fumes and generate highly toxic gases.
- Work in a confined area only if it's well ventilated, or use an ap-pro-ved repiratory/filtration unit. Make sure that a qualified per-son is around to watch over you. The fumes and gases released while heating can replace oxygen or air, causing accidents or death. Check the quality of the air you're breathing
- Do not overheat metals, such as galvanised steel, covered with lead or cadmium, unless the coating is removed from the surface before it's heated, that the area is well ventilated, and if needed, use an approved filtration/respiratory unit.. Foundry pieces and all metals containing such elements may generates toxic fumes if overheated.
- Check the MSDS for temperature related details.



Warning, electrical danger



Warning ! Major magnetic field. People wearing active or pas-sive implants must be informed.

No further protective steps are required when the machine is used on its own. Further restrictions and/or protective measures may be necessary in other cases.



After maintenance, the magnetic field levels must be checked be-fore the machine is used again.

When switched on, never put the inductor near the head or vital organs.



People wearing pacemakers are advised to not come close to the machine. Risk of disruption of pacemaker operations when close to the machine.

Consult a doctor before getting close to induction heaters.



Risk of metal or adhesive projections

- Wear approved protective goggles with lateral protections, or protect the whole face with a screen.
- Wear protective clothes.
- Wear gloves.



Connection:

- This machine must be connected to an earthed socket.



- These Class A devices are not intended to be used on a residential site where the electric current is supplied by the public network, with a low voltage power supply. There may be potential difficulties in ensuring electromagnetic compatibility on these sites, because of the interferences, as well as radio frequencies.

Maintenance:



- If the power cable is damaged, it must be replaced by the manufacturer, its after sales service or an equally qualified person to prevent danger.
- Service should be performed by a qualified person.
- Warning! Always disconnect from the mains before performing maintenance on the device. High Voltage and Currents inside the machine.
- If the internal fuse is melted, it must be replaced by the manufacturer (GYS' dedicated sales service) or by an equally qualified person to prevent any accidents.
- The device is maintenance-free.
- Remove the casing on a regular basis, to remove any excess dust. Take this opportunity to have the electrical connections checked by a qualified person, with an insulated tool.
- Do not use solvents or any aggressive cleaning products.
- Clean the device's surfaces with a dry cloth.



Regulations:

- Device complies with European directives.
- The certificate of compliance is available on our website.
- EAC Conformity marking (Eurasian Economic Community).



Waste management:

- This product should be disposed of at an appropriate recycling facility. Do not throw away in a domestic bin.

DESCRIPTION

The Powerduction 10R has been designed to heat ferrous metallic elements by induction heating. Its main purpose is the unjamming of parts such as bolts or exhaust pipes.

Carry case contents:

The Powerduction 10R is supplied in a carry case that contains (see fig.1) :

- the generator and its inductor cable , ①,
- 3 coiled wires, diameter 18 mm / 24 mm / 30 mm ②,
- a flexible braided wire ③,
- a straight rigid wire ④.

Fig.1



②		Coiled wired Ø18 mm 054806
		Coiled wired Ø24 mm 054790
		Coiled wired Ø30 mm 055469
③		Flexible braided wire 054813
④		Straight rigid wire 054868



The elements contained in this carry case are fragile. They're to be handled with care.

MAINS POWER SUPPLY

This equipment is supplied with a 16 A CEE7/7 type plug and should only be used on an electrical installation single-phase 230 V (50 - 60 Hz) three-wire with a neutral connected to earth.

STARTING

Assembly

Choose the required tool (one of the 3 coiled wires, the braided wire or the straight wire) and fit it on the inductor. To do so, insert the two rods of the selected tool and insert them into the holes intended for this purpose, then screw the tightening wheels (fig.2). To unscrew a tightening wheel, it is possible to use a spanner/wrench size 12. Warning : never use a spanner/wrench to screw the tightening wheel as it may get damaged.

Heating activation

Start the product by pressing the ON/OFF button.	The green LED lights up.
Press the inductor button to activate the heating. Keep pressing the button to keep the heating active.	The green LED flashes green as long as the heating is active.

RECOMMENDATIONS

The coiled inductor is designed for unjamming. it heats metal pieces or parts via induction to unblock and remove them easily. Circle the piece using the appropriate accessory (coiled, braided, straight), then heat the inductor, that will be used to heat the metal piece. Once the piece starts to be coloured in red, stop the heating and remove it using the right tool (clamp, spatter/wrench...) then remove it.

ACCESSORIES

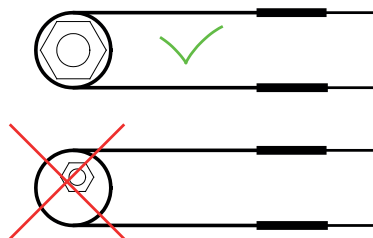


The accessories provided are consumables. These must be replaced when they are damaged.

Afin de pouvoir intervenir sur des pièces à formes multiples, 3 types d'accessoires accompagnent l'inducteur.

3 coiled wire (Ø 18, 24, 30 mm)

Standard tool, already shaped for a fast and effective operation. The coil shape enable optimises the concentration of the magnetic fields in its centre, which guarantees a powerful and effective induction heating. The glass fiber circle can electrically insulate the coils as well as the element to heat. The coil is used in the following way : position it at the centre then press the inductor's button to start the heating.



Heating efficiency :

To achieve maximum heating power efficiency, the coil must be adapted to the workpiece.

Flexible braided wire

The braid is designed for pieces that cannot be heated with the coil (parts with a bigger diameter) :

Ex. an exhaust pipe or a wheel hub

The braid can be enrolled around the metal piece.

To obtain a better result, circle 3 times around the metal piece and make sure that the coils are bonded together. Press the inductor's button to start the charge.

Straight rigid wire

The straight rigid wire is designed to suit any of the user's needs. It can be :

- adjusted to the shape of a specific part/piece.
- adjusted to a piece that is too big for the coils.
- copy the shape of an existing coil if the latter is damaged.

It works in the same way as coils and braided wire. Its shape must be adjusted to fit the metal piece's shape and if possible, circle around the piece several time for maximum efficiency.

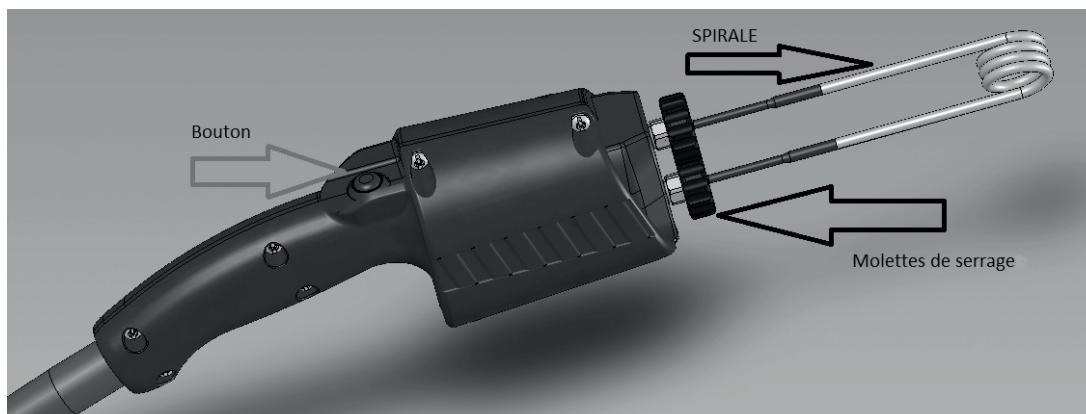


fig.2

RECOMMENDATIONS

- When heating the coils for the first time, some smoke will be released.
- Avoid heating for more than 30s, the coils will heat excessively and suffer premature damages.
- It is not necessary to come in contact with the bolt to heat it.
- The coil's protective fabric is fragile, it is glass fabric : make sure to store the coils in such a way that they do not get damaged.



The coils heat very fast. After use, is is recommended to let them cool down before storing them. Manipulate with gloves to prevent burns or itches caused by the glass fabric.

Do not place a finger or any limb inside or close to the coil when the machine is switched on. Magnetic fields should be considered.

PRODUCT SPECIFICATIONS

	10R
Power	1,2 kW
Operating voltage	230 V +/- 15%
Power supply frequency	50 Hz - 60 Hz
Heater Frequency	45-100 kHz, microprocessor controlled.

Number of conductors	2 + Earth
Power supply cable length	2 m
Inductor cable length	0,9 m
IP Code	IP 21
Weight (kg) <i>générateur + inducteur</i>	3,5
Weight (kg) <i>inducteur seul</i>	1,3
Dimensions (cm)	25 x 20 x 14,5

WARRANTY

The warranty covers faulty workmanship for 2 years from the date of purchase (parts and labour).

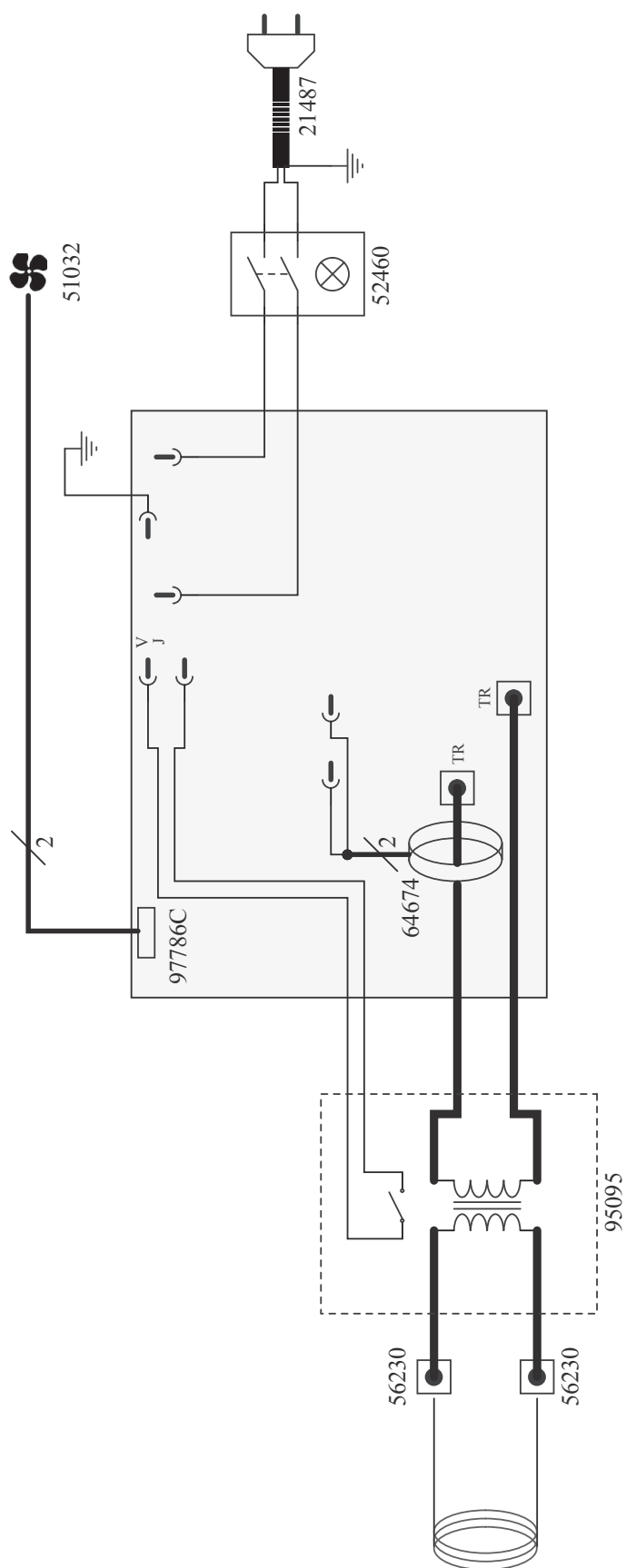
The warranty does not cover:

- Transit damage.
- Normal wear of parts (eg. : cables, clamps, etc..).
- Damages due to misuse (power supply error, dropping of equipment, disassembling).
- Environment related failures (pollution, rust, dust).
- Removable inductors and ferrites that are consumables.

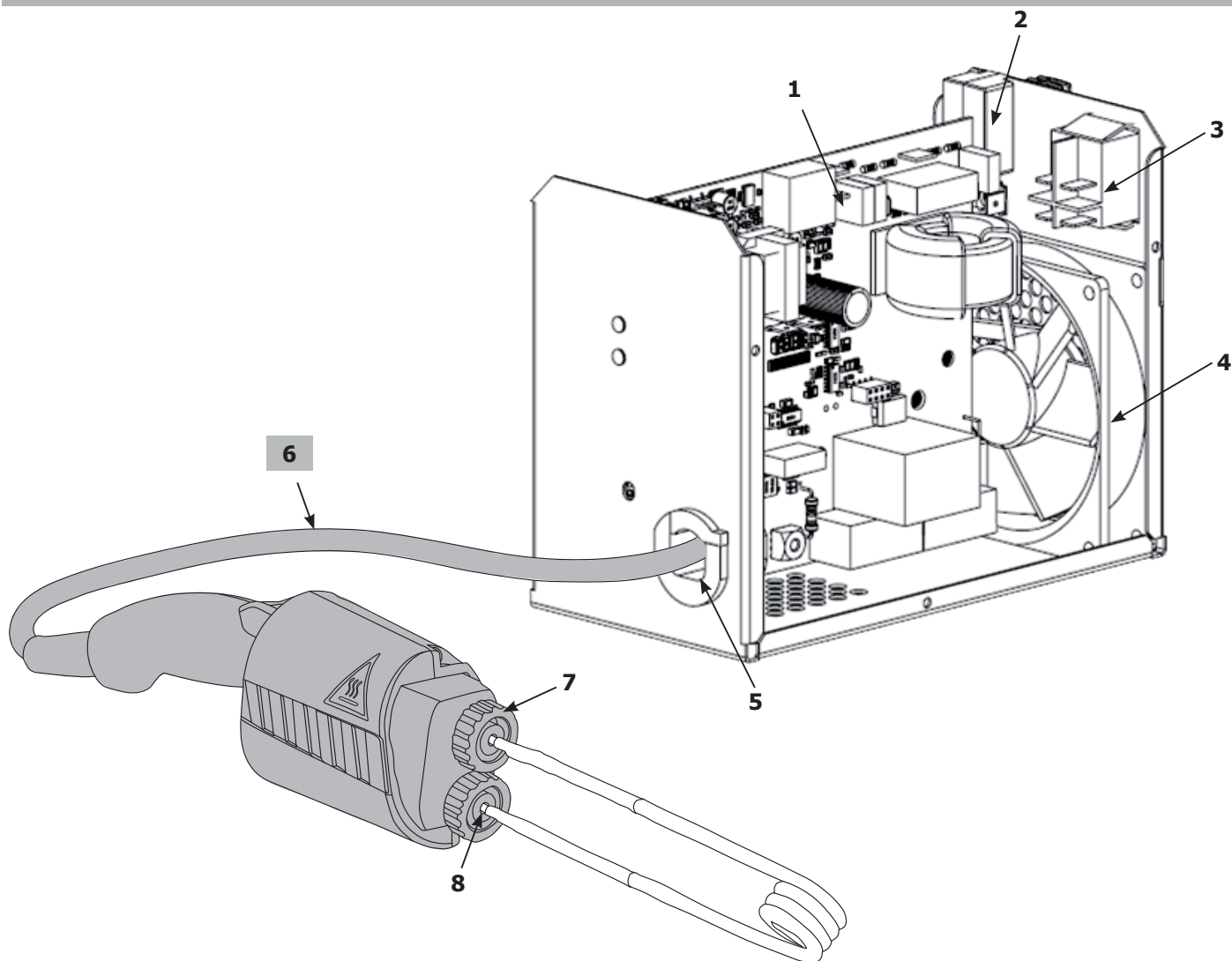
In case of failure, return the unit to your distributor together with:

- The proof of purchase (receipt etc ...)
- A description of the fault reported

SCHÉMAS ÉLECTRIQUES / ELECTRICAL DIAGRAM / ESQUEMAS ELÉCTRICOS / ЭЛЕКТРИЧЕСКИЕ СХЕМЫ / ELEKTRISCHE SCHEMA'S / SCHEMI ELETTRICI



PIÈCES DE RECHANGE / SPARE PARTS / ERSATZTEILE / PIEZAS DE REPUESTO / ЗАПАСНЫЕ ЧАСТИ / RESERVE ONDERDELEN / PEZZI DI RICAMBIO



1	Carte électronique / Electronic board / Platine / Tarjeta electrónica / Электронная плата / Printplaat / Scheda elettrica	97786C
2	Cordon secteur / Power supply cable / Netzleitung / Cable de alimentación / Кабель массы / Cavo corrente / Netsnoer	21487
3	Interrupteur ON-OFF / ON-OFF switch / ON-OFF Schalter / Interruptor ON-OFF / Переключатель ON-OFF / ON-OFF schakelaar/ Interruttore ON-OFF	52460
4	Ventilateur / Fan / Ventilator / ventilador / Вентилятор / Ventilator / Ventilatore	51032
5	Passe cloison / Bulkhead passage / Schottdurchgang / Pasillo de mamparo / Балкхедовый проход / Schotdoorgang / Passaggio per paratie	43120
6*	Câble inducteur / cable inductor / Induktivitätskabel / Cable de inducción / Кабель индуктора / Inductorkabel / Cavo induttore	95095
7	Écrou moleté / Knurled nut / Rändelmutter / Tuerca moleteada / Кнурлевая гайка / Gekartelde moer / Dado zigrinato	56230
8	Mandrin pince / Collet chuck / Spannzangenfutter / Mandril de pinza / Цанговый патрон / Span-tangboorhouder / Mandrino a pinze	90898

* comprend toute la partie grisée sur le schéma / includes all the grey part on the diagram / enthält alle grauen Teile des Diagramms / incluye toda la parte gris en el diagrama / включает в себя всю серую часть на схеме / bevat al het grijze gedeelte op het diagram / include tutta la parte grigia del diagramma.

PICTOGRAMMES / PICTOGRAMS / PIKTOGRAMME / PICTOGRAMA / СИМВОЛЫ / PICTOGRAMMEN / PICTOGRAMMI

	Symbole de la notice / User manual symbol / Symbole in der Bedienungsanleitung / Símbolo del manual / Символы, использующиеся в инструкции / Symbool handleiding / Simbolo del manuale
	Avertissement - Lire le manuel de l'opérateur / Warning Notice - Read the user manual / Hinweise - Die Bedienungsanleitung sorgfältig durchlesen. / Atención - Lea el manual de usuario / Предупреждение - Прочтите инструкцию по использованию / Waarschuwing - Lees de fabriekshandleiding / Avvertenze - Leggere il manuale dell'operatore
	Pour usage à l'intérieur - Ne pas exposer à la pluie / To be used indoors - Must not be exposed to the rain. / Für den Innenbetrieb - Nicht dem Regen aussetzen / Para uso en interior - No exponer a la lluvia / Для использования в помещении - Не выставлять под дождь / Voor gebruik binnen - Niet blootstellen aan regen / Per utilizzo all'interno - Non esporre alla pioggia
	Risque d'explosion - Gaz explosif / Explosion risks - explosive gases / Explosionsgefahr - explosives Gas / Riesgo de explosión - Gas explosivo / Риск взрыва - Взрывчатый газ / Explosie-gevaar - Explosief gas / Rischio d'esplosione - Gas esplosivo
	Porter des lunettes / Wear goggles / Schutzbrille tragen. / Lleve gafas de protección / Носите защитные очки / Draag een bril / Indossare occhiali di protezione
	Porter des gants / Wear gloves. / Schutzhandschuhe tragen. / Lleve guantes / Носите перчатки / Draag handschoenen / Indossare guanti di protezione
	Porter un vêtement de travail / Wear protective clothing. / Geeignete Arbeitskleidung tragen. / Lleve ropa de trabajo / Носите рабочую одежду / Draag werkkleding / Indossare abiti da lavoro
	Risque de flamme / Risk of flames. / Schützen Sie sich vor Hitze und Feuer. / Riesgo de llama / Риск пламени / Risico op brand / Rischio di fiamma
	Surface chaude / Hot surface. / Heiße Oberfläche / Superficie caliente / Горячая поверхность / Oppervlakte kan heet zijn / Superficie calda
	Attention danger électrique / Warning, electrical danger / Achtung! Elektrische Gefährdung / Atención, peligro eléctrico / Опасность поражения электрическим током. / Waarschuwing : elektrisch gevaar / Attenzione pericolo elettrico.
	Attention aux porteurs de stimulateur cardiaque / Warning for people wearing pacemakers. / Beachten Sie, dass Träger von Herzschrittmachern sich vom Gerät fernhalten. / Precaución a aquellos que lleven un estimulador cardíaco. / Лица, имеющие электрокардиостимуляторы, будьте осторожны. / Waarschuwing aan dragers van een pacemaker / Attenzione ai portatori di pacemaker
	Émission de champ magnétique / Magnetic fields emissions / Elektromagnetische Felder / Emisión de campo magnético / Магнитное поле / Aanwezigheid van elektromagnetische velden / Emissione di campo magnetico
	Émission électromagnétique / Electromagnetic field emissions / Elektromagnetische Störungen / Emisión electromagnética / Электромагнитное излучение / Elektromagnetische emissie / Emissioni elettromagnetiche
	Mise à la terre (terre de protection) / Earthing (for protection) / Erdung (Schutzleiter) / Conexión a tierra (tierra de protección) / Заземление (защитное заземление) / Aarding (beveiliging) / Messa a terra (terra di protezione)
	Fusible / Fuse / Sicherung / Fusible / Плавкий предохранитель / Zekering / Fusibile
	N'est pas prévu pour un emploi en site résidentiel où le courant électrique est fourni par le réseau public d'alimentation basse tension (non classe B) / Not intended to be used on a residential site where the electric current is supplied by the public network, with a low voltage power supply (not class B). / Dieses Gerät ist nicht für den Einsatz in Wohngebieten bestimmt, in denen die lokale Stromversorgung über das öffentliche Niederspannungsnetz geregelt wird. / No está previsto para uso residencial donde la corriente eléctrica es suministrada por la red pública de baja tensión (no de clase B) / Это оборудование не подходит для использования в жилых кварталах, где электрический ток подается общественной системой питания низкого напряжения (не класса B). / Niet bestemd voor gebruik in een woonomgeving waar de elektrische stroom aangeleverd wordt door een openbaar laagspanningsnet (niet klasse B). / Non è adatto ad un impiego in sito residenziale in cui la corrente elettricaviene fornita dalla rete pubblica d'alimentazione a bassa tensione (non classe B)

	Restriction concernant la connexion aux réseaux publics d'alimentation basse tension / Restriction regarding connections to the public network, with a low voltage power supply / Einschränkung bezüglich der Verbindung zu öffentlichen Niederspannungsnetzen / Restricción respecto a la conexión a las redes públicas de baja tensión / Ограничения, касающиеся подсоединения к общественной системе питания низкого напряжения / Restrictie betreffende de aansluiting aan openbare laagspanningsnetten / Restrizione che riguarda la connessione alle reti pubbliche d'alimentazione bassa tensione
	Marquage CE / CE marking / CE Kennzeichnung / Marcado CE / Маркировка CE / CE markering / Marchio CE
	Marquage EAC / EAC marking / EAC Kennzeichnung / Marcado EAC / Маркировка EAC / EAC markering / Marchio EAC
	Ne pas jeter dans la poubelle ordinaire / Do not dispose through regular domestic waste / Nicht mit dem Hausmüll entsorgen! / Ne lo tire a la basura doméstica. / Не выбрасывать в общий мусоросборник / Niet met het gewone huishoudelijke afval wegwerpen / Non gettare nei rifiuti normali
	Indication de température / Temperature indication / Temperaturanzeige / Temperaturanzeige / Indicación de temperatura / Temperatuur-indicatie / Указание температуры / Indicazione della temperatura
	Ecoemballage / Ecopackaging / Umweltfreundliche Verpackung / Ecoembalaje / Эко упаковка / Eco-verpakking / Ecoimballaggio
	Triman / Triman / Triman / Triman / Triman / Afval recycling / Triman
	Symbole du courant alternatif / Alternative current symbol / Symbol Wechselstrom / Símbolo de corriente alterna / Символ переменного тока / Symbool wisselstroom / Simbolo di corrente alternata



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