

User Manual

DecoRad® Floormate



DecoRad® Systems bv
Kruisboog 39B
3905 TE Veenendaal
The Netherlands

Phone: +31(0)318-550425
E-mail: info@decorad.com
www.decorad.com

Preface

The DecoRad® Floormate is the ultimate tool for instantly curing floor coatings, varnishes and oils. Its innovative use of UV can instantly cure up to 250 square meter per hour (depending on the type of substrate, layer thickness and product).

UV has been used successfully for many years already for instantly curing inks, car paints, glues and coatings. The DecoRad® Floormate is the result of the many years' experience of DecoRad® Systems with on-site use of UV in combination with coatings, varnishes and oils.

DecoRad® Systems has succeeded in providing the latest equipment and best technology, which enables end-users to successfully cure industrial concrete coatings as well as coatings for smooth VCT floorings.

DecoRad® Floormate

The new standard in on-site UV curing:

- 3000 Watt output
- 45 cm cure path
- Adjustable cure speed
- CE marking and TÜV certified (radiation)
- Direct dimming option (100% - 20%) of the lamp for extra long life span
- Compact, user-friendly and easily manoeuvrable (0° turning circle)
- Self-service package available - no downtime
- Attractive pricing
- Medium-pressure mercury lamp, at your choice ozone free or ozone building

This user manual provides the user with information about the safe usage and maintenance of the DecoRad® Floormate.



Carefully read through this user manual before using the Floormate. Only then optimal safety is guaranteed.
The DecoRad® Floormate can only be operated by sufficiently qualified personnel.

Keep this user manual with the DecoRad® Floormate.

Contents

User Manual	1
DecoRad® Floormate	1
<i>Preface</i>	1
<i>Contents</i>	2
<i>1. Introduction</i>	3
1.1 Related Documents	3
1.2 Manufacturer	3
1.3 CE Marking	4
1.4 Guarantee	4
1.5 Copyright	4
1.6 Liability	4
<i>2. Safety</i>	5
2.1 Safety Symbols in this User Manual	5
2.2 Symbols on the DecoRad® Floormate	5
2.3 Usage	6
2.4 Maintenance	6
2.5 Safety Regulations	6
2.6 UV radiation	6
2.7 Risks of UV Radiation	7
2.8 User	8
<i>3. Machine Description</i>	9
3.1 Function	9
3.2 Overview of the DecoRad® Floormate	9
3.3 Control Elements	10
3.4 Equipment and accessories	10
<i>4. Putting into operation</i>	11
<i>5. Operation</i>	13
5.1 Switching the DecoRad® Floormate On	13
5.2 Switching the DecoRad® Floormate Off	14
<i>6. Error Messages / tips</i>	15
<i>7. Specifications of DecoRad® Floormate</i>	16
<i>8. Service parts</i>	17
8.1 Standard Delivery	17
8.2 Field Replaceable Service Package	17
<i>9. Replacing Service Parts</i>	18
9.1 Replacing the UV-Lamp	18
9.2 Replacing the Mainprint	21
9.3 Replacing the Fuses of the Mainprint	24
9.4 Calibrating speed	25
<i>10. Appendices</i>	26
10.1 CE Declaration	26
10.2 TÜV Declaration	27

1. Introduction



Carefully read through this user manual before using the DecoRad® Floormate. Optimal safety is only guaranteed if the user instructions, as described in this manual, are observed. The DecoRad® Floormate can only be operated by sufficiently qualified personnel.

1.1 Related Documents

In addition to this user manual, the following documents come with the DecoRad® Floormate:

- **CE declaration**
- **TÜV declaration**

These were included in the appendices of this user manual.

1.2 Manufacturer

The DecoRad® Floormate is manufactured by:

DecoRad® Systems bv
Kruisboog 39B
3905 TE Veenendaal
The Netherlands

Phone: +31(0)318-550425
E-mail: info@decorad.com
www.decorad.com

For any questions regarding sales orders, deliveries, parts or shipments, please contact DecoRad® Systems bv.

1.3 CE Marking

The DecoRad® Floormate comes with a CE marking. This means that the Floormate meets the fundamental safety demands of the European Community. See the appendix for the CE marking.

1.4 Guarantee

The manufacturer of the DecoRad® Floormate provides a 12 month warranty for parts and repair costs*. This warranty is only valid if the DecoRad® Floormate is used according to the specifications and the user and maintenance instructions are observed.

The DecoRad® Floormate warranty* lapses in case of:

- Inexpert use
- Insufficient maintenance
- Inexpert maintenance
- Alterations without prior permission of the manufacturer

The normal replacement parts do not fall under the factory warranty.

* At the discretion of DecoRad® Systems bv

1.5 Copyright

Copyright © DecoRad® Systems bv.

All rights reserved. Nothing from this publication can be multiplied, stored in an automated file and/or made public in any form, either electronically, mechanically, by photocopies, recordings, or any other way without prior written consent of the manufacturer.

1.6 Liability

The manufacturer of the DecoRad® Floormate is not liable for unsafe situations, accidents or damage as a consequence of:

- Ignoring warnings or instructions as stated on the DecoRad® Floormate or as described in this user manual (including not correctly applying personal protection measures).
- The use of the DecoRad® Floormate for any other application or in any other circumstances than indicated in this user manual.
- Making any kind of alterations to the DecoRad® Floormate. This also pertains to applying other replacement parts.
- Intensity of the usage is decisive for the degree of maintenance.

The manufacturer is not liable for consequential loss when using the DecoRad® Floormate, such as damage to products, business interruption, production loss, etc.

2. Safety

This chapter describes the safety measures pertaining to the DecoRad® Floormate. Carefully read this chapter before putting the DecoRad® Floormate into operation or performing maintenance work.

2.1 Safety Symbols in this User Manual

The following symbols are used in this user manual:



A comment draws the user's attention to possible problems.



Danger of damage to the DecoRad® Floormate if the instructions are not carefully executed.

Danger of serious injuries to the user if the instructions are not carefully followed.

2.2 Symbols on the DecoRad® Floormate

The following symbols can be found on the DecoRad® Floormate:



Wearing a UV protective DecoRad® face shield.



Wearing UV protective DecoRad® clothes



Wearing UV protective DecoRad® gloves



Surface can become hot when using the DecoRad® Floormate.



Careful: UV light.
Do not look into the light



Keep the room ventilated. The UV lamp might be full spectrum, so there can be ozone production, depending on the type of lamp

2.3 Usage

The DecoRad® Floormate can only be operated by qualified personnel.



The safety instructions described in this manual should be observed. If you deviate from these instructions, this can lead to serious personal or material damage.

2.4 Maintenance

The DecoRad® Floormate can only be operated by qualified personnel.



The safety instructions described in this manual should be observed. If you deviate from these instructions, this can lead to serious personal or material damage.

The maintenance mechanic should be acquainted with the entire contents of the this user manual.

Intensity of the usage is decisive for the degree of maintenance.

Examples of this are:

- The wheels (which should be undamaged and clean)
- The lamp & reflector (dirt, dust and age causes a decrease in UV energy output).

2.5 Safety Regulations

The DecoRad® Floormate meets the fundamental safety and health demands of the relevant guidelines of the European Community. However, in case of inexpert or careless use, dangerous situations may still arise.



Stay alert for dangerous situations!

2.6 UV radiation

Ultraviolet radiation (or UV) is a proven process to disinfect water, air and solid surfaces which have been contaminated with micro-organisms. In addition to this, UV radiation is well-known for its application as a catalyst in drying processes. The effects of UV as a disinfectant have been extensively documented in scientific research.

UV radiation is a mixture of radiation of various wavelengths. In a rainbow, the visible part of the UV radiation is ordered according to the length of the waves. Progressing from purple to red, the waves become increasingly longer. The infrared, with a wavelength longer than that of red, is not visible but can be felt as (solar) heat. The ultraviolet or UV has a wavelength shorter than that of purple. This part of the UV radiation is not visible as well.

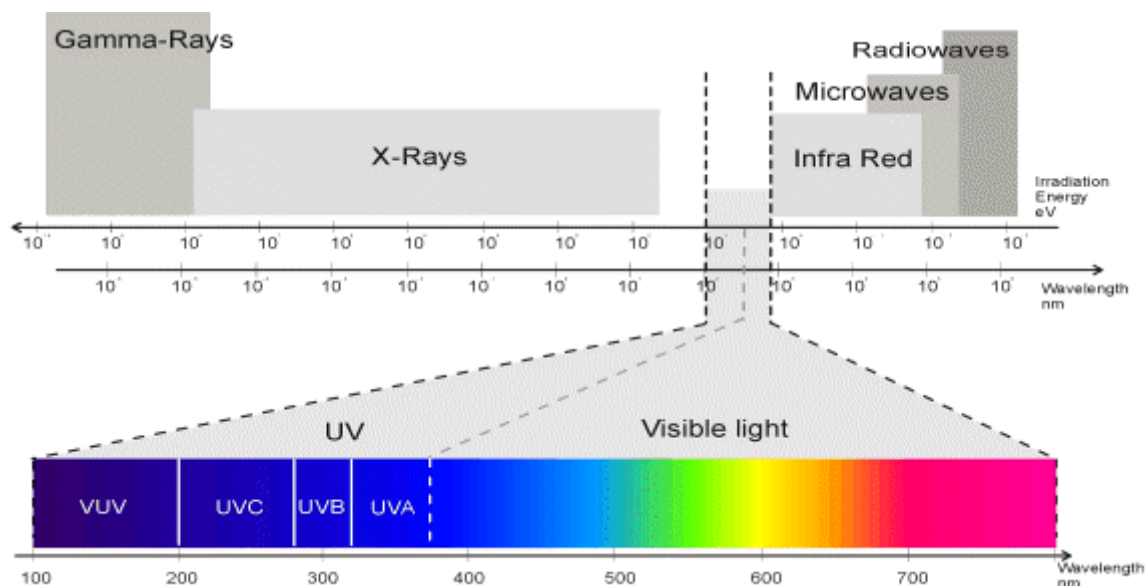
Most of the UV radiation we get comes through sunlight. Not all UV radiation reaches the earth: a part is blocked by the ozone layer.

2.7 Risks of UV Radiation

Both UVA and UVB can damage cells and genetic material, thus leading to skin cancer. UVB poses the greater risk here. Even though scientists used to think that UVA was not harmful, newer research has proven that UVA contributes 10 to 20 percent to the cancer risk.

In order to protect itself against damage to genetic material, the skin tries to thicken itself (after UVB exposure). Pigment cells create the substance melanin, which gives the skin a brown colour. This means that when the skin tans, it has already been damaged.

Because the ozone layer is becoming increasingly thinner due to environmental pollution, less UV radiation is absorbed, thus leading to an increase of skin cancer occurrences.



In addition, the skin can burn under influence of UVA and UVB radiation. Burning is accompanied by redness and in serious cases tremors, blisters, nausea and fever. In the long term the skin will lose its elasticity, suffer from accelerated aging and will remain sensitive for itching, pimples, etc.



Ultraviolet light can damage skin and eyes.

Wear the facial shield and protective clothes.

As a user, never look directly into a switched-on lamp.

Certain types of medication and cosmetics can increase sensitivity.

2.8 User



Carefully read through this user manual before operating the DecoRad® Floormate.



Before switching on the DecoRad® Floormate, please ensure that the personal protection tools as described in the user manual are used. The UV-resistant facial shield and skin covering clothes (including gloves) are obligatory.



The lamp emits large amounts of heat; keep out of reach of explosive or highly flammable mixtures.



Make sure that the room where the DecoRad® Floormate will be used is properly lit and ventilated.



**The Floormate should be lifted by 2 persons.
Fold down handlebar and secure to lift
Never lift from the lamp unit (this can still be hot).**



**Dirt on the lamp and/or reflectors (e.g. from coatings or fingers) can shorten the life span of the lamp or reduce the UV energy output
If needed, clean the cooled down lamp and reflector with isopropyl alcohol and paper towel.**



Make sure the Floormate is visually checked (e.g. wheels, lamp, reflector etc.) - Topple the DecoRad® Floormate over backwards and let it rest on the folded out push bar



Please make sure that bystanders without appropriate UV protection are at a safe distance of 10 meters / 33 ft



In order to prevent damage to the DecoRad® Floormate and the user, the user is strictly prohibited to work with tools on the DecoRad® Floormate in any other way than indicated in this user manual for the purpose of maintenance.

3. Machine Description

This chapter describes the parts and operational use of the DecoRad® Floormate.

3.1 Function

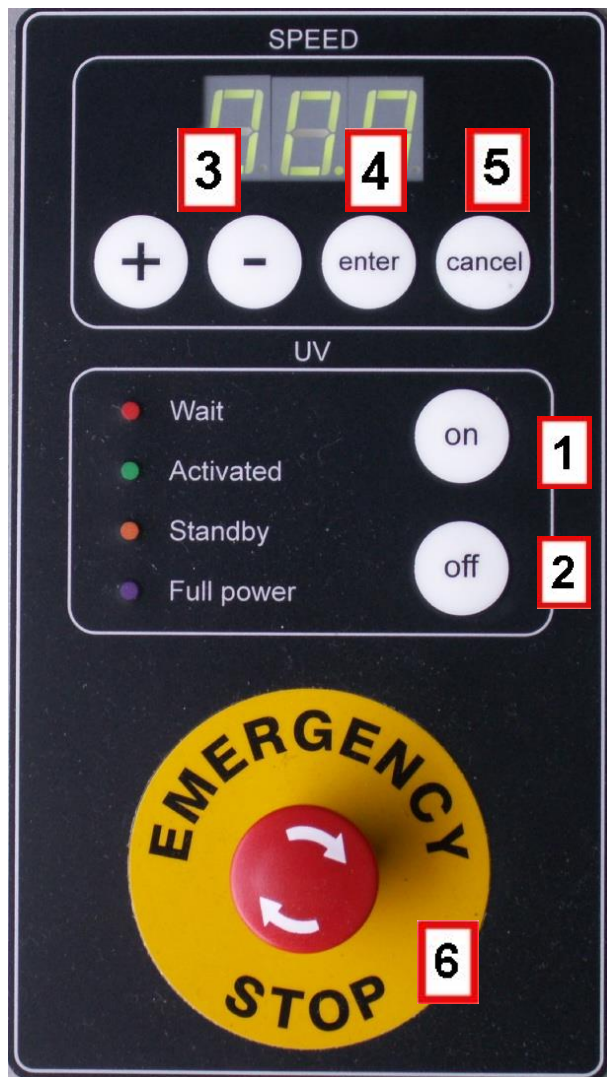
The DecoRad® Floormate is the ultimate tool for instantly curing floor coatings, varnishes and oils. With the help of UV, it can instantly cure up to 250 square meter per hour (depending on the type of base floor, layer thickness and product). Please consult our website, www.decorad.com for a recent overview of suitable products!

3.2 Overview of the DecoRad® Floormate



1. Fold down handlebar
2. UV lamp
3. Adjustment clamp for setting the height of the UV lamp
4. Control panel

3.3 Control Elements



1. “ON” button: switch on
2. “OFF” button: switch off
3. “+ and –“ buttons (individual and/or together): set speed
4. “enter” button: confirm
5. “cancel” button: cancel
6. Emergency stop

3.4 Equipment and accessories

Equipment and available accessories:

- UV-resistant face shield
- Extension cord
- Heat shield
- Custom-made flight case (for transportation)
- Spare UV - lamp including Stainless housing & reflectors
- Spare Mainprint
- UV Safety cones
- Spare set of wheels



4. Putting into operation

Remove the Floormate from the transportation stand in accordance with the directions as indicated on the images below.

1. Pull to release the handlebar.
2. Place push bar into upright position and click into red bar.



Drive the Floormate (tilted backwards) in the transportation position to the location where you would like to use it.



Then connect the supplied power cable.

First connect the power cable with the blue connector on the DecoRad® Floormate as indicated on the images below.

ATTENTION: make sure the power cable connector is firmly connected to the blue machine outlet !





As soon as the power button is pressed, the ventilator will start working.

Adjust the UV lamp to the right height by using the red adjustment clamps.



**The recommended height is 6 mm.
(Distance between the bottom of the lamp unit
and the floor)**

Place the heat shield underneath the UV lamp.



This prevents the floor from becoming too hot.

Skin & Eye protection.

Always wear protective clothing , gloves and a UV-resistant face shield during use. Make sure that bystanders remain at sufficient distance.



5. Operation

5.1 Switching the DecoRad® Floormate On

Connect the power cord to the Floormate and the mains.

The software version will shortly appear on the screen and the ventilator will turn on.

Press the "on" button on the control panel.

The UV lamp will warm up, the LEDs "Activated" and "Wait" will light up.



Software version

**Set the correct speed by using the "+" and "-" buttons.
Simultaneously press the "+" and "-".**

Now it is possible to set the speed.

+ is faster

- is slower

Confirm the set speed by pressing the "enter" button.

Cancelling can be done by pressing the "cancel" button.

*The speed can be set between 3.5 and 20.0 meter per minute
(IN USA DISPLAY WILL BE IN FEET PER MINUTE!)*



As soon as the "standby" LED lights up, the Floormate is ready for use.

Drive the Floormate away from the heat shield to the location where you would like to use it. (always keep moving)

Press the left push button in the handlebar 1x.

The UV lamp will now go to full power.

Press the right push button in the handlebar 1x.

The Floormate will now start moving with the set speed.

The set speed will appear on the display.



If the Floormate stands still for 4 seconds with the UV lamp on full power, the Error Code U92 including acoustic signal will appear on the display and the UV lamp will switch automatically to the dimming position.

Press enter to suppress this notification, and start moving the Floormate.



If the notification is not suppressed with enter, and the Floormate remains in “non movement’ Error Code U93 will appear on the display, after which the Floormate automatically switches off.



Driving with the set speed is only possible with the UV lamp on full power.



Please consult chapter 6 for error messages.

5.2 Switching the DecoRad® Floormate Off

Press” Lamp” button on the handlebar; the UV lamp will switch to the dimming position.

Press the "off" button on the display to switch off the DecoRad® Floormate, place on heat shield and let cool for 1-2 minutes.

Unplug the DecoRad® Floormate from the mains voltage.

Remove the power cable from the DecoRad® Floormate.

Press the red bar down to release the handlebar.

Fold the handlebar down and secure.

The DecoRad® Floormate is now ready for transportation.

6. Error Messages / tips

Trouble operating the Floormate:

- Have you read the manual?
- Have you set the correct speed (matching with the UV coating, please check with your supplier)?
- Is the powercable plugged in correctly and firmly (outlet/connector)
- Please make sure that stable and sufficient voltage is available.
- Always press OFF and unplug the powercord (=reset) of the Floormate and restart in case of unwanted or unexpected actions
- When the Floormate is switched off (and cooled down), the powercord should always be removed from the powersource
- Starting the Floormate always begins with connecting the powercord with the Floormate to the correct powersource
- When having bad curing results, please consult your coating supplier and / or order a new UV bulb including reflectors with DecoRad® Systems

Error	Description	Solution
General		If an error cannot be solved directly by pressing ENTER, please always try to reconnect and restart the Floormate.
E01	Communication error	Please consult DecoRad® Systems bv
E11	Lamp driver fail	The lamp driver is damaged, please consult DecoRad® Systems bv.
E12	System fail	The lamp driver is damaged, please consult DecoRad® Systems bv
E13	Lamp fail	Switch off the Floormate and leave the UV lamp to cool down. Replace the lamp house unit.
E14	Temperature fail	De UV lamp is too warm, leave the UV lamp to cool down.
E15	Fan fail	Please consult DecoRad® Systems bv
E18	Low voltage	Please connect to power source with more voltage
E21	Motor fail	Please consult DecoRad® Systems bv
U91	Tilt error	The Floormate is tilted too far. First press ENTER and secondly press ON.
U92	Non-movement error 4 seconds	The Floormate is not moving for 4 seconds whilst full power. The lamp will switch to dimming position. First press ENTER and secondly press ON. Please check whether the center wheel is NOT (b)locked.
U93 (after U92)	Non-movement error 15 seconds	The Floormate is still not moving after U92. The Floormate will shut down after 10 seconds. Please restart by pressing the ON button
U94	Auto Off after 5 minutes no use	The Floormate will shut down after not being used for 5 minutes whilst in dimming position and placed on the heat shield. First press ENTER and secondly press ON.

7. Specifications of DecoRad® Floormate

SPECIFICATIONS		Floormate
General		
Brand and Type	DecoRad® Floormate GEN6	
Colour	Silver / black	
Cure path	45 cm	
Lamphouse height adjustable to floor	✓	
Zero degree turn radius	✓	
Adjustable digital cure speed in meters or feet	✓	
Wheels with PU tyre	✓	
Measurements and weights		
Total weight (kg)	Stainless Steel 56 Aluminium 39	
Measurements (cm)	70 x 50 x 50 (LxWxH)	
Power supply		
Power UV - ultraviolet (Watt)	3000	
Power voltage	190/250 V 50/60 HZ 16 Amp circuit	
Cable powering provided (cm)	1000	
Lamps		
Standard UV-lamp (Ga, Fe or others possible)	Hg Mercury	
Number of UV-lamp(s)	1	
Burning hours UV-lamp(s)	500 to 1000	
Start-up time UV-lamp(s)	Approx. 45 seconds	
Ozone free or ozone building	At you choice	
Warranty (excluding (IR) & UV lamp(s))		
Manufacturer's warranty	1 year	
Warranty type	Carry-in	
Inspections		
CE Approved	✓	
TÜV certified (radiation)	✓	
Accessories		
Standard included	High quality flightcase, 2 safety cones, service and operator manual, heat shield, extension cord, safety package	
Optional	Lamp house units with different spectrum UV lamps, line marking 20 cm lamp house units, extra PCB (mainprint), extra set of wheels (as a package or individually available), Pigtails adapters (3 phase to 1 phase)	

8. Service parts

8.1 Standard Delivery

The DecoRad® Floormate is standard delivered with:

- Flight case (ideal for transportation)
- 2 Safety cones
- Service and repair manual
- Safety package
- Extension cord
- Heat shield

8.2 Field Replaceable Service Package

In order to prevent on-site downtime, the following package is optionally available upon purchase of the DecoRad® Floormate (the individual components are also available separately at addition cost).

The optional package consists of:

- Spare UV - lamp house unit (field replaceable by operator in 10 minutes, see chapter 9.1).
- Spare Mainprint (field replaceable by operator in 15 minutes, see chapter 9.2).
- UV safety cones (2 pieces)
- Spare set of wheels (field replaceable by operator in 10 minutes)



9. Replacing Service Parts

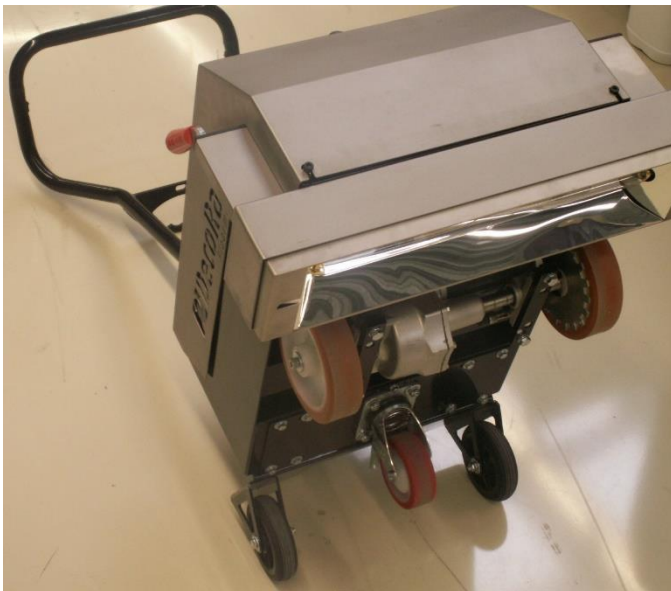


- Make sure that the DecoRad® Floormate is completely shut off!
- Remove the power cord!
- Make sure the lamp has cooled off!

9.1 Replacing the UV-Lamp

Follow the steps below for replacing the UV-lamp.

1. Topple the DecoRad® Floormate over backwards and let it rest on the folded out push bar.



2. Now lower the red handles as much as possible; the lamp will now be in the lowest position.



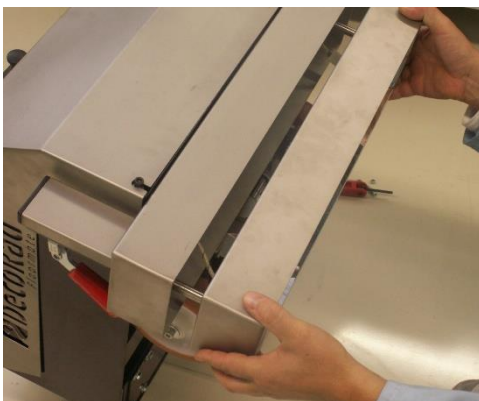
3. Turn the indicated socket head screw loose on both sides with a Allen Key and an open-end wrench 10.



4. Remove both socket head screws.

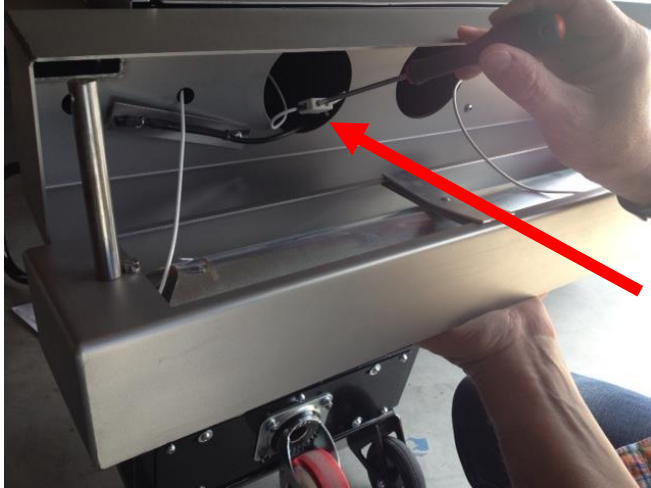


5. Carefully remove the complete Stainless lamphousing.



6. Loosen both ceramic connectors with a screwdriver.

PLEASE NOTE: LOOSEN CERAMIC CONNECTORS ON THE SIDE OF THE WIRES OF THE LAMP (CERAMIC CONNECTORS STAY BEHIND IN THE MACHINE!)



7. Replace the entire lamp unit

8. Connect the wires of the new lamp with the two ceramic connectors.

9. Place the lamp unit back into the DecoRad® Floormate.

10. Fix both socket head screws.

11. Pull both red handles straight up; the lamp is now in the highest position.

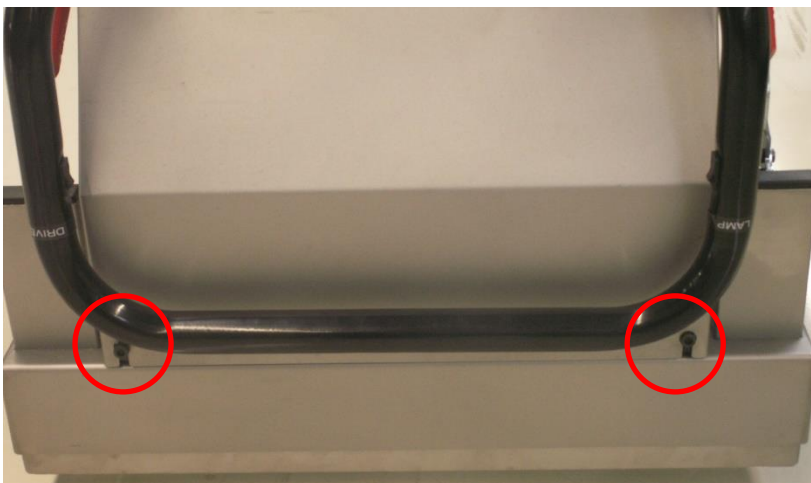
9.2 Replacing the Mainprint

Follow the steps below for replacing the Mainprint.

1. Make sure the push bar has been folded forward and is secured.



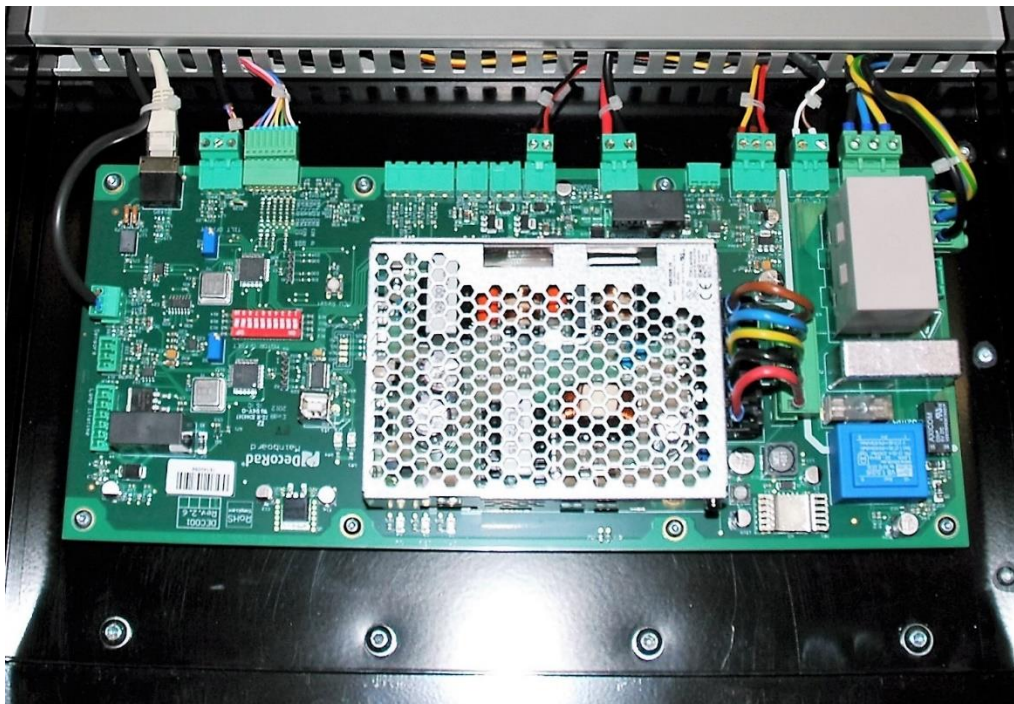
2. Half-loosen the 2 indicated socket head screws.



3. Open the lid.

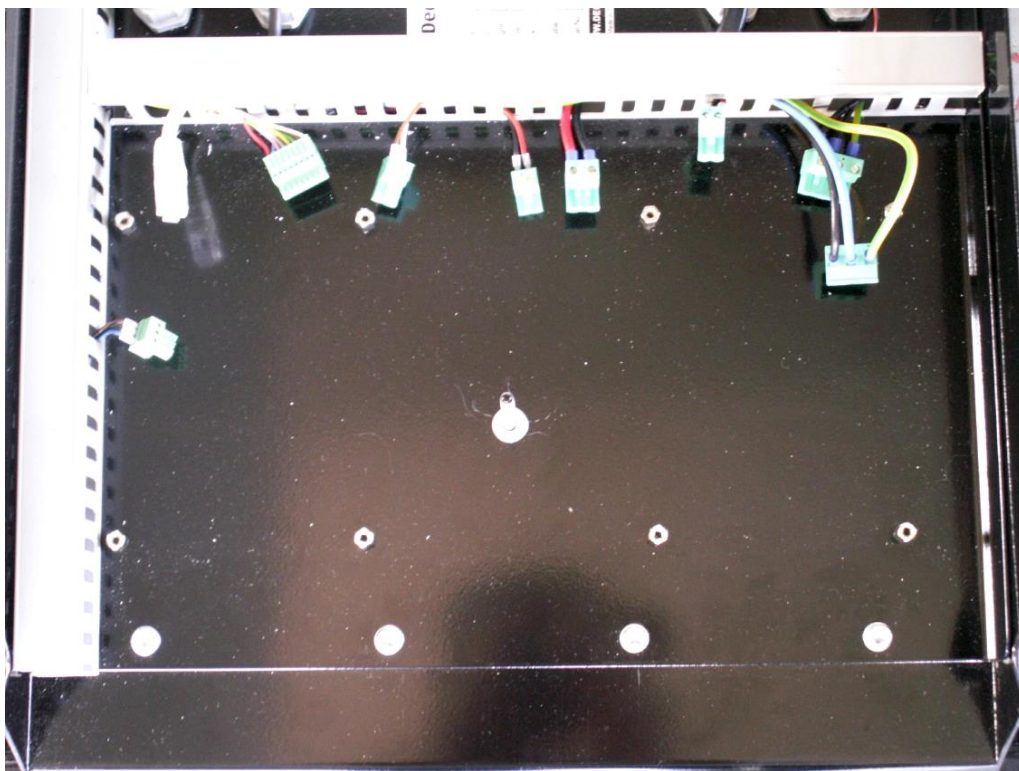


4. Carefully pull off all connectors by hand.
PLEASE NOTE: LEAVE THE WIRES IN THE CONNECTORS!



5. Remove the 8 socket head screws with which the print is attached.

6. Remove the Mainprint from the DecoRad® Floormate



7. Place the new Mainprint into the DecoRad® Floormate.

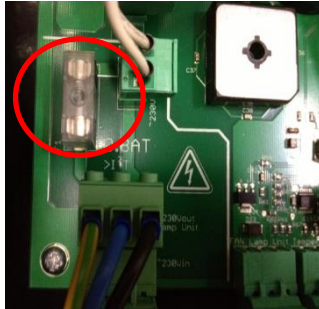
8. Secure the Mainprint with 8 socket heat screws into the DecoRad® Floormate.

9. Connect all connectors to the Mainprint.

9.3 Replacing the Fuses of the Mainprint

Follow the steps below for replacing fuses on the Mainprint.

1. Spare fuse is packed in a bag and is located inside the DecoRad® Floormate.
(1x 32mA)

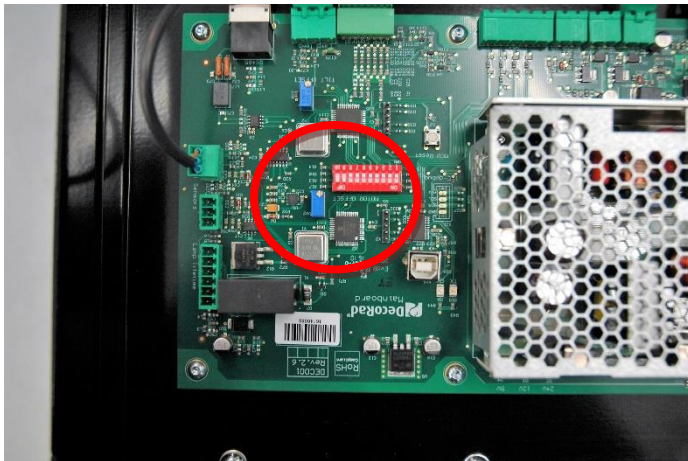


2. Remove the indicated fuse cap and then the fuse.
3. Place the new fuse as indicated in the picture.
4. Place the fuse cap.

9.4 Calibrating speed

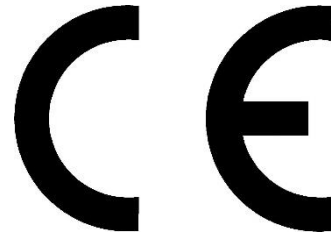
Please follow the following steps to calibrate the speed of the DecoRad® Floormate
(Please check the speed regularly)

1. Put a range of 5 meters / 15 feet
2. Set the speed of the DecoRad® Floormate to – meters/ft per minute.
3. Measure for 1 minute the distance traveled.
4. If the distance deviates, use the adjuster on the mainprint to set the right speed (circled in red)
5. Use the adjuster until you have reached the correct speed.



10. Appendices

10.1 CE Declaration



We DecoRad® Systems bv
 Kernreactorstraat 11B
 3903 LG Veenendaal
 The Netherlands

Declare fully under own responsibility that the equipment specified in this declaration complies with the conditions as defined in:

Machinery Directive :	:2006/42/EC
EMC Directive	:2004-108/EG
Low Voltage Directive	:2006/95/EC

and the standards:

EN 12921-1:2005+A1 (2010)	:Machines for surface preparation using liquids or vapours
EN ISO 12100 (2010)	:Safety of Machinery
EN 61000-3-2 (2006)	:Harmonic Current Emissions
EN 60204-1(2006)	:Electrical equipment of machines
EN 61000-3-3 (2008)	:Limitation of voltage changes, voltage fluctuations and flicker
EN 61000-6-2 (2005)	:Immunity for industrial environments
EN 61000-6-3 (2007)	:Emission standard for residential, commercial and light-industrial environments
EN 61000-6-4 (2007)	:Emission Standard for Industrial Environments
EN 60204-1 (2006)	:Machines with Emergency-Stop function

Product	:DecoRad® Floormate
---------	---------------------

Veenendaal, Date	:July 2011
Name	:R. Muller
Function	:Managing Director

10.2 TÜV Declaration

TÜV Rheinland Nederland B.V.

Versie: 20101101

Decorad Systems B.V.
T.a.v. dhr. R. Muller
Kernreactorstraat 11b
3903 LG VEENENDAAL

Datum
08-04-2011

Contact
De heer E.
Schols

Onze referentie

Projectnummer
E10.29955

Onderwerp
Onderzoek Decorad Vloerdroger

Geachte heer Muller,

Door TÜV Rheinland Nederland BV is in de persoon van de heer Jan Maat, materie deskundige, getoetst of het ter verificatie aangeboden product Decorad® Vloerdroger voldoet aan de richtlijn NEN-EN 14255-1.

Uit het onderzoek is gebleken dat het ter verificatie aangeboden product voldoet aan de richtlijn NEN-EN 14255-1

De definitieve rapportage van het gehele onderzoek zal u op afzienbare termijn worden toegezonden.

Met vriendelijke groet,

Ing. J.J.A. Maat,
Projectleider



Namens deze:
Ir. E.H.M. Schols

© TÜV, TÜV and TÜV are registered trademarks. Any use or application requires prior approval.

Hoofdkantoor Apeldoorn:
Boogschutterstraat 11A
Postbus 541
7300 AM Apeldoorn
Tel. +31 (0)88 888 7 888
Fax +31 (0)88 888 7 879

Vestiging Eindhoven:
De Rondom 1
Postbus 6235
5600 HE Eindhoven
Tel. +31 (0)88 888 7 888
Fax +31 (0)40 265 0 302

Vestiging Enschede:
Josink Esweg 10
Postbus 337
7500 AH Enschede
Tel. +31 (0)88 888 7 888
Fax +31 (0)88 888 7 859

TÜV Rheinland Nederland B.V. is als
besloten vennootschap ingeschreven
bij de Kamer van Koophandel voor
Oost Nederland onder nummer
27288788
info@nl.tuv.com
www.tuv.com/nl