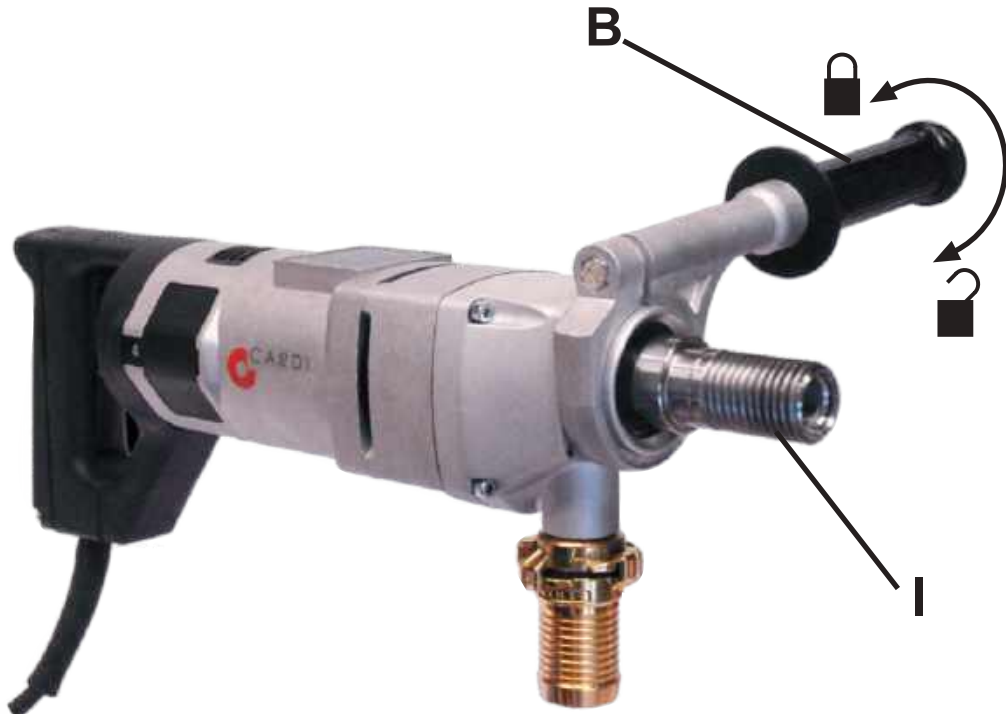

DIAMOND PULSE-TECH

SAFETY AND USER MANUAL FOR:
DRY USE HAND-HELD CORE DRILL

TYPE: **DP2200 MA-16**

1



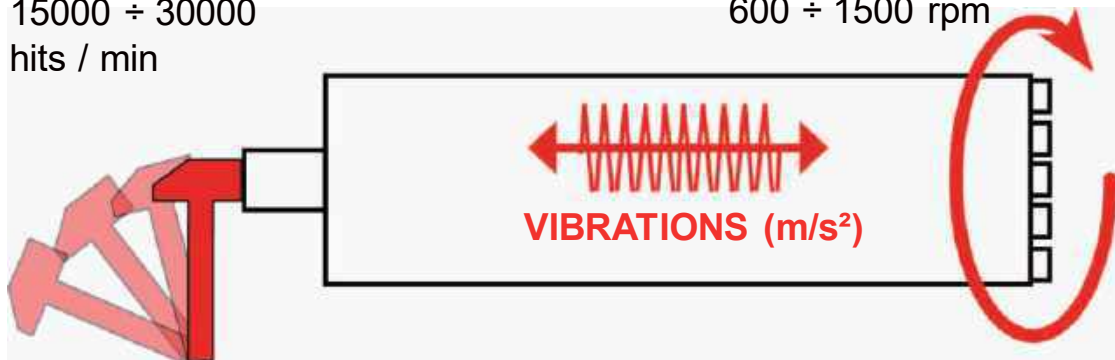
2

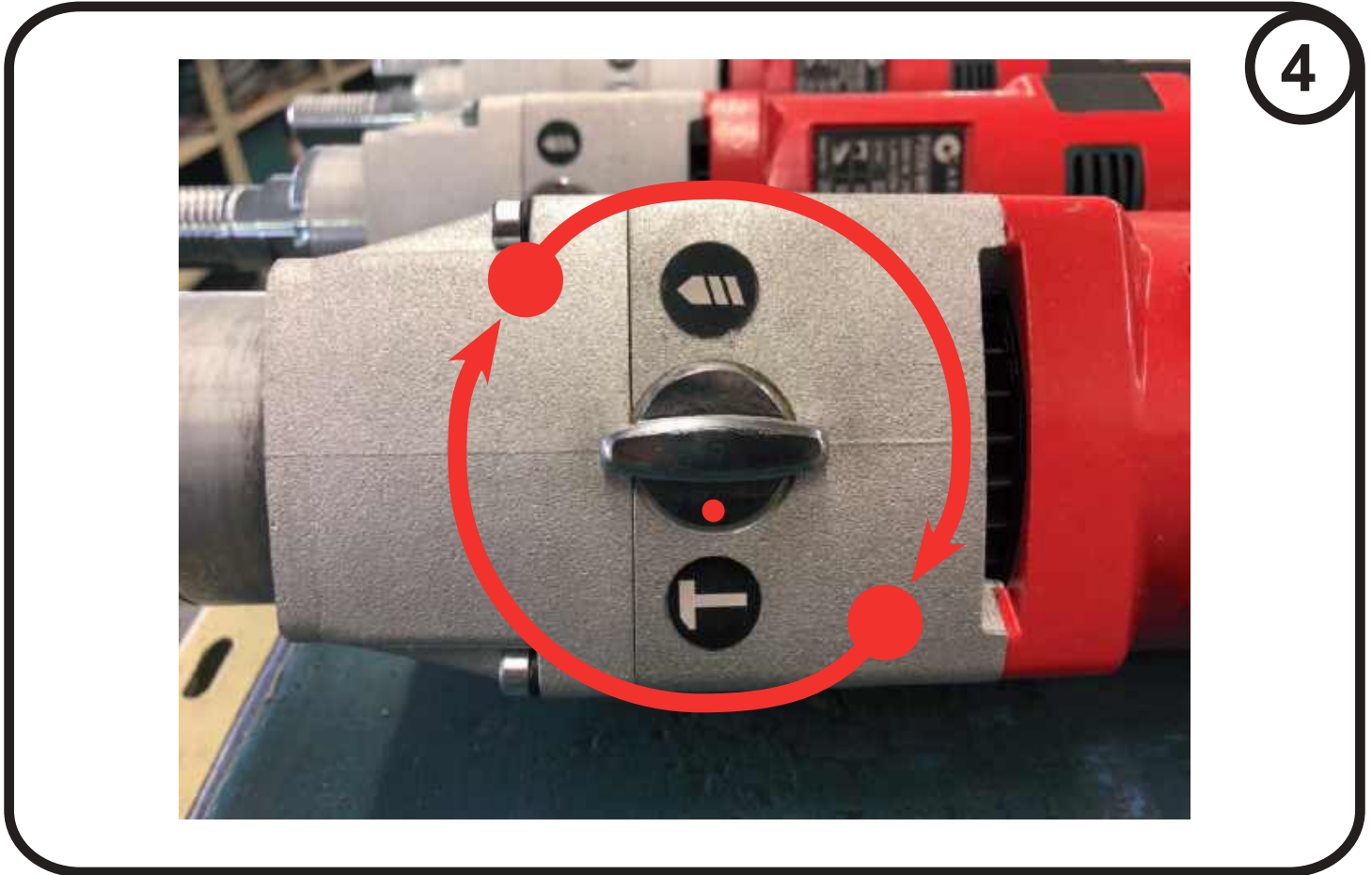
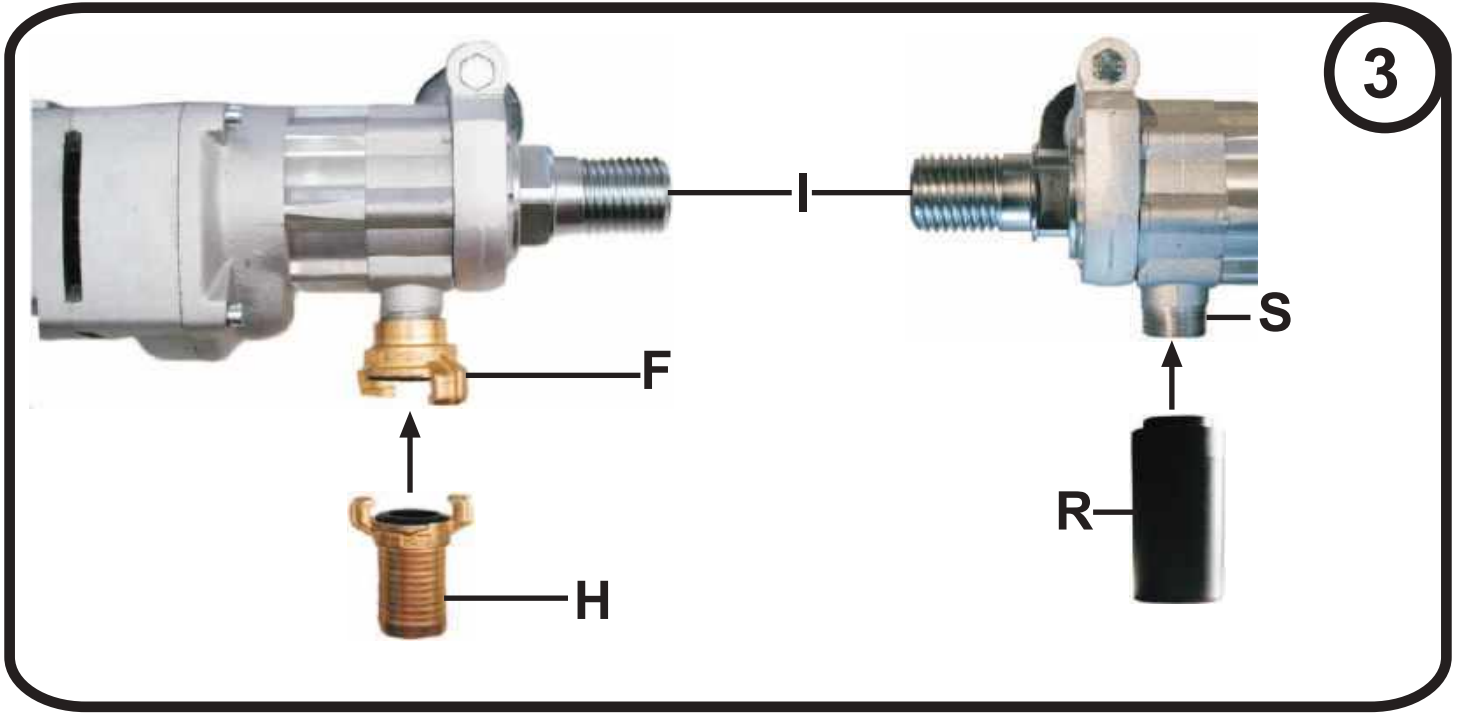
IMPACT ACTION

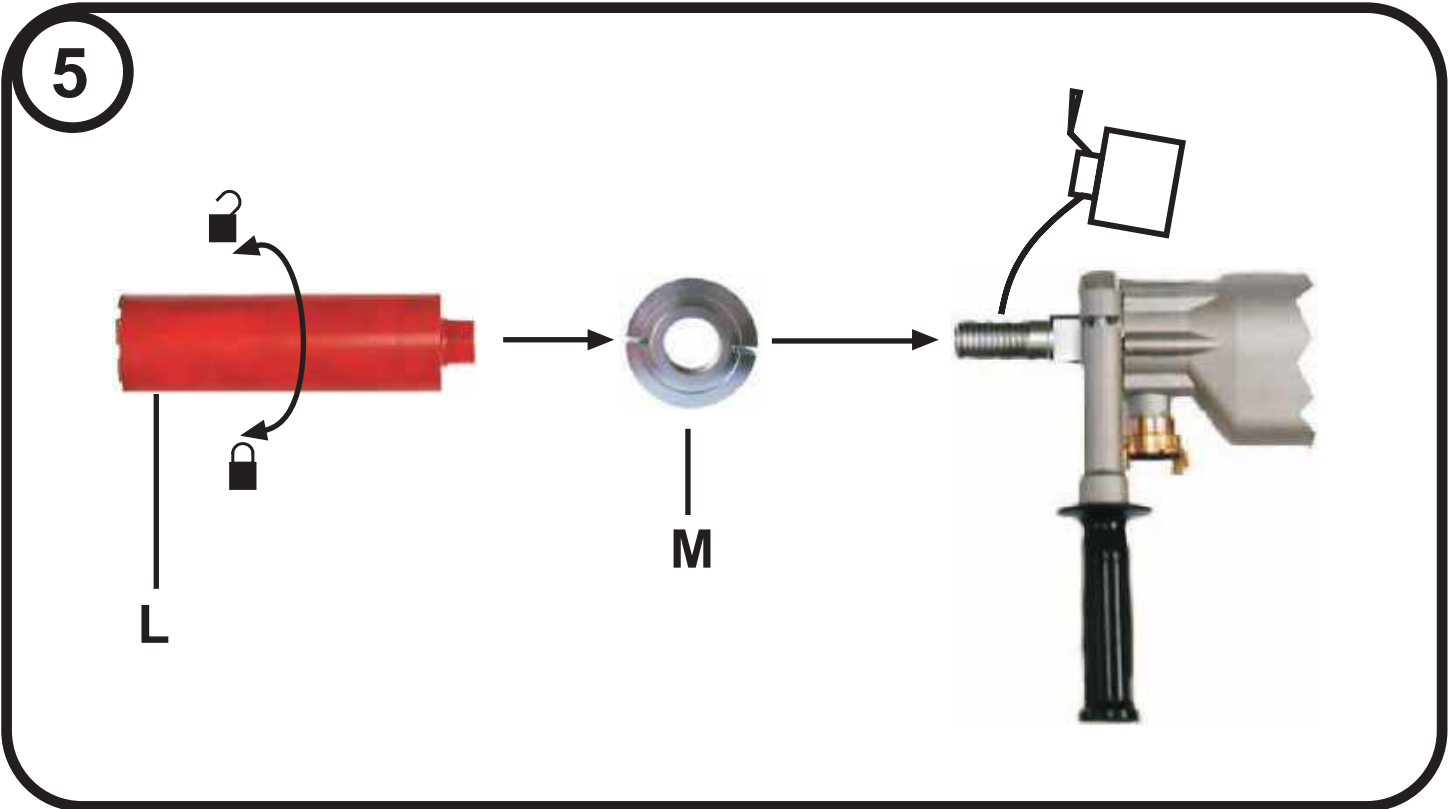
15000 ÷ 30000
hits / min

ROTATIVE ACTION

600 ÷ 1500 rpm







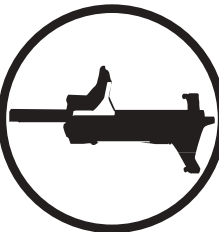
OK



ON

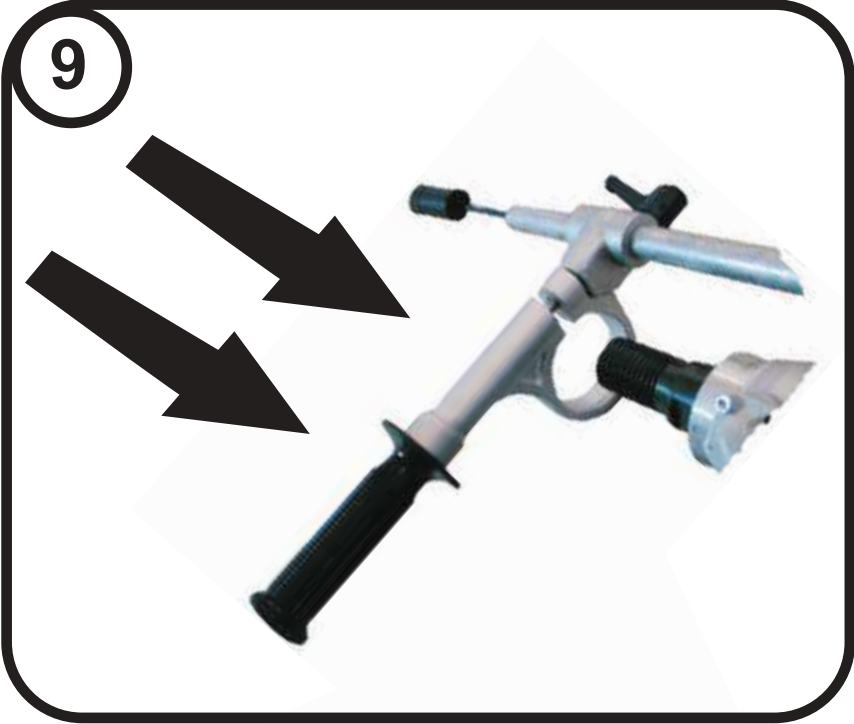


OK



LOCK
ON





SEZIONE MINIMA DEI CONDUTTORI PER CAVI DI PROLUNGA
MINIMUM WIRE SIZE FOR EXTENSION CABLE
MIN. ADERDURCHMESSER FÜR VERLÄNGERUNGSKABEL
SECÇÃO MINIMA DE CABO
EXTENSIÓN DEL CABLE
SECTION DU CONDUCTEUR POUR CORDON PROLONGATEUR
MINIMUM STØRRELSE PÅ FORLÆNGERKABEL
ΕΛΑΧΙΣΤΟ ΜΕΓΕΘΟΣ ΑΓΩΓΩΝ ΓΙΑ ΚΑΛΩΔΙΟ ΠΡΟΕΚΤΑΣΗΣ
MINIMALE DOORSNEDE ADERS VERLENGSNOER

		LUNGHEZZA - LENGTH - LÄNGE - LARGURA - LARGO LONGUEUR - LÆNGDE - ΜΗΚΟΣ - LENGTE					
AMPERE (A)		7,5 m	15 m	25 m	30 m	45 m	60 m
5,1 ÷ 7	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²
7,1 ÷ 10	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	4 mm ²
10,1 ÷ 16	4 mm ²	4 mm ²	4 mm ²	4 mm ²	6 mm ²	6 mm ²	6 mm ²
16,1 ÷ 22	4 mm ²	4 mm ²	4 mm ²	6 mm ²	6 mm ²	6 mm ²	-
		Caratteristiche dei cavi di prolunga: 2 CONDUTTORI (1 fase + 1 neutro) / 3 CONDUTTORI (1 fase + 1 neutro + terra)			Caracteristicos cables: con 2 CABLES (2 polos) / con 3 CABLES (2 polos+tierra)		
		Extension Cable: 2 WIRES (2 Pole) / 3 WIRES (2 Pole + Ground)			Forlængerkabel: 2 LEDERE (2 poler) / 3 LEDERE (2 poler + jord)		
		Vergrößerungskabel: 2 ADRIG (2 Pole) / 3 ADRIG (2 Pole + Erde)			Καλώδιο προέκτασης: 2 ΑΓΩΓΟΙ (2 πόλοι) / 3 ΑΓΩΓΟΙ (2 πόλοι + γείωση)		
		Caracteristicas dos cabos: Com 2 CABOS (2 polos) / Com 3 CABOS (2 polos + terra)			Verlængsnoer: 2-aderlig (2 polen) / 3-aderlig (2 polen plus aarde)		
		Le cordon prolongateur doit être: 2 CONDUCTEUR (2 Pole) / 3 CONDUCTEUR (2 Pole + Terre)					

Your core drill is a power tool designed to make drilling in dry conditions, in materials like bricks, masonry, concrete, using a diamond core bit. It can be used hand-held or with a proper core drill stand.

General Safety Rules

WARNING! Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) Work area

- a) **Keep working area clean and well lit.** Cluttered and dark areas invite accidents.
- b) **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.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use safety equipments: always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left

attached to a rotating part of the power tool may result in personal injury.

- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery and long hair can be caught in moving parts.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.
- h) **Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.

4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation.** If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from intended could result in a hazardous situation.

5) Power tool use in "Roto-Percussion Mode"

- a) **When using the tool in Roto-Percussion mode, reduce the exposure to vibrations by either:**
 - **limiting the time of hand-held use;**
 - and**
 - **using a proper drill stand with "vibrations suppression" feature.**

The vibrations produced by the tool, if transmitted to the hands and arms repeatedly in daily work can cause personal injuries, also using the tool for short period for many times. The use a proper drill stand with "vibrations suppression" feature reduces drastically the level of vibration transmitted to the operator's hands and arms.

- b) **Always use the right tool for each job (to do the job more quickly and expose you to less hand-arm vibration).**
- c) **Check tools before using them to make sure they have been properly maintained and repaired to avoid increased vibration caused by faults or general wear.**
- d) **Make sure cutting tools are kept sharp so that they remain efficient.**
- e) **Reduce the amount of time you use a tool in one go, by doing other jobs in between.**
- f) **Avoid gripping or forcing a tool or work piece more than you have to.**
- g) **Store tools so that they do not have very cold handles when next used.**
- h) **Encourage good blood circulation by:**
 - *keeping warm and dry (when necessary, wear gloves, a hat, water proofs and use heating pads if available);*
 - *giving up or cutting down on smoking because smoking reduces blood flow; and*
 - *massaging and exercising your fingers during work break.*

6) Throughout the whole operations always use:



Always wear safety goggles



Always wear safety gloves



Always wear ear protection



Always wear safety shoes



Always wear dust mask

7) Service

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Instructions before use



Read carefully the data reported on the data plate of your core drill and on the *Technical Data* sheet that you will find in the package together with your product.

In the following text, figures are identified by numbers, details inside the figures by letters. Figures are depicted on the first pages of this user manual.

Drilling technique choice



Warning: this core drill has been designed for dry use only. Do not use this product in wet mode.

Choose one of the following drilling techniques according to the drilling you have to perform. The following hints help you to choose.

Hand-held drilling

This drilling technique:

- is suitable for drilling into abrasive materials like, bricks, masonry, gasbeton, poroton, etc;
- is not recommended to drill concrete (reinforced or not reinforced);

- is not recommended when using the Roto-Percussion mode (see chapter "Rotative and Roto-Percussion modes").

Drilling with a drill stand

This drilling technique:

- is safer and more effective than the hand-held drilling technique;
- is suitable to drill into any kind of material;
- allows you to drill in Rotative and Roto-Percussion modes for longer time than hand-held.

The use of a proper drill stand with "vibrations suppression feature", is highly recommended.



Always follow the instructions given by the drill stand manufacturer.

Rotative and Roto-Percussion modes

Your core drill can be used in two modes:

- "Rotative mode";
- "Roto-Percussion" mode: while is rotating, the core bit is also moved forward and backward, generating impacts on the material you're drilling (fig. 2).

You can select the mode by operating the selector as shown in figure 4.



Warning: The Roto-Percussion mode is not recommended when drilling hand-held, due to the vibration level the user is exposed to.

Devices to reduce vibrations

Core drills and more in general every power tool, expose the user to vibrations that could be dangerous for the health if prolonged and repeated for significant lengths of time.

The European Directives and Standards for Safety define limits to time and level of exposure of workers to vibrations.

The employer is responsible for the safety and health of his workers and he has to evaluate the daily vibrations exposure taking action when the limits are exceeded.

To reduce the worker's exposure to vibrations, CARDI offers specifically developed devices.

Ask your dealer for more information.

Dust suppression

- dry drilling is safer and more effective if dust is removed by a proper vacuum cleaner;
- the core drill is equipped of an integrated dust extraction system; just connect a proper vacuum cleaner to the dust outlet;
- a proper vacuum cleaner must be suitable for thin dust;
- always wear a dust-mask when performing dry drilling.

Extension cords

- when an extension cord is needed, follow the chart shown in figure 13 on this manual for the choice of the right section of the conductors;
- the extension cord (made up of cable, plug and socket) must be suitable for permanent outdoor use and resistant to oil and grease (like as example type H07RN-F);
- if you use more than one extension cord make sure that every cable in each extension cord has a section not lower than the value shown on the chart in figure 13, considering the total length of the extension cords;
- remember that the more an extension cord is long the more the voltage drop is high and the worse is the operation of your core drill. We suggest extensions no longer than 60 meters.

Preliminary operations

In order to prepare your core drill to operate, follow these steps. Before proceeding with the preparation make sure that the plug is disconnected from the outlet.

- a) If you use your core drill hand-held, fix the auxiliary handle (B) to the core drill, as shown in figure 1.



Warning: If you don't use the auxiliary handle you can lose control of the core drill and this can lead to serious personal injuries.

- b) If you use your core drill with a stand, fix the machine into the collar of the stand (as shown in figure 12).



Follow the instructions given by the stand's manufacturer to fix the machine to the drill stand and to fix the drill stand to the material you want to drill.

ON/OFF switch



Warning: for your safety, you must get familiar with the functioning of the switch in order to prevent unintentional switch-on and to switch-off the machine quickly, if necessary.

- see figure 8 in order to understand how to use the switch;
- the switch is equipped with a feature (*lock-off*) that prevent unintentional switch-on of the core drill.
- the switch is equipped with a feature (*lock-on*) that locks the switch in the *on* position;



Warning: the *lock-on* feature must be used ONLY when the machine is fixed on a drill stand. You must not use the *lock-on* feature when you are using your core drill hand-held.

Integrated dust extraction system

Your core drill is equipped with a dust extraction system integrated into the machine, shown in figure 3. Follow these instructions:

- connect a proper vacuum cleaner to the bayonet coupling pipe adapter (H). The vacuum cleaner must be suitable to filter thin dust;
- connect the bayonet coupling pipe adapter to the machine (F).

As an alternative, you can use a special connection (R).

Checks and precautions to avoid structural damage and damage to the plant

Before starting any drilling activity, talk with the construction manager or the planner in order to make sure that the drilling doesn't:

- make any damage to the structure of the building and doesn't change the structural characteristics of the construction;
- damage any water or gas pipeline or any electric mains.

Checks and precautions to avoid damage caused by the fall of the core

- before drilling, make sure that the possible falling out of core from the other side of the hole doesn't make any damage. Always bound the area where the core can fall and signal the danger;
- if the possible fall of the core can make damage, make a system that holds the core when drilling is completed.

Start drilling device

When you use your core drill hand-held, we recommend to use a *start drilling device*. Some examples are shown in figures 9, 10 and 11. These devices stabilize the core bit allowing safer drilling conditions.

Core bit choice

The maximum and minimum core bit diameter, according to the kind of drilling performed, is reported on the data plate on your core drill. Do not use core bits out of the limits given for your machine.



Warning: Use only laser welded core bits, specifically manufactured for dry drilling.

The core bit is different depending on the material to be drilled and the kind of drilling you are performing: consult your dealer about the correct core bit for your application. Wrong type of core bit for the application or not sharpened core bit can overload the motor leading to damages to the motor, long drilling time, excessive diamond segments wear.

Diamond core bit mounting and replacement

Follow these directions, refer to figure 5:

- before mounting or dismantling the core bit (L) always unplug the core drill;
- lubricate the core bit and the core bit spindle thread in order to make easier, after use, the core bit removal;
- we recommend to interpose a *quick release device* (M) between the core bit spindle and the core bit (as shown in figure 5).
- before starting to drill make sure that the core bit is firmly screwed on the core bit spindle.

Fastening the work piece and size of the work piece

- if the work object is a block and not part of a structure, fasten it in order to prevent its movement;
- prevent the work piece from shifting, moving or falling when you are cutting.

Environmental conditions

- don't expose the machine to rain, ice or snow;
- prevent water or any other liquid from coming into contact with the electric parts of your machine;
- do not use the core drill in explosive atmospheres, for instance in presence of inflammable liquids, gas or dust. The electric core drill produces sparks which can ignite dust or smoke.

Overhead drilling (ceiling drilling)

Your CARDI core drill can perform overhead-drilling (upward).



Warning: the possible drop of the core can be dangerous. Watch out!

Operating Instructions

Follow these instructions:



Warning: do not touch any moving parts of your diamond drill when operating.

- if you use the core drill hand-held, using a start drilling device, begin to drill into the material, pressing lightly. Let the diamond segments drill about 1 cm deep into the material. This operation is very important because, if correctly carried out, leads to a perfect centering and makes drilling easier. After this some start drilling devices need to be removed. Perform this starting phase in "Rotative mode".
- if you use the core drill with a stand, fix the stand on the material to be drilled and then mount the core drill to the stand, according to the instructions provided by the manufacturer of the stand. Then switch on the core drill, keeping the core bit not in contact with the material to be drilled. After this operation, using the moving system of the stand, move the core drill and the rotating core bit closer to the material and, pressing lightly, drill about 1 cm into the material. This operation is very important because, if correctly carried out, leads to a perfect centering and makes drilling easier. In any case, refer to instructions provided by the manufacturer of the stand. Perform this starting phase in "Rotative mode".
- at this point you can choose if continue to drill in "Rotative mode" or if putting the machine in "Roto-Percussion mode" to make the job. Refer to the Paragrah "Rotative and Roto-Percussion modes".
- after the centering operation, increase the forward speed. On one hand, a too low forward speed leads to polishing of diamond sectors, decreasing their drilling capacity. On the other hand, a too high forward speed, leads to a quick segments wear.

- when drilling, make sure that the rotation axis of the core bit doesn't move and avoid any possible movement of it. When the core bit rotation axis moves, the friction between the wall of the hole and the core bit's metal body leads to a considerable power loss.
- If, for any reason, you can not continue drilling, you can make a new hole around the old one (over-drilling), keeping the same rotation axis. The diameter of the new hole must be at least 15-20 mm bigger than the diameter of the old one;
- drilling materials containing wood, cork, rubber, foam polystyrene can generate problems to the drilling to continue. If you have this kind of problems, pull the core out of the hole and remove all the materials listed before that don't allow the core bit to go on and then continue with drilling operations;



Warning : in case the electric power goes off, set the switch to the off position, preventing the machine from accidentally self starting.



Warning: do not touch the core bit after performing a drill. The core bit can be very hot and cause severe burns.

Mechanical clutch



Warning: the unexpected block of the core bit rotation can cause an heavy tear at your arms.

The maximum force of this tear at your arms, accordingly with the safety regulation, can not exceed 40 Kg. Be always ready to resist this kind of force and to quickly release the switch.

Your CARDI core drill is equipped with a safety mechanical clutch that comes into operation in case of sudden stop of the core bit rotation. The block of the core bit rotation can be dangerous for the operator so, despite your drill is equipped with this device, you must always be watchful and be ready to resist the tear and release the switch to off position.

Multifunction electronic

- the soft-start (peaks limiter) allows the motor to not start at full power, reduces current peaks that occurs when you switch the motor on, helps you when you begin drilling, allowing gradual core bit rotation and avoiding tears at your arm, and allows you to use your core drill connected to the household electric supply equipped with automatic circuit breaker;
- the electronic clutch cuts off power to the motor in case of excessive overload, increasing the operator safety and preventing damage to the motor. When the overload is over, the device gives back power to the motor that begins working again;
- if the electronic clutch operates frequently means that the core drill is not used properly. Possible causes can be a not suitable forward speed, an excessive friction between the core bit and hole wall or an excessive drilling depth.

Drilling deeper than the core bit length

If you want to make an hole deeper than the core bit length proceed as follows:

- drill till the end of the core bit;

pull the core bit out of the hole and remove the core;

place a proper core bit extension between the core bit and the core drill thread;

insert the core bit in the hole and proceed drilling.

Maintenance - Service - Warranty

Periodic maintenance

at the end of the work, after having removed the core bit, blow compressed air inside the rotating motor in order to remove dust and powder. Do this operation wearing protective goggles;

before starting any other cleaning, maintenance or lubrication operation make sure that the core drill is unplugged;

never unplug the core drill by pulling the cord;

keep lubricate the core-bit shaft thread;

keep your core drill clean and dry, in particular its handles;

never use solvents or other harsh chemicals for cleaning your core drill;

after use put your core drill in a dry, safe and inaccessible to children place;

gears are lubricated by lubricating oil and grease which are suited for any external temperature. You don't have to check the oil level or to fill it up;

inspect often the electrical cord and extension cords, making sure that they don't have any damage like cuts, abrasions or live conductors. If you find a damage, ask a CARDI authorized service centre for replacement;

do not use the core drill with damaged components or with malfunctions, in particular when the switch doesn't work properly. In these cases, ask a CARDI authorized service centre to service on the machine.

Service

after 250 hours of work, bring your core drill to a CARDI authorized service centre for periodical check;

any core drill repairing must be carried out by CARDI authorized service personnel only. Ask your dealer for the list of the CARDI authorized service centres;

your machine's serial number is printed on the data plate;

use original CARDI spare parts only.

Warranty

Your product is under CARDI warranty for 12 months, starting from the date of purchase. This warranty is against faulty workmanship, flaws material and design problems. The warranty covers free components replacement, manpower needed for replacement and wearing materials such as oil and lubricants if intact before the repairing operation. The warranty doesn't cover the replacement of:

components of the product replaced or modified by people not authorized by CARDI;

components damaged by carelessness, not suitable use or overloaded;

components of products from which safety devices have been removed;

worn wearing parts replaced during repair.

This warranty does not apply to products that have been damaged by carelessness like water entering the core drill, lack of periodic cleaning and maintenance, damage of the threaded components or the spindle etc.

The life of wearing parts is variable depending on the working time and the kind of work they are used for. Examples of wearing parts are: cables, switches and plugs, brushes, commutators, clutch plates, ball and roller bearing not in oil, sealing rings, transmission spindles, filters, percussion system parts, etc.

If during repairing under warranty, a wearing part is worn and this can affect the safety and the operation of your product, the customer is asked to pay for the replacement of these components not under warranty. If the customer refuses this, no repairing operation will be carried out.

The warranty covers free replacement of components which are defective due to wrong manufacturing or assembly, if the product is brought to an authorized service centre and if:

the product is together with a purchasing document stating when the product has been purchased. Valid purchasing documents are invoices or delivery certificates;

maintenance operations have been carried out every 250 working hours, replacing the worn wearing parts;

no unauthorized people have serviced the product;

the product has not been misused and it has been used accordingly with the directions given in this user manual;

all safety directions have been followed.

Your CARDI product is not under warranty if:

the product has been serviced by people not authorized by CARDI.

damage is due to incorrect use and/or carelessness. Dents due to drops or strokes will be considered evidence of carelessness;

damage has been caused by mechanical or electrical overload;

damage has been caused by water, mud or any other liquid entering the product.

When your product is under warranty, in some cases, like if the CARDI authorized service personnel think the repairing is too expensive to be carried out, the free substitution of the product is possible. In addition, the substitution under warranty is provided after two fruitless reparation attempts and after the authorization of a CARDI service manager. In case of substitution, the customer is, usually, requested to pay for the worn wearing parts of the product that has been replaced.

User-replaceable components

No components of the CARDI product can be replaced by the user. Replacement must be carried out by CARDI authorized personnel only.

CARDI service centres - Address list

Ask your dealer for a CARDI service centres address list.

Package contents

For the list of contents refer to the *Spare Parts List*, specific for your model, located in the package together with this manual.

**WARNING:
THE MANUFACTURER DECLINES ALL RESPONSIBILITY
IN CASE OF NO RESPECT OF THE ABOVE WRITTEN
"SAFETY AND OPERATING INSTRUCTIONS".**

Products to the end of their life.



The symbol on the left, that you can find on the product or on its packaging indicates that this product may not be treated as household waste. At the end of its life the products must be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

Be sure that this product is disposed correctly. You will help prevent potential negative consequences for the environment and human health. For more detailed information about what to do when your product doesn't work and is not fixable, contact the dealer where you did purchase the product.

Your product has been introduced new on the market after August 13th 2005.



This manual is subject to modifications without notice.



DATI TECNICI - Performance Data - Technische Daten - Dados Técnicos - Datos De Rendimiento - Tekniske Data - Données Techniques - Στοιχεία απόδοσης - Technische Gegevens - Технические характеристики

MODELLO - Model - Modell - Modelo - Modelo - Model - Modèle - Μοντέλο - Model - Модель		DP2200 MA-16	
TENSIONE - Voltage - Spannung - Tensão - Voltaje - Spænding - Tension - Ηλεκτρική Τάση - Voltage - Напряжение, В	V	230	
GIRI A VUOTO - No-Load R.P.M. - Leerlaufdrehzahl - R.P.M.Sem Carga - Velocidad Sin Carga - Tomgangshastighed - Régime Au Point Mort - Στροφές Χωρίς φορτίο - Snelheid Onbelast - Холостой ход, об/мин	min ⁻¹	1200	
PERCUSSIONI A VUOTO - No-load impact - Leerlaufschlagzahl - Impacto em vazio - Impacto en vacío - Slagtal ubelastet - Percussion à vide - Aantal slagen	min ⁻¹	28800	
FREQUENZA - Frequency - Frequenz - Frequência - Frecuencia - Frekvens - Fréquence - Συχνότητα - Frequentie - Частота, Гц	Hz	50 ÷ 60	
CARICO NOMINALE - Nameplate Load - Nennleistung - Carga Nominal - Carga De Placa - Nominal Ydelse - Puissance Nominale - Ονομαστικό Φορτίο - Nominaal Vermogen - Заявленные нагрузки			
CORRENTE NOMINALE - Nameplate Current - Nennstrom - Corrente Nominal - Corriente De Placa - Mærkestrøm - Courant Nominal - Ονομαστικό Ρεύμα - Nominaalstroom - Сила тока	A	10	
POTENZA ASSORBITA NOMINALE - Nameplate Input Power - Nennaufnahmeleistung - Potência De Admissão Nominal - Alimentación De Entrada De Placa - Indgangshastighed - Puissance D'entrée Nominale - Ονομαστική Ισχύς Εισόδου - Aanloopstroom - Входная мощность, Вт	W	2200	
GIRI A CARICO NOMINALE - Nameplate Load R.P.M. - Lastdrehzahl - R.P.M. Da Carga Nominal - Velocidad De Carga De Placa - Belastningsomdrejningshastighed - Régime Nominal - Στροφές Ονομαστικού Φορτίου - Snelheid Belast - Под нагрузкой, об/мин	min ⁻¹	880	
PERCUSSIONI A CARICO NOMINALE - Nameplate load impact - Impacto Da Carga nominal - Impacto De Carga De Placa - Percussion à Régime nominal	min ⁻¹	21120	
POTENZA RESA NOMINALE - Nameplate Output Power - Nennabgabeleistung - Potência De Saída Nominal - Alimentación De Salida De Placa - Udgangshastighed - Puissance De Sortie Nominal - Ονομαστική Ισχύς Εξόδου - Uitvoerstroom - Выходная мощность, Вт	W	1260	
COPPIA NOMINALE - Nameplate Torque - Nenndrehmoment - Binário Nominal - Par De Placa - Mærkedrejningsmoment - Couple Nominal - Ονομαστική Ροπή - Nominaal Koppel - Крутящий момент, Нм	Nm	19,4	
CARICO DI FRIZIONAMENTO ELETTRONICO - Electronic Clutch Intervention - Auslösestrom Der Elektronik - Carga Da Embraiagem Automática - Intervención De Toma Electrónica - Elektronisk Brydestrom - Intervention Mandrin Electronique - Παρέμβαση ηλεκτρονικού συμπλέκτη - Terugslagbeveiliging - Максимальные нагрузки			
CORRENTE MASSIMA ASSORBITA - Maximum Input Current - Maximale Stromaufnahme - Corrente Máxima De Admissão - Corriente De Entrada Máxima - Maksimal Indgangsspænding - Courant D'entrée Maximum - Μέγιστο Ρεύμα Εισόδου - Maximale Ingangsstroom - Сила тока, А	A	11,5	
POTENZA MASSIMA RESA - Maximum Output Power - Maximale Abgabeleistung - Potência Máxima De Saída - Alimentación De Salida Máxima - Maksimal Udgangsspænding - Puissance De Sortie Maximum - Μέγιστη Ισχύς εξόδου - Maximale Uitgangsstroom - Выходная мощность, Вт	W	1470	
COPPIA MASSIMA RESA - Maximum Output Torque - Maximales Abgabedrehmoment - Binário Máximo De Saída - Par De Salida Máximo - Maksimal Afgivelsesomdrejningsmoment - Couple De Sortie Maximum - Μέγιστη Ροπή Εξόδου - Maximaal Uitgaand Koppel - Крутящий момент, Нм	Nm		
DISPOSITIVI DI SICUREZZA - Safety Devices - Sicherheitseinrichtungen - Dispositivos De Segurança - Dispositivos De Seguridad - Sikkerhedsanordninger - Dispositifs De Sécurité - Διατάξεις Ασφαλείας - Veiligheidsvoorzieningen - Защита			
FRIZIONE ELETTRONICA MULTIFUNZIONE - Multifunction Electronic Clutch - Multifunktionselektronik - Embraiagem Automática Multifunções - Toma Electrónica Multifunción - Multifunktionselektronik - Mandrin Electronique Multifonction - Ηλεκτρονικός συμπλέκτης πολλαπλών λειτουργιών - Multifunctionele Elektronische Koppeling - Многофункциональное электронное сцепление			
AVVIAMENTO LENTO E LIMITATORE DI SPUNTO ALL'AVVIO - Soft-Start - Softstart - Arranque Lento - Inicio Suave - Softstart - Démarrage Progressif - Ομαλή εκκίνηση - Softstart - Плавный запуск			
PROTEZIONE DA SOVRACCARICO - Overload Protection - Überlastschutz - Protecção Contra Sobrecarga - Protección Ante Sobrecargas - Overlastbeskyttelse - Protection Contre Les Surcharges - Προστασία από Υπερφόρτωση - Overbelastingsbeveiliging - Общая защита			
FRIZIONE MECCANICA (CON DISCHI IN BRONZO) - Mechanical (Brass Rings) Clutch System - Mechanische Rutschkupplung - Embraiagem Mecânica (Com Anéis De Bronze) - Sistema De Toma Mecânica (Disco De Bronze) - Mekanisk Glidekobling - Mandrin Mécanique (Bagues Laiton) - Σύστημα Μηχανικού Συμπλέκτη (μτρούζιμων δακτυλίων) - Mechanische Koppeling (Met Koperen Ringen) - Механическая предохранительная муфта (бронзовые кольца скольжения)			
COSTRUZIONE IN DOPPIO ISOLAMENTO - Double Insulation Construction - Doppel-Isolierung Bau - Construção De Isolamento Duplo - Construcción Con Doble Aislamiento - Dobbelt Isoleringskonstruktion - Isolation Double - Κατασκευή με διπλή μόνωση - Dubbel Geïsoleerd -			
ALTRI DATI - Other Data - Andere Daten - Outros Dados - Otros Datos - Andre Data - Autres Données - Άλλα στοιχεία - Overige Gegevens - Другая информация			
GAMMA DI FORATURA - Drilling Range - Bohrbereich - Conjunto De Perfuração - Serie De Perforación - Boreområde - Intervalle De Perçage - Απόσταση διάτρησης - Boorbereik - Диаметр сверления, мм		MATERIALI ABRASIVI - Masonry Materials - Mauerwerk - Materiais De Alvenaria - Materiales De Albañilería - Murværk - Matières - Υλικά τοιχοποιίας - Metselwerk - Диапазон сверления абразивного материала, мм	mm 52 ÷ 202
		CEMENTO ARMATO O SIMILARI - Reinforced Concrete Or Similar - Armierter Beton Oder Vergleichbares - Betão Reforçado Ou Semelhante - Hærmignon Consolidado O Similar - Armeret Beton Eller Lignende - Béton Armé Ou Similaire - Versterkt Beton Of Vergelijkbaar - Диапазон сверления армированного бетона, мм	mm 52 ÷ 152
PESO - Weight - Gewicht - Peso - Peso - Vægt - Poids - Βάρος - Gewicht - Bec			Kg 4,8
COPPIA DI TARATURA FRIZIONE - Clutch Torque - Drehmoment Der Rutschkupplung - Embraiagem De Binário - Par De Agarre - Drejemoment For Glidekobling - Couple Du Mandrin - Ροπή συμπλέκτη - Draaimoment Van De Koppeling - Крутящий момент сцепления, Нм			Nm 15
QUANTITÀ E TIPO DI OLIO - Quantity And Type Of Oil - Menge Und Typ Getriebeöl - Quantidade E Tipo De Óleo - Cantidad Y Tipo De Aceite - Oliemængde Og -Type - Quantité Et Type D'huile - Ποσότητα και τύπος λαδιού - Hoeveelheid En Soort Olie - Количество и вид масла			g 65
	E.P.68 - 150cST (ex. ESSO Spartan E.P.68; ESSO Spartan E.P. 150)		
QUANTITÀ E TIPO DI GRASSO - Quantity And Type Of Grease - Menge Und Typ Getriebefett - Quantidade E Tipo De Lubrificante - Cantidad Y Tipo De Grasa - Smøreløiemængde Og -Type - Quantité Et Type De Graisse - Ποσότητα και τύπος Γράσου - Hoeveelheid En Soort Vet - Количество и вид смазки, г			g 30
	GREASE FOR GEARS AT MOBYDENUH DISULPHIDE		
ATTACCO CORONA - Bit Connection - Bohrkronenschlussgewinde - Ligação Das Brocas - Conexión De Broca - Tilslutningsgevind Til Borehoved - Connexion Foret - Σύνδεση Κοπτικού - Aansluiting Boorkoppen - Тип соединения			1" ¼ UNC
SPINA - Plug - Stecker - Fich - Toma - Stikprop - Prise - Φις - Steker - Штекер			SCHUKO/France

(EN 60745-1 , EN 60745-2-1) Rumore - Noise - Lärm - Bruit - Ruido - Lawaai - Støj - Ruído - Ηαλας - Θόρυβος			
IT - EN - DE - FR - ES - NL - DA - PT - PL - EL - RU -	Livello di pressione sonora Sound pressure level Schalldruckpegel Niveau de pression sonore Nivel de presión acústica Geluidsdrukniveau Lydtryksniveau Nível de pressão sonora Poziom ciśnienia akustycznego Επίπεδο ηχητικής πίεσης Уровень звукового давления	L_{pA}	90 dB(A)
IT - EN - DE - FR - ES - NL - DA - PT - PL - EL - RU -	Livello di potenza sonora Sound power level Schalleistungspegel Niveau de puissance sonore Nivel de potencia sonora Geluidsvermogensniveau Lydeffektniveau Nível de potência sonora Poziom mocy akustycznej Στάθμη ισχύος θορύβου Уровень звуковой мощности	L_{WA}	101 dB(A)
IT - EN - DE - FR - ES - NL - DA - PT - PL - EL - RU -	Incertezza Uncertainty Unsicherheit Incertitude Incertidumbre Onzekerheid Usikkerhed Incerteza Niepewność Αβεβαιότητα Погрешность	K	3 dB

(EN 60745-1 , EN 60745-2-1) Vibrazioni - Vibration - Vibration - Vibrations - Vibraciones - Trillingen - Vibration - Vibração - Wibracja - Δόνηση			
IT - EN - DE - FR - ES - NL - DA - PT - PL - EL -	Valore di emissione delle vibrazioni Vibration emission value Schwingungsemissionswert Valeur d'émission vibratoire Valor de vibraciones Trillingen emissiewaarde Vibrationsemissionsværdien Vibração valor de emissão Wartości emisji drgań Κραδασμών τιμή εκπομπής		a_{h,DD} 6,2 m/s²
			a_{h,ID} 13,9 m/s²
IT - EN - DE - FR - ES - NL - DA - PT - PL - EL -	Incertezza Uncertainty Unsicherheit Incertitude Incertidumbre Onzekerheid Usikkerhed Incerteza Niepewność Αβεβαιότητα	K	1,5 m/s²

Carotatrici manuali per uso a secco.

Hand held core drills for dry use.



Dichiarazione di conformità CE

Secondo la direttiva 2006/42/EC, Allegato II, N.1A.

EC Declaration of conformity

According to 2006/42/EC, Annex II, No.1A.

EG-Konformitätserklärung

Nach 2006/42/EG, Anhang II, Nr.1A.

Déclaration CE de conformité

Selon la directive 2006/42/CE, Annexe II, N.1A

P1800 82-MS
P1800 82-MS-EL
P1800 162-MS
P1800 162-MS-EL
T1800 82-MS
T1800 82-MS-EL
T1800 82-MA-EL
T1800 82-PS-EL

T1800 162-MS A1
T1800 162-MS-EL
T1800 162-MA-EL
T1800 162-PS-EL
T1800 130-MS
T1800 130-MS-EL
T1800 130-MA-EL
T1800 130-PS-EL

T2000-250 MA-EL
P2000 MS-13
T2000 MS-13
T2000 MS-14
T2000 MA-14
T2000 MA-15
DP2200 MA-15
DP2200 MA-16

IT-Dichiarazione CE di conformità - Secondo la direttiva 2006/42/EC, Allegato II, N.1A

La società **CARDI S.r.l. con sede in via Leonardo da Vinci, 21, 24030 Pontida, Italia** autorizza il signor Ezio Cattaneo, reperibile presso **CARDI S.r.l. via Leonardo da Vinci, 21, 24030 Pontida, Italia**, a costituire la documentazione tecnica pertinente il prodotto di seguito citato.

Con la presente si dichiara che la carotatrice manuale modello

P1800 82-MS, P1800 82-MS-EL, P1800 162-MS, P1800 162-MS-EL, T1800 82-MS, T1800 82-MS-EL, T1800 82-PS-EL, T1800 82-MA-EL,

T1800 162-MS A1, T1800 162-MS-EL, T1800 162-PS-EL, T1800 162-MA-EL, T1800 130-MS, T1800 130-MS-EL, T1800 130-PS-EL,

T1800 130-MA-EL, T2000-250 MA-EL, P2000 MS-13, T2000 MS-13, T2000 MS-14, T2000 MA-14, T2000 MA-15, DP2200 MA-15, DP2200 MA-16

a decorrere dal numero di matricola **1603096** (il numero di matricola è riportato sulla macchina), è conforme a tutte le disposizioni applicabili della

direttiva macchine 2006/42/CE del 15 Maggio 2006;

direttiva 2014/30/CE sulla compatibilità elettromagnetica del 26-02-2014

direttiva 2011/65/CE (RoHS), direttiva 2012/19/CE (WEEE).

Inoltre sono state applicate le seguenti norme armonizzate (o parti di esse):

EN60745-1:2009, EN60745-2-1:2010,

EN55014-1:2006+A1:2009+A2:2011, EN55014-2:1997+A1:2001+A2:2008,

EN61000-3-2:2014, EN61000-3-3:2013,

EN61029-1:2009, EN61029-2-6:2010.

Pontida, 23-05-2016

Ezio Cattaneo



Responsabile tecnico di prodotto

(Rappresentante autorizzato per CARDI S.r.l., Pontida, Italia, responsabile per la documentazione tecnica)

Nel caso di abbinamento della carotatrice manuale con un supporto si realizza una carotatrice stazionaria che dovrà essere accompagnata da una nuova Dichiarazione di conformità CE. La responsabilità della redazione di tale dichiarazione è a carico di chi compone la carotatrice stazionaria.

EN-EC Declaration of conformity - According to 2006/42/EC, Annex II, No.1A

The company **CARDI S.r.l.** based in **via Leonardo da Vinci, 21, 24030 Pontida, Italy** authorizes Mr. Ezio Cattaneo found on **CARDI S.r.l. via Leonardo da Vinci, 21, 24030 Pontida, Italy**, to compile the technical file about the under listed product.

We hereby declare that the hand-held diamond drill type

P1800 82-MS, P1800 82-MS-EL, P1800 162-MS, P1800 162-MS-EL, T1800 82-MS, T1800 82-MS-EL, T1800 82-PS-EL, T1800 82-MA-EL,

T1800 162-MS A1, T1800 162-MS-EL, T1800 162-PS-EL, T1800 162-MA-EL, T1800 130-MS, T1800 130-MS-EL, T1800 130-PS-EL,

T1800 130-MA-EL, T2000-250 MA-EL, P2000 MS-13, T2000 MS-13, T2000 MS-14, T2000 MA-14, T2000 MA-15, DP2200 MA-15, DP2200 MA-16

from serial number **1603096** (the serial number is shown on machine), fulfils all relevant provisions of

directive 2006/42/EC of 15 Maj 2006

directive 2014/30/CE electromagnetic compatibility of 26-02-2014

directive 2011/65/EC (RoHS), directive 2012/19/CE (WEEE).

The following harmonized standards (or parts thereof) were applied:

EN60745-1:2009, EN60745-2-1:2010,

EN55014-1:2006+A1:2009+A2:2011, EN55014-2:1997+A1:2001+A2:2008,

EN61000-3-2:2014, EN61000-3-3:2013,

EN61029-1:2009, EN61029-2-6:2010.

Pontida, 23-05-2016

Ezio Cattaneo



Product technical manager

(Authorized representative for CARDI S.r.l., Pontida, Italy, technical documentation manager)

In event of combination of the hand-held diamond drill with a drill-stand, a stationary drilling machine is created. The stationary drilling machine must be accompanied by a new Declaration of Conformity. The preparation of this new declaration is responsibility of those who composed the stationary drilling machine.

DE-EG-Konformitätserklärung - Nach 2006/42/EG, Anhang II, Nr.1A

Hersteller:

CARDI S.r.l. via Leonardo da Vinci, 21, 24030 Pontida, Italien

Herr Ezio Cattaneo ist bevollmächtigt die technischen Unterlagen zusammenzustellen.

Anschrift Ezio Cattaneo: CARDI S.r.l. via Leonardo da Vinci, 21, 24030 Pontida/ Italien.

Hiermit erklären wir, daß die nachfolgend benannten CARDI Freihand- Kernbohrmotoren:

P1800 82-MS, P1800 82-MS-EL, P1800 162-MS, P1800 162-MS-EL, T1800 82-MS, T1800 82-MS-EL, T1800 82-PS-EL, T1800 82-MA-EL, T1800 162-MS A1, T1800 162-MS-EL, T1800 162-PS-EL, T1800 162-MA-EL, T1800 130-MS, T1800 130-MS-EL, T1800 130-PS-EL, T1800 130-MA-EL, T2000-250 MA-EL, P2000 MS-13, T2000 MS-13, T2000 MS-14, T2000 MA-14, T2000 MA-15, DP2200 MA-15, DP2200 MA-16 ad Seriennummer **1603096** (Seriennummer ist auf dem Typenschild angegeben),

mit allen einschlägigen Bestimmungen der

EG Maschinenrichtlinie 2006/42/ EG vom 17. Mai 2006 in Übereinstimmung sind.

Die Maschinen sind in Übereinstimmung mit allen einschlägigen Bestimmungen der folgenden

EG- Richtlinien 2014/30/EG- elektromagnetische Verträglichkeit vom 26-02-2014.

Richtlinien 2011/65/EG (RoHS), Richtlinien 2012/19/EG (WEEE).

Folgende harmonisierte Normen wurden angewendet:

EN60745-1:2009, EN60745-2-1:2010,

EN55014-1:2006+A1:2009+A2:2011, EN55014-2:1997+A1:2001+A2:2008,

EN61000-3-2:2014, EN61000-3-3:2013,

EN61029-1:2009, EN61029-2-6:2010.

Pontida, 23-05-2016

Ezio Cattaneo



Produkt technischer Manager

(Bevollmächtigter Vertreter für CARDI S.r.l., Pontida, Italien, verantwortlich für die technische Dokumentation)

Für den Fall, daß ein Freihandkernbohrmotor auf einen Bohrständer fixiert wird, entsteht eine komplette Bohreinheit, für die eine entsprechend neue CE Konformitätserklärung erstellt werden muß. Die Erstellung dieser neuen CE Konformitätserklärung liegt in der Verantwortung desjenigen, der die Zusammenstellung der Bohreinheit erwirkt hat.

FR-Déclaration CE de conformité des machines - Selon la directive 2006/42/CE, Annexe II, N.1A

La société **CARDI S.r.l.** basée en **via Leonardo da Vinci, 21, 24030 Pontida, Italie** autorise Monsieur Ezio Cattaneo trouvé sur **CARDI S.r.l. via Leonardo da Vinci, 21, 24030 Pontida, Italie**, pour constituer la documentation technique.

Nous déclarons que la carotteuse manuelle de type

P1800 82-MS, P1800 82-MS-EL, P1800 162-MS, P1800 162-MS-EL, T1800 82-MS, T1800 82-MS-EL, T1800 82-PS-EL, T1800 82-MA-EL, T1800 162-MS A1, T1800 162-MS-EL, T1800 162-PS-EL, T1800 162-MA-EL, T1800 130-MS, T1800 130-MS-EL, T1800 130-PS-EL, T1800 130-MA-EL, T2000-250 MA-EL, P2000 MS-13, T2000 MS-13, T2000 MS-14, T2000 MA-14, T2000 MA-15, DP2200 MA-15, DP2200 MA-16 à partir du numéro de série **1603096** (le numéro de série est indiqué sur la machine), satisfait l'ensemble des dispositions pertinentes de la

directive 2006/42/CE 17 mai 2006 relative aux machines.

directive 2014/30/CE compatibilité électromagnétique 26-02-2014

directive 2011/65/CE (RoHS), directive 2012/19/CE (WEEE)

Les normes harmonisées suivantes (ou parties de ces normes) ont été utilisées:

EN60745-1:2009, EN60745-2-1:2010,

EN55014-1:2006+A1:2009+A2:2011, EN55014-2:1997+A1:2001+A2:2008,

EN61000-3-2:2014, EN61000-3-3:2013,

EN61029-1:2009, EN61029-2-6:2010.

Pontida, 23-05-2016

Ezio Cattaneo



Chef de produit technique

(Mandataire pour CARDI Srl, Pontida, en Italie, responsable de la documentation technique)

Dans le cas de combinaison de la carotteuse manuelle a un support on realise une machine a forer che doit être accompagnée d'une nouvelle Déclaration CE de conformité. La responsabilité de la rédaction d'une telle déclaration est à la charge de qui compose la machine a forer.