



**CORE PREP
OPERATOR'S MANUAL**

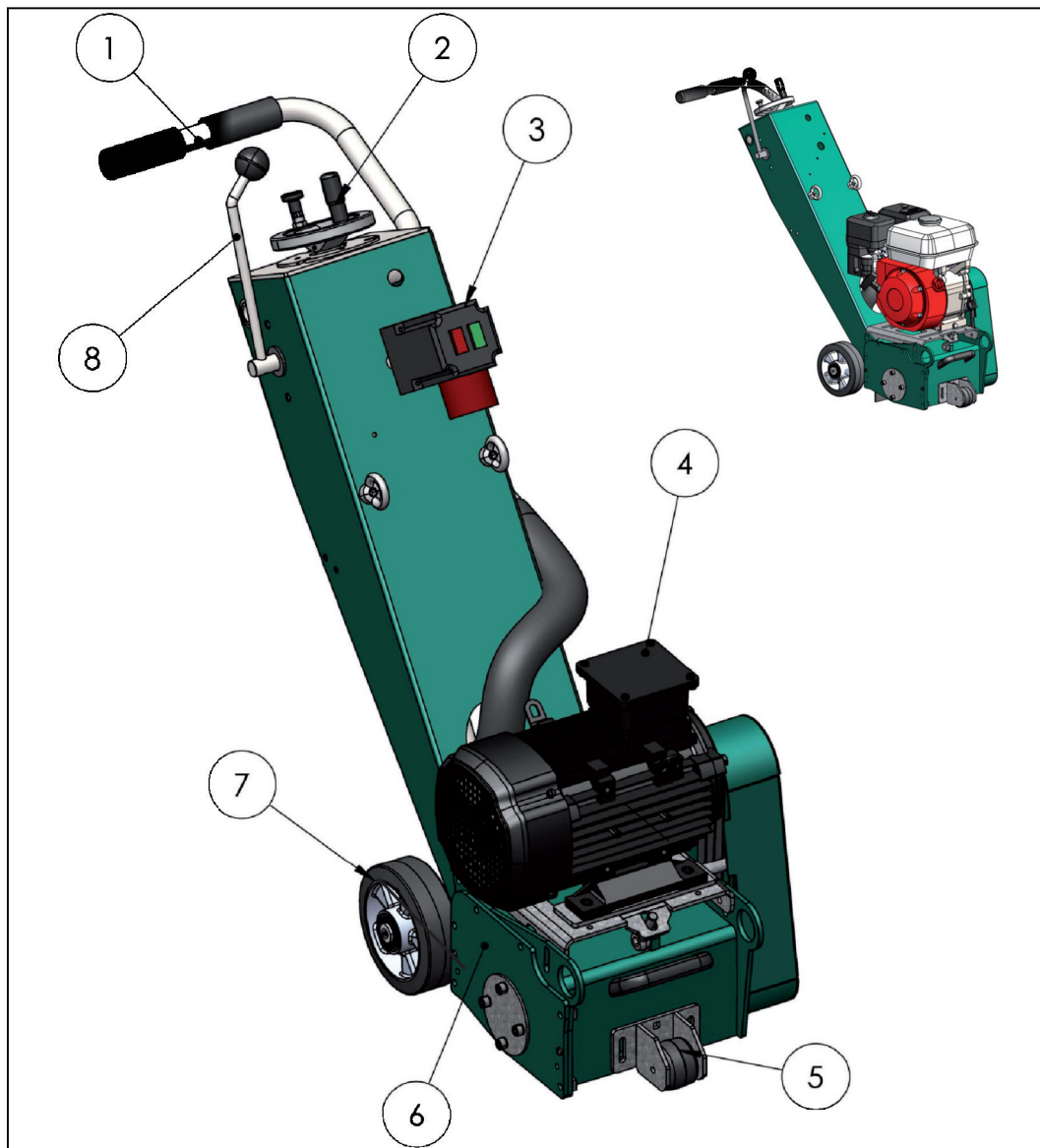
**CPS800
SCARIFIER**

OCTOBER, 2024

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Product Overview



Product Overview

- 1 Hand griff
- 2 Hand wheel
- 3 Motor switch
- 4 Motor
- 5 Front wheel
- 6 Side plate
- 7 Rear wheel
- 8 Lifting lever

General Safety Precautions

1.1 Safety rules for the operation of the Scarifiers/Planers



Information

The CPS83E1 floor planer/scarifier has been developed according to existing safety rules and regulations. The technical safety precautions must not be removed or changed under any circumstances. When operating the milling machine, the following points should also be observed:



Danger!

- The CPS83E1 floor planer / scarifier may only be operated with all protective safety covers and technical precautions.
- The power must be disconnected when transporting, cleaning, repairing or maintaining the machine. This also applies to tool changes.
- The operator should never leave the machine during operation.
- The tool must be removed before the machine is transported.
- Before leaving the machine all rotary parts should be brought to a stand still.
- The electric models must be disconnected from the mains. Make sure that the machine cannot roll or move by itself.
- After maintenance and adjustment all safety covers must be reattached.
- If unusual running noises or increased vibrations are registered during operation of the CPS83E1, the machine must be switched off immediately and the cause of the problem must be explored.
- After maintenance and repair work, the protective devices must be properly reinstalled.
- Noise protection equipment must be worn by the machinist.
- The machine operator must wear eye protection.
- The machinist must wear safety shoes with steel toecaps.
- If there is a lot of dust in closed rooms, the floor milling machine must be operated with an extraction system.
- For the petrol engine version CPS848G, sufficient ventilation must be ensured!

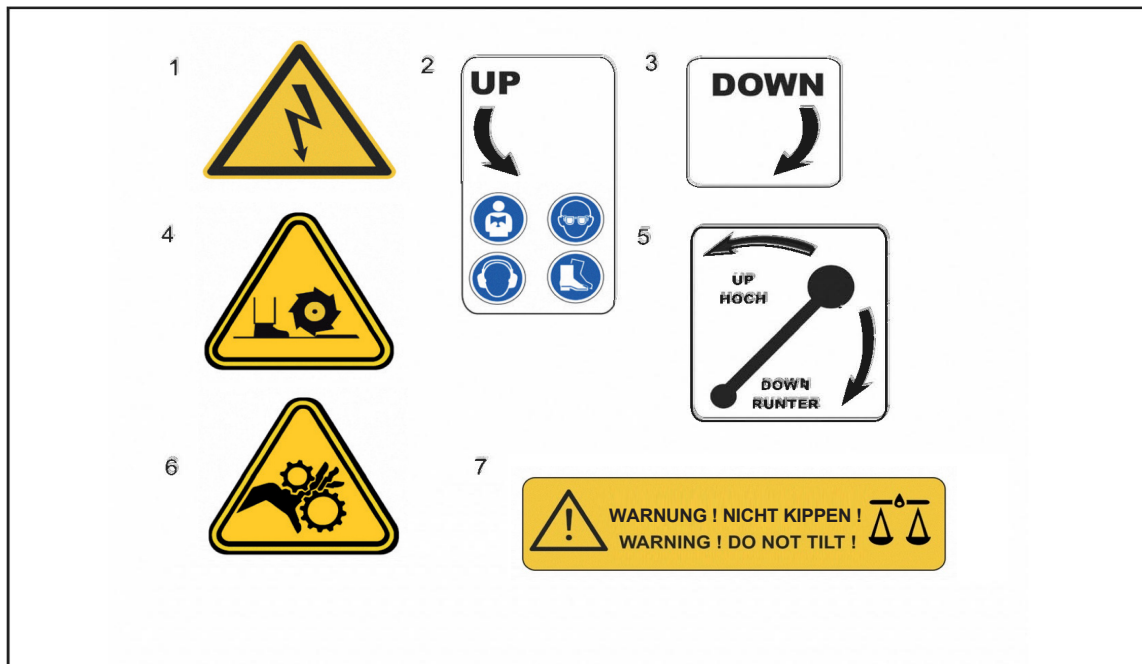


Attention!

Depending on the type of floor and coating, gases/dust can be released during milling. It is the responsibility of the user whether these generated gases/dust may contain dangerous substances and whether protective measures have to be taken.

Floors containing asbestos are especially dangerous and can cause health problems. Special masks must be worn by the operator which to filter breathing air. A dust collector must be used and should be equipped with filters suitable for asbestos dust.

1.2 Labels on the CPS83E1 floor scarifier



Labels on the CPS83E1 floor scarifier

- 1 Warning - electrical voltage.
- 2 Read all information carefully. Safety goggles, ear protectors and steel toe shoes must be worn.
UP - direction of lifting the tools from the ground.
- 3 **DOWN** - direction of lowering the tools to the ground.
- 4 Warning! Rotating sharp objects - risk of cutting!
- 5 Lever direction for raising or lowering the tool drum.
- 6 Warning - rotating objects - risk of injury.
- 7 Warning! Do not tilt - especially with the gas version.

1.3 Machine type identification label CPS83E1



Machine type ID label CPS83E1

2. Operating the Machine

2.1 Range of applications of the CPS83E1






Information

The CPS83E1 has been specifically designed developed for the milling or scarifying of horizontal dry floors such as concrete and steel surfaces with and without coatings and for asphalt using the milling tools offered exclusively by Diamond Products .
Specifically for use outside in dry weather. The operation is only permitted with a dust extraction system recommended by Diamond Products .

2.2 Operational function of the CPS83E1

The CPS83E1 performs aggressively when removing concrete, asphalt, coatings and road markings. Specially designed milling flails make it easy to remove flexible plastic coatings, epoxy resins and road markings.

2.3 Application of the tools

Tools	Application
TCT Cutters 	Heavy duty, long life cutters for all concrete texturing, scabbling, planing and grooving applications. Also used for removal of road markings, roof chippings and brittle coatings
Milling cutters 	Primarily for the removal of thermoplastic road / run-way markings. Tipped with tungsten carbide they are cost effective and highly efficient. A range of cutter dimensions are available
Beam flails 	Heat treated cutters for the removal of paint coatings and laitance from new concrete. Also for removing grease, dirt and ice deposits.

2.4 Operating and scarifying

After mounting the appropriate tools the operation of the scarifier/planer can begin.

- The height adjustment lever (see chapter 2.7 Height adjustment of the tool drum) must be in the upper position before the motor is switched on. In addition, the handwheel of the machine must be turned anti-clockwise as far as it will go.
- Switch on the motor.

In the case of petrol version, open the petrol tap and start the engine by hand. (See operating instructions)

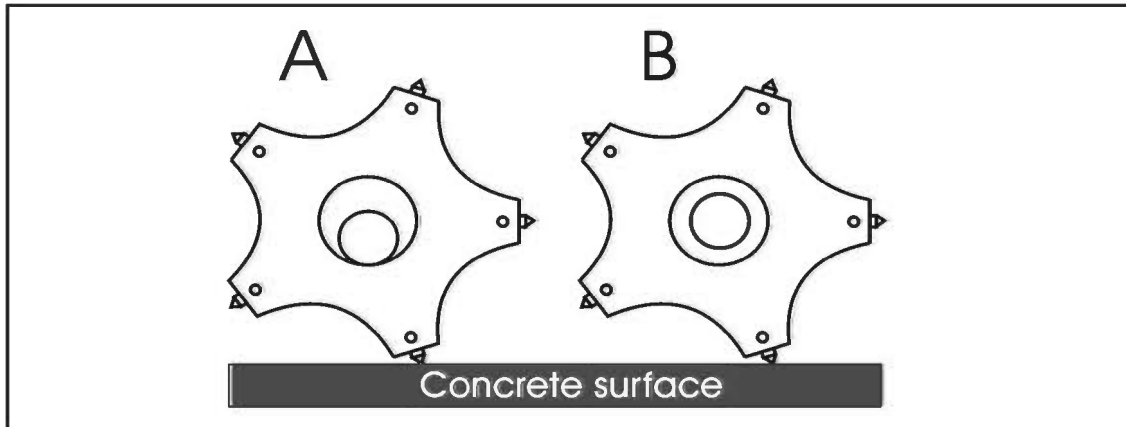
- Lower the planer by pushing the quick height adjustment lever down.
- Adjust the working depth with the handwheel of the height adjustment until the tools are lowered to the floor and until the required finish is achieved.
- Attention: Never switch the motor of the planer on while the tools still touch the floor. Always lift the machine and the tools clear from the floor and then switch the motor on.
- Heavy dust formation can be avoided by connecting an extraction system.
- The damping of the operators grip enables almost vibration-free work

2.5 Correct position of the cutters in the drum



Danger!

Excessive depth adjustment will jam the cutters between the drum shaft and the surface (A). The consequence is the destruction of the cutters, drum shafts and the drum. If the machine has to be lowered, always make sure that the tools can still turn freely on the drum shafts (B).



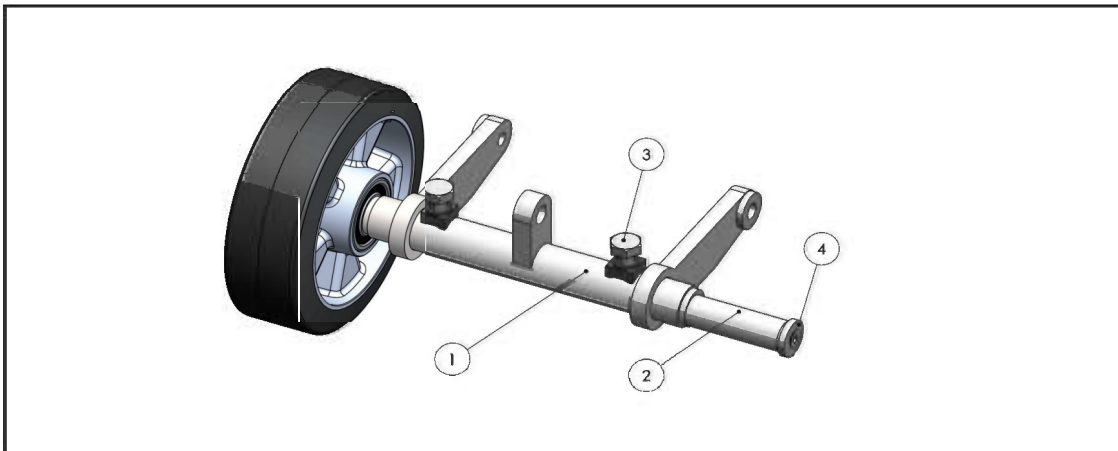
Correct position of the cutters in the drum cutters Position A und B.



Danger!

Excessive depth setting reduces the power of the tools and does not improve performance.

2.6 Adjusting the tool drum



Adjusting the tool drum

- 1 Rear wheel swing
- 2 Eccentric shaft
- 3 Clamping screw
- 4 Screw

During the operation of the CPS83E1 floor planer or after a drum has been changed or replaced, the drum shaft and the rear wheel axis can fall out of alignment. This is noticeable through an uneven milling pattern.

The CPS83E1 machine touches down earlier on one side than on the other and thus removes more material on this side. One of the two rear wheels is mounted on an eccentric shaft.

(see picture above - adjusting the tool drum)

If the milling pattern needs to be set, proceed as follows:

- ▶ Place the planer on an even floor.
- ▶ Lift the machine with the height adjustment hand wheel, until all the tools are well clear of the floor.
- ▶ Loosen the clamping screw of the eccentric shaft (3).
- ▶ On the other side of the rear wheel is a screw which keeps the wheel on the shaft (4).
- ▶ Turning the screw will also turn the eccentric shaft.
- ▶ The floor planer moves up and down on one side.
- ▶ Always turn the screw clockwise. Anti clockwise will loosen the screw.
- ▶ Keep turning until all the tools on the drum are the same distance to the floor.
- ▶ Tighten the clamping screw again

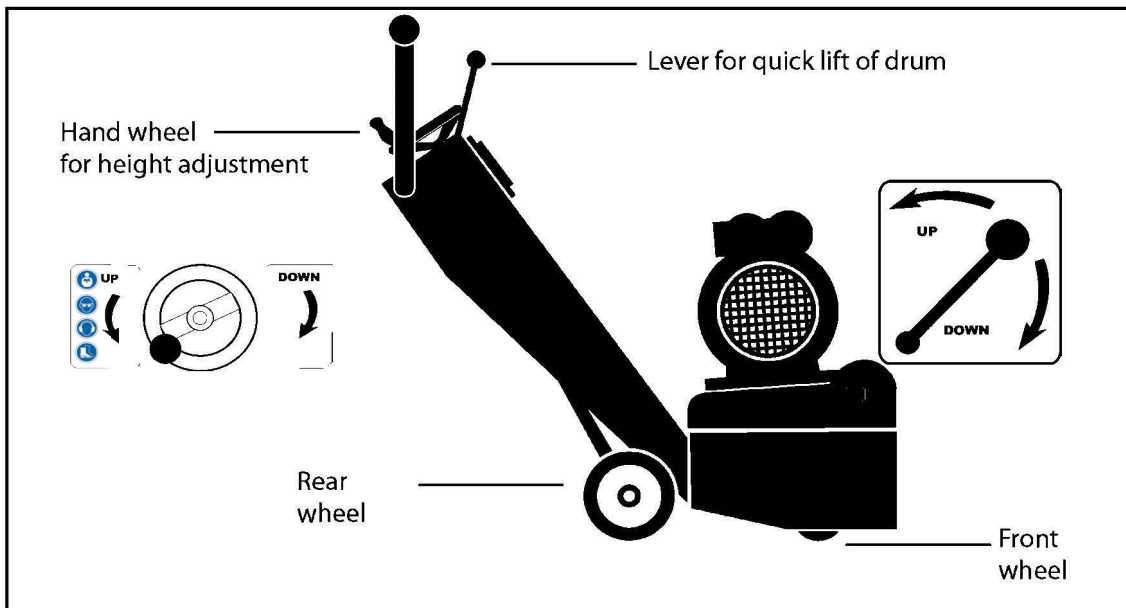
2.7 Height adjustment



Danger!

Never switch the motor of the planer on while the tools still touch the floor.

Always lift the machine and the tools clear from the floor using the quick lift lever first and then switch the motor on. Raise the machine with the height adjustment handwheel until all the tools are clearly off the ground.



Height adjustment of the tool drum

2.8 Changing the tool drum



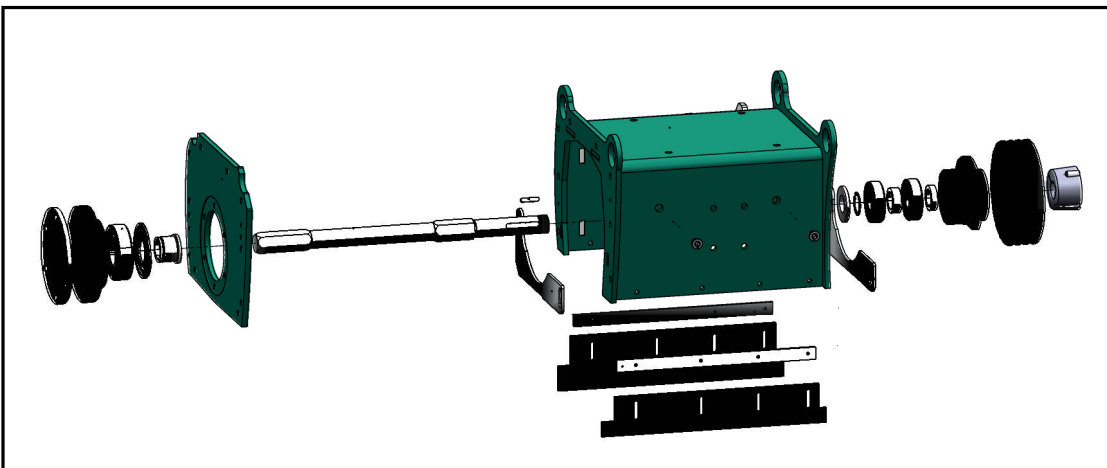
Danger!

Before any maintenance, the machine must be brought to a complete stand still. Always disconnect the machine if it is an electric model.

- ▶ Lift the machine with the lever so that the tools are well clear of the floor.
- ▶ Unscrew the screws on the right side plate (M8, Key width 13 mm)
- ▶ Carefully remove the side plate.
- ▶ Take out the drum. Remove worn out tools.
- ▶ Check shafts and drums for wear and tear. If necessary replace new tools on the drum.
- ▶ Push drum on freshly greased shaft.
- ▶ Reconnect side plate.

See 2.8.1 Drum housing complete

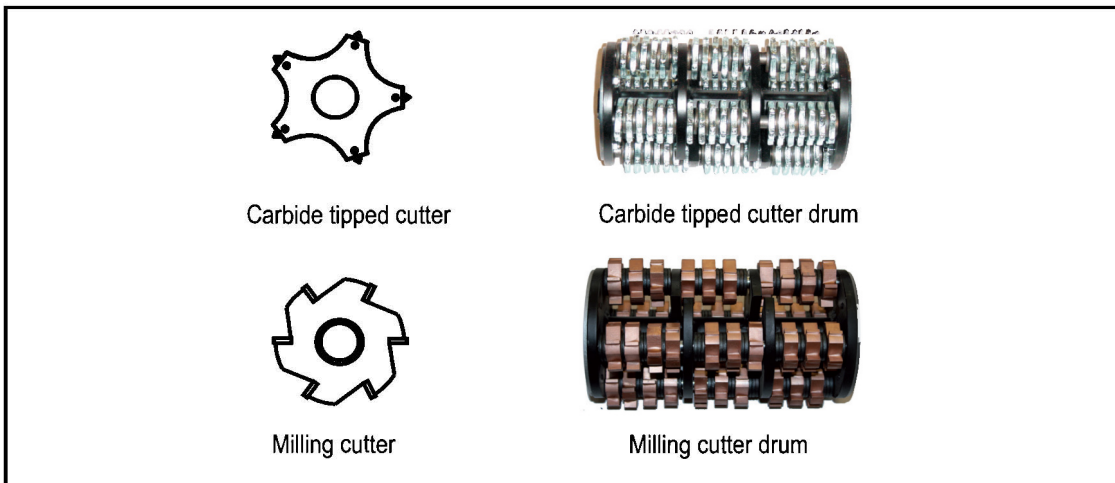
2.8.1 Drum housing complete



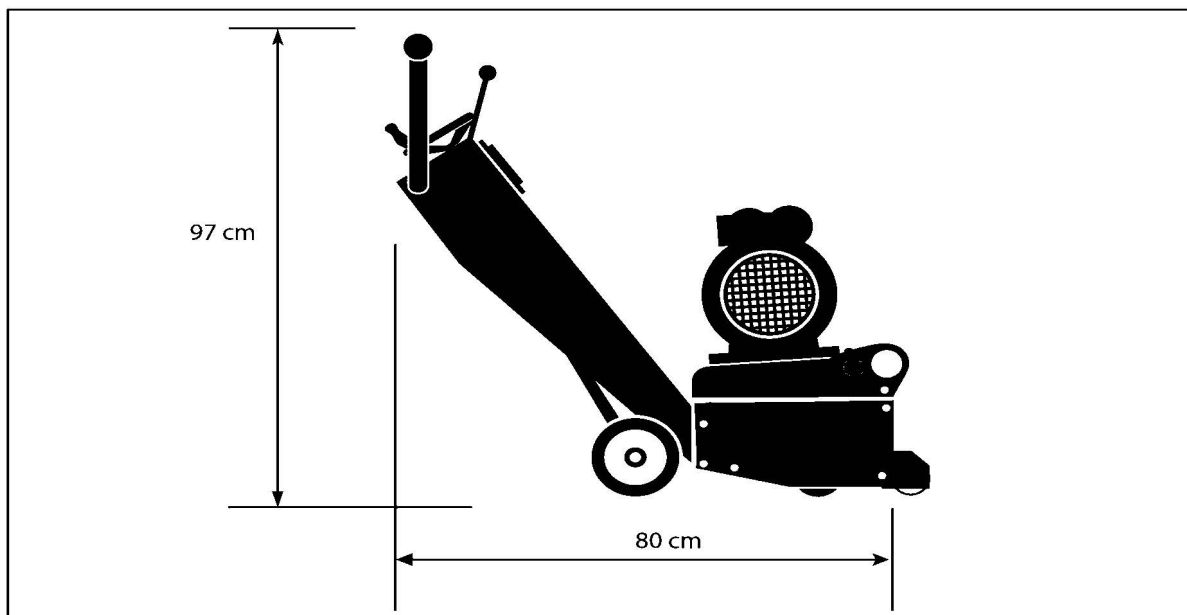
Drum housing complete

All individual parts and explosions diagrams can be found listed in our separate CPS83E1 Spare Parts List.

2.8.2 Example of tools and drum



3 Technical Data



Technical Data for the CPS83E1		
Parameter	CPS83E1 (230V)	CPS848G
Width of cut	200 mm (8 in)	200 mm (8 in)
Machine width	36 cm (14 in)	37 cm (14.5 in)
Length of machine	80 cm (31 in)	90-100 cm (35.4 -39.4 in)
Height of machine	97 cm (38 in)	90-100 cm (35.4 -39.4 in)
Weight with drum	52 kg (115 lbs)	51 kg (1122 lbs)
Dust port Ø	5 cm (2 in)	5 cm (2 in)
Height adjustment	Hand wheel with lever	Hand wheel with lever
Electric motor	USA: 110 V, 1.5 hp 60 Hz, 230 V, 3.0 hp 60 Hz	HONDA petrol/ benzin motor Other motors available on request
Average value of acceleration a_{hv} *	4.2 m/s ²	6.0 m/s ² «
Noise level L_{wa} *	107 dB(A)	107 dB(A) «
Noise level L_{eq} *	97 dB(A)	97 dB(A) «

* Measured values / data: All specifications are approximate and subject to confirmation. They should only be used as a guide

3.1 Tools for the drum

Tools for the CT 200®	
Parameter	Value
Drum diameter	10.8 cm (4.25 in)
Cutter shaft diameter	1.2 cm (0.47 in)
Number of shafts	4
TCT cutter	46/5
Milling cutter	46/20
Beam flail	46
Cutter diameter	4.6 cm (1.81 in)
Max No. of TCT cutters	76
Max. No. of milling cutters	24

4 Trouble Shooting

Trouble Shooting		
Problem	Possible cause	Solution
Machine does not run	<ul style="list-style-type: none"> – Power supply interrupted – Defective fuse cable or plug defective 	<ul style="list-style-type: none"> – Check the network supply – Eliminate the fault by a specialist or replace parts
High dust development during operation	<ul style="list-style-type: none"> – Connection to the dust collection system interrupted – Extraction system not switched on – Milling area sealing defective 	<ul style="list-style-type: none"> – Check dust port connection – Turn on or restart dust collector – Replace sealings
High vibration	<ul style="list-style-type: none"> – Wear & tear parts are worn out 	<ul style="list-style-type: none"> – Check all tools and the correct assembly of drum and replace if required

5 Maintenance and cleaning

Maintenance and cleaning	
Bearings	<ul style="list-style-type: none">– All bearings are greased for their life time.
Height adjustment and joints	<ul style="list-style-type: none">– All joints have to be greased periodically with a standard machine grease.
Belt drive	<ul style="list-style-type: none">– Check the belts after approximately every 30 hours of operation. To tension the belt you need to raise the motor bracket. Loosen the 4 M10 screws of the bracket. The front screws are in two slots. Raise the bracket using the eyebolt until the belts are tensioned. Tighten the screws again
Cleaning	<ul style="list-style-type: none">– Regular cleaning of the machine increases the life of all components and tools of the planer. <p>NEVER USE A HIGH PRESSURE CLEANER!</p>

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EQUIPMENT AND PARTS WARRANTY

Diamond Products warrants all equipment manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to Customer.

The responsibility of Diamond Products under this Warranty is limited to replacement or repair of defective parts at Diamond Products' Elyria, Ohio factory, or at a point designated by it, of such parts as shall appear to us upon inspection at such parts, to have been defective in material or workmanship, with expense for transportation and labor borne by Customer.

In no event shall Diamond Products be liable for consequential or incidental damages arising out of the failure of any Product to operate properly.

Integral units such as engines, electric motors, batteries, transmissions, etc., are excluded from this Warranty and are subject to the prime manufacturer's warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED.



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