

# Fine Blasting Unit Cemat II Plus 4/3/2



Cemat-2 II Plus



Cemat-3 II Plus



Cemat-4 II Plus



USER MANUAL

**Dear customer,**

Thank you for choosing a product from the Wassermann range. Wassermann Dental-Maschinen incorporates the highest standards of quality and the latest technology. In order to enjoy maximum performance and years of trouble-free operation, please read this user manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this user manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.



Make sure that anyone using this device has read and understood this user manual.

Keep this user manual in a safe place where it can be referred to as required at any time.



The unit complies with the relevant EU guidelines.



The unit is subject to the EU guidelines 2012/19/EU (WEEE Directive).

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## 1 Features

- precision long-life fine blasting units for blasting, roughening and polishing
- multifunctional fine blasting appliances with 2 to 4 chambers
- even, pulse-free blast from 1–6 bar, low consumption
- individual, pneumatic blasting control by means of key contacts directly on the stylus
- permanent pressure system against pollution and dampness in the blasting medium
- problem-free change of blasting medium for all usual blasting media sizes possible over all chambers without use of tools
- filter relief sand drawer for the catchment of coarse materials
- with handy air-expellant jet for simple cleaning
- specially coated protection shield for optimal visibility
- practical colour coding system
- high hygiene standard via changeable sleeves
- no electronic components, with the exception of lighting

## 2 Safety Symbols used in this Manual



### **Warning!**

This is a warning of risk situations and dangers.  
Failure to observe this warning could be life-threatening.  
These warnings has to be observed.



### **Information!**

This symbol draws your attention to specific features that has to be observed.

### 3 Safety Guidelines

Configuring and operating this equipment requires **precise knowledge** and **observance** of the instructions in this **user manual**. The equipment is designed only for its intended application.



**WARNING:**

Service and repairs should be carried out only by authorised specialists.  
Disconnect the power plug before starting any maintenance work.



Make sure that the equipment is connected to the correct power source.



**Working is only allowed with the blasting chambers closed.**



**Please wear safety goggles!**



**WARNING: Never connect to an oxygen bottle.**

**Risk of dust explosion.**

### 4 Responsibility for Operation or Damage

The responsibility for operating the device lies exclusively with the owner or user if said device is incorrectly serviced, maintained or altered by persons not employed by an authorised dealer or if the device is used in a manner contrary to its specified purpose. The unit has to be maintained and operated in accordance with this user manual. Wassermann Dental-Maschinen GmbH is not responsible for damage arising from the **nonobservance** of these instructions.

Warranty and responsibility provisions contained in the sales and supply conditions of Wassermann Dental-Maschinen GmbH are not extended by these instructions.

## 5 Application

The Cemat II Plus family of fine-abrading units have multiple chambers for abrading, roughening and polishing, and are used to bring a lasting finish to the workpiece.

The latest technology means that system blockages are virtually a thing of the past. The instruments operate accurately and can prevent clumping of the abrasive. The new techniques used break up the abrasive continuously. The entire system is under pressure constantly and is ready for operation immediately. All Cemat Plus II units are pneumatically controlled, thereby avoiding problems with electronics.

Only use the device for this type of application.

## 6 Before Starting

### 6.1 Transport

Before transporting the unit, ensure that it has been unplugged from the power socket. Make sure that it is packed correctly in order to avoid accidental damage.



Be sure to check for any transport damage when unpacking the goods. Note down any damage if found.

### 6.2 Storage

The unit location is very important when it comes to workplace safety, even if it is only to be set up there for a short period. The room should be dry, well ventilated and vibration-free. An even temperature and wooden supports also help. The unit should not be stored or set up outdoors. If the unit is to be stored for an extended period, protect it from moisture and dust.

### 6.3 Installation

Open the box, remove the packing materials, and carefully lift out the device and accessories. Check the included accessories.

The device has to stand horizontally on a steady and even surface.



Install the device in a place where it will not block the working area and the functionality (take the dimensions into account).



Do not install the unit outdoors or in places without proper ventilation.

Before start-up, be sure the device reaches room temperature.

## 7 Installation/ Start-up



**Before** starting the unit, connect up the following:

- Connect the unit to the compressed-air line.
- The fine blasting unit has to be connected to an external suction unit. The nozzle is at the lower rear.
- **Finally**, insert the power plug into the socket, making sure that the mains and the unit operate on the same voltage.
- Fill the abrasive tanks.
- Flip the (green) rocker switch.
- The unit is ready for use as soon as it reaches operating pressure.
- The abrasion process is blocked until the observation flap is closed.

## 8 Operation

### 8.1 General Operating Instructions



All instructions for using the unit, whether in verbal or written form, are based on our own experience and experimentation and can only be regarded as guidelines.

All abrasive tanks are colour-coded to match the pencils in the abrasion chamber. Thus, if you use the blue pencil, it will be fed with abrasive from the blue tank.

**The instrument will operate only with the observation flap closed. A safety switch cuts power to the system if the flap is open.**

### 8.2 Filling with Abrasive

The instrument must be switched off before you fill it.

The tanks can only be opened after the pressure has been released. You do this by pressing the point in the lid until you no longer hear air coming out. The lid can then be unscrewed and the container filled with abrasive.

Pay attention of the maximum filling: the receptor nozzle has to be free of material.

Please pay attention to the maximum filling capacity of the chambers which is marked inside the chamber. The chambers are only allowed to be filled up to 2.5 cm from the upper chamber edge.

The nozzle and the grain size must also match. You should use a 0.8 mm nozzle when working with glass beads. A 1.2 mm nozzle is recommended for use with irregular bead sizes. Before replacing the lid, make sure that the thread and sealing surfaces are free of abrasive. The instrument is ready for use when **all** tanks have been sealed.

### 8.3 Abrading

You hold the pencil in your hand like a stylus. One finger must be placed at the top end of the flat recess. You then apply light finger pressure to initiate the abrasion process.

### 8.4 Regulating the Abrasive

The pressure regulator at the rear of the instrument is set at the factory to 6 bar. This setting must **not** be changed. Adjustment of the abrasive pressure is done **only** using the black knobs at the front top of the unit. You adjust the pressure by pulling the knob out and turning it to the **left (to reduce the pressure)** or to the **right (to increase the pressure)**.

You then push the knob in again. The set pressure can be read on the pressure gauge. Changing the pressure varies the abrasive feed velocity and the amount of abrasive used.

### 8.5 Cleaning Nozzles

The instrument is fitted with a compressed-air nozzle for cleaning the inner area and the workpiece. You operate it by lightly bending the front section of the rubber pencil.

## 9 Troubleshooting

Fault	Cause	Solution
Irregular abrasive flow	Too little abrasive in tank or pencil nozzle too small or abrasive wet	Fill tank Use larger nozzle Replace with dry abrasive
No abrasive flow	Tank empty	Fill tank
	Nozzle and/or hose blocked	Unscrew nozzle from pencil and clean (eg, with a needle) and try process again; abrasive must flow. If necessary, kink hose briefly to increase pressure.
Falling pressure, low jet pressure	Filter blocked and/or seized	Contact our Service department



If the above recommendations do not solve the problem, contact your dental depot or our service department.

### **Note:**

Blockages are mostly the result of impure or clumped abrasive. If the sand is absorbing moisture, check the water separator and your compressor.

## 10 Care and Maintenance

### 10.1 Cleaning



Disconnect the power plug before starting any maintenance work.

The identification plate has always to be kept in easily legible condition and has not to be removed.



Remove external dirt from time to time with some form of cold cleaner.

Use only cold cleaners to avoid damaging the paintwork or removing the lettering.

The equipment should be cleaned at regular intervals to ensure trouble-free operation.

It requires only normal cleaning (sponge, damp cloth, mild detergent) and no further chemical additives.

The interior of the chamber can easily be cleaned using the compressed-air nozzle. Fine dust will be removed by the suction system.

Coarse abrasive, which cannot be removed by the suction system, will fall through the grate and into the drawer.

In this way, the suction filter is not overloaded and the chamber remains free of abrasive. The drawer must be removed completely for emptying.

## 10.2 Maintenance/ Replacing worn Components

### 10.2.1 Sleeves

The sleeves can be replaced by gloves. The procedure is the same:

1. Remove the ring with the spring inside the chamber.
2. Remove the old sleeve. Install the new sleeve on its mount so that it faces the wall.
3. Replace the ring with the flat side facing the wall.

### 10.2.2 Specially Coated Protection Shield

1. Open the flap and undo the three thumbscrews on the disk.
2. Remove the aluminium guides.
3. Tip the disk forward and remove it from the front slot. Please take care of the spacer reels.
4. Replace it with the new disk.
5. Reassemble in reverse order.

### 10.2.3 Hoses

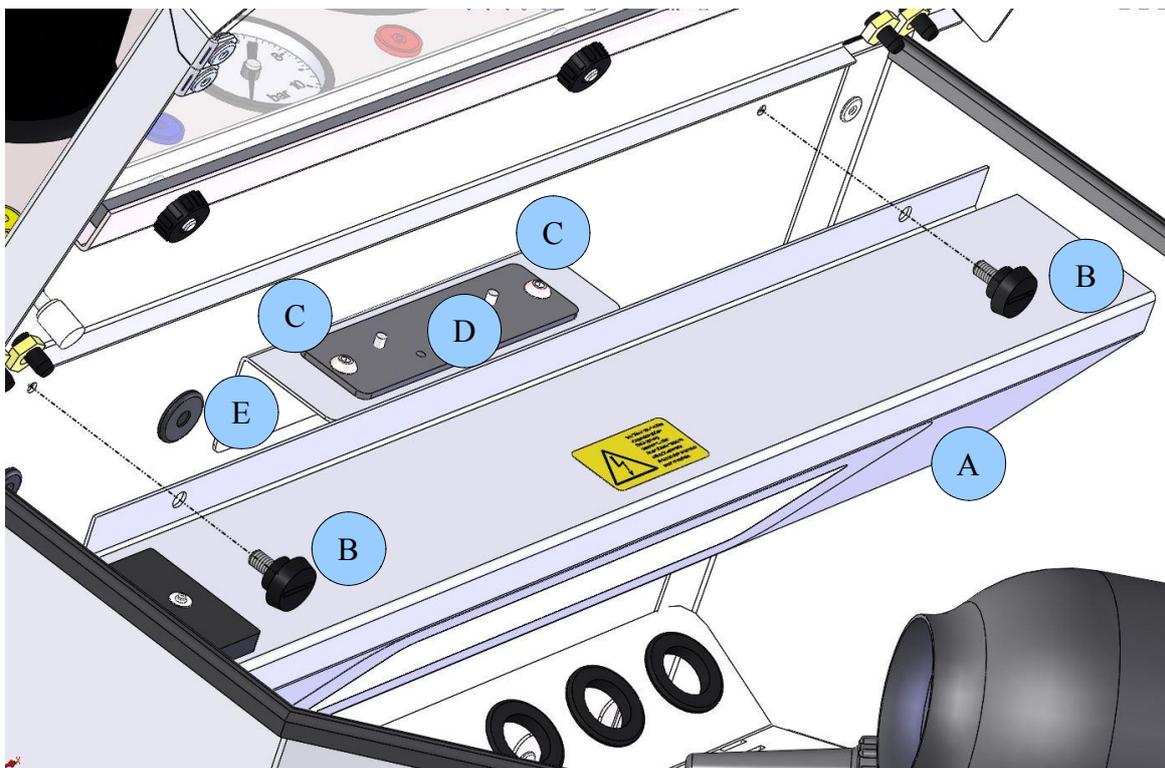
**Before replacing the hoses, disconnect the power plug, undo the compressed-air line and release the pressure in the tanks.**

1. Take sieve unit out of the chamber.
2. Lay the unit on its side so that you have access to the bottom of the unit.
3. To detach the desired hose from the tank, solve the black hose clamp with a pliers, remove the hose from the chamber nipple.
4. To remove the white control hose, grip it by the brass end, depress the brass ring on the valve and then remove the hose.
5. Pull the silver grip on the thrust valve. Insert your other hand through the access hole and pull the hose into the central chamber.
6. Remove the slotted hose protection.
7. In principle the installation takes place exactly in the reverse manner.

### 10.2.4 Pencils

1. Undo the silver cap on the end of the pencil.
2. Remove the rubber hose and the white control hose.
3. Reassembly: slip the silver cap and the plastic ring onto the new hose. The recess in the plastic ring must match up with the control hose. Slip the black, nylon-sheathed rubber hose onto the nipple on the pencil. Then push the white control hose into the small opening up to the stop. Push the plastic ring firmly onto the pencil.
4. Slide the woven casing over the rubber and tighten the silver cap.

### 10.2.5 LED Replacement



- For changing the LED lamp open the safety screen first.
- Then remove the lamp cover [A] by loosen the knurled screws [B].
- Resolve the plug connection of the LED power cable.
- Than remove the two screws [C] by using an Allen wrench.
- Remove the defective LED strip [D] from the retaining angle [E] and change it.
- Reassemble everything in reverse order.

## 10.2.6 Nozzle Replacemant

The replacement is very easy. Simply unscrew the old nozzle and screw on a new one.



**Important!:** Before setting up a new nozzle, shortly operate the unit and blow away old blasting material which may remain inside the hose.



Take care that the nozzle always corresponds to the size of the used blasting material (please see the following chart).

### Overview of Nozzles and Blasting Material

Colour code* (tank/ handpiece):	yellow	blue	green	red
Fine blasting nozzle (handpiece)	0,6	0,8	0,8	1,2
Nozzle (tank) 1,4 (< 110 µm)	X	X		
Nozzle (tank) 2,0 (> 110 µm)			X	X
Aluminium Oxyde 50 µm	+++	++	+	-
Aluminium Oxyde 110 µm	+	+++	+++	+
Aluminium Oxyde 250 µm	-	-	+	+++
Glass Beads 50 µm	++	+	-	-
Glass Beads 110 µm	+	++	+++	+
Glass Beads 125 µm	-	+	++	+++

#### Annotation:

X = Combination fine blasting nozzle (handpiece)/ nozzle (tank)

- = does not fit

+ = fits

++ = fits well

+++ = optimal

The ratings in the table are standard values that may vary depending on the nature of the blasting material.

\*This colour code with the above mentioned combination of the nozzles is delivered as standard (see page 17).

### 10.2.7 Pressure Regulator

There is a pressure regulator with integrated water separator at the rear of the instrument. This ensures that no moisture from the compressor enters the instrument's circulation system. It should be checked from time to time and emptied when it reaches its maximum level. To do so, release the grey outlet knob so the water can flow down into a container.

### 10.3 Warranty



The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our service department.

Your equipment should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

This warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

## 10.4 Spare Parts

If necessary please contact our service hotline phone.

## 10.5 Service Hotline 0049 (0)40 730 926 -20/ -24

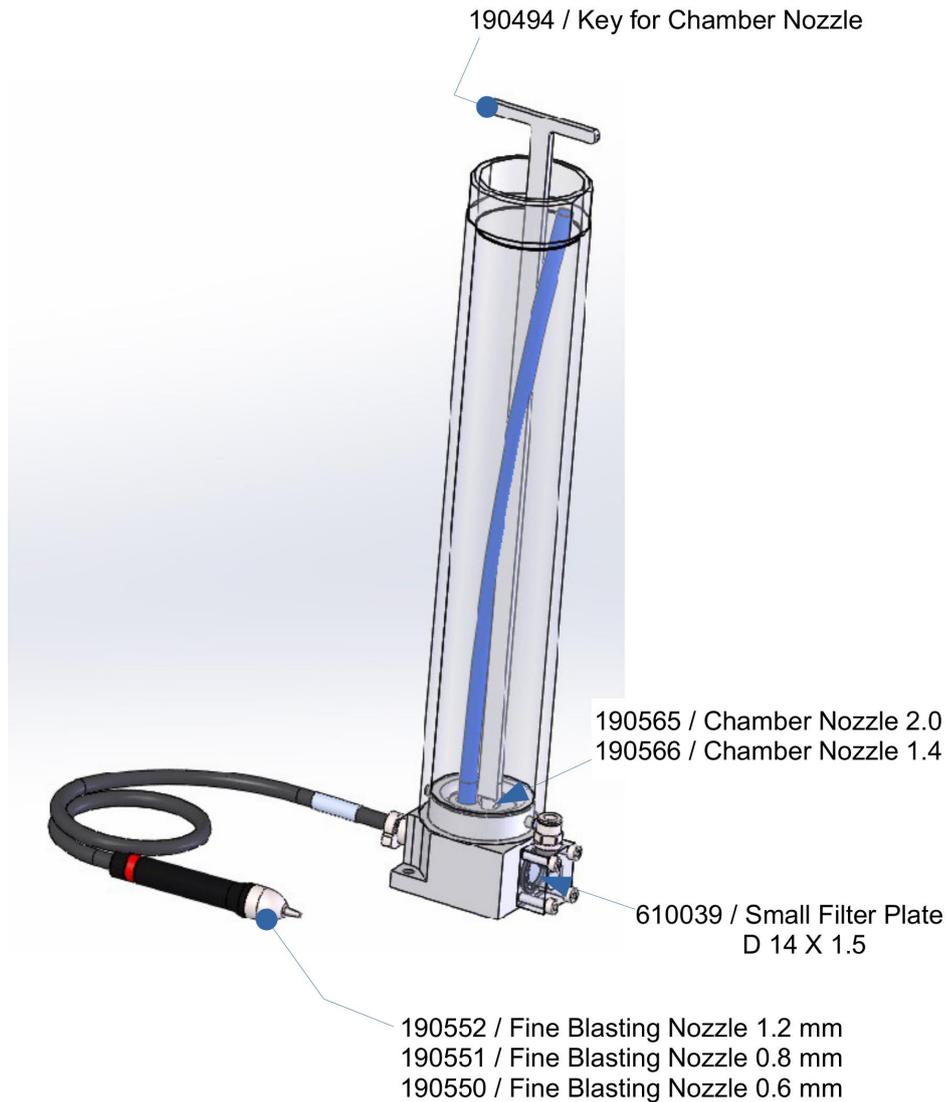
## 10.6 Scope of Delivery/ Accessories

Included parts	Item no.
Compressed air hose, PVC hose Ø 8x6 textile (blue), 2 m	320026
Supply line	592012
Cemat-4 II Plus including 4 fine blasting jets 0.6 (yellow), 0.8 (blue), 0.8 (red), 1.2 (green)	190986
Cemat-3 II Plus including 3 fine blasting jets 0.6 (blue), 0.8 (red), 1.2 (green)	190985
Cemat-2 II Plus including 2 fine blasting jets 0.8 (red), 1.2 (green)	190981

Accessories	Item no.
Automatic stand	146170
Compressed air hose, PVC hose Ø 8x6 textile (blue), per meter	320026
Spare sleeve, per piece	190175
Extractor nozzle Ø 40 mm exterior	143385
Extractor nozzle Ø 50 mm exterior	190286
Spare fine blasting jet 0.4 mm	190553
Spare fine blasting jet 0.6 mm	190550
Spare fine blasting jet 0.8 mm	190551
Spare fine blasting jet 1.2 mm	190552



We recommend the use of **Wassermann blasting materials** and our **low-pressure suction units SG-1/1 & SG-1/1 Comfort** and **SG-1/2 D** with a long-life brushless motor and an extra large micro fine dust filterbag.



## 10.7 Repairs



Servicing or repairs to the unit has only to be carried out by qualified technicians. Only original spare parts are to be used. Responsibility for the product is voided if unauthorised persons alter it or if inappropriate components are installed.

## 11 Technical Data

<b>Cemat-4 II Plus</b>	<b>Item no.: 190986</b>
<b>Cemat-3 II Plus</b>	<b>Item no.: 190985</b>
<b>Cemat-2 II Plus</b>	<b>Item no.: 190981</b>
Voltage	100–240 V / 50/60
Power consumption	0.2 A
Female connector power consumption max.	8 A
Output	50 W
W x H x D	445 x 460 x 620 mm 28kg, 26kg, 24kg
Weight	28kg, 26kg, 24kg
Sound level	≤ 70 dB (A)
Tank capacity	560 cm <sup>3</sup>
Compressed air connection	3-6 bar
Working pressure	1-6 bar
Extractor nozzle	75 mm



Technical changes reserved.

## 12 Disposing of the Unit

The unit has to be disposed by an authorized recycling operation. The selected company has to be informed of all possibly health-hazardous residues in the unit.

### 12.1 Information on Disposal for Countries within the EU



To conserve and protect the environment, prevent environmental pollution and improve the recycling of raw materials, the European Commission adopted a directive that requires the manufacturer to accept the return of electrical and electronic units for proper disposal or recycling.

Within the European Union units with this symbol should not therefore be disposed of in unsorted domestic waste.

For more information regarding proper disposal please apply at your local authorities.

**13 EU Declaration of Conformity**

in accordance with 2014/35/EU (Low Voltage Directive) and 2014/30/EU (Electromagnetic Compatibility Directive) and 2006/42/EC (Machinery Directive) and 2011/65/EU (RoHS Directive)

Manufacturer: **W A S S E R M A N N**      Product description: Fine Blasting Unit  
Dental-Maschinen GmbH      for dental  
Rudorffweg 15-17      applications  
21031 Hamburg  
Germany

Model:      Cemat-4 II Plus      Item No. 190986  
                  Cemat-3 II Plus      Item No. 190986  
                  Cemat-2 II Plus      Item No. 190981

Applicable standards:      DIN EN 61010-1  
  DIN EN 61000-6-3  
  DIN EN 61000-6-1  
  DIN 45635-1  
  DIN EN 60335-1

Hiermit wird bestätigt, dass die oben bezeichnete Maschine den genannten EU-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EU guidelines. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur d'Union européenne. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los límites requeridos por el reglamento UE. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigen aan de machine worden aangebracht.

Place, date: Hamburg, 2025-02-12

Company stamp:



Signature : \_\_\_\_\_  
                  Sven Wassermann  
                  (Managing Director)

Notes:





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