

User Manual

DecoRad® Floormate *GEN6*



DecoRad® Systems BV
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The Netherlands

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www.decorad.com

Preface

The DecoRad® Floormate is designed for the instant curing of UV floor coatings, varnishes and oils.

UV technology has been used successfully in on-site applications for many years. The DecoRad® Floormate is developed in close cooperation with coating companies and built using the latest technology. This enables end users to successfully cure industrial concrete coatings as well as finishes for wood and resilient floors with the same machine.

Characteristics of the DecoRad® Floormate

- Output 3000 W
- Single phase: 190 – 250 Vac / 50 – 60 Hz / 16A
- 45 cm cure path
- Motorized drive with adjustable curing speed
- Compact, user-friendly and highly manoeuvrable (0° turning circle)
- Field replaceable spare parts
- Curing capacity: approx. 250 m²/hour (depending on the coating used)
- Medium-pressure mercury lamp, ozone-free or ozone-generating versions.
- CE marked and TÜV certified
- ISO 9001 Quality assurance



Carefully read this user manual before operating the Floormate.
The DecoRad® Floormate may only be operated by suitably qualified personnel.

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

1.1 Related Documents

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

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

These documents are included in the appendices of this manual.

1.2 Manufacturer

The DecoRad® Floormate is manufactured by:

DecoRad® Systems BV
Fokkerstraat 25
3905 KV Veenendaal
The Netherlands

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

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

1.3 CE Marking

The DecoRad® Floormate bears the CE marking. This means that the equipment complies with the essential health and safety requirements applicable under European Union legislation.

1.4 Warranty

The manufacturer of the DecoRad® Floormate provides a 12 month carry-in warranty covering parts and repair costs*. This warranty is only valid if the DecoRad® Floormate is used in accordance with its specifications, and if all operating and maintenance instructions are followed. Factory repairs are performed on a carry-in basis.

The DecoRad® Floormate warranty* lapses in case of:

- Improper use
- Insufficient or improper maintenance
- Modifications made without the prior written consent of the manufacturer.

The normal replacement-parts (lamps) are not covered by the manufacturer's warranty.

* At the sole discretion of DecoRad® Systems BV

1.5 Copyright

Copyright © DecoRad® Systems BV. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or made available in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the manufacturer.

1.6 Liability

The manufacturer of the DecoRad® Floormate is not liable for unsafe situations, accidents, injury, or damage resulting from:

- Ignoring warnings or instructions provided on the DecoRad® Floormate or contained in this user manual, including the incorrect use of personal protective equipment (PPE).
- The use of the DecoRad® Floormate for any other application or in any other circumstances than indicated in this user manual.
- Any modification of the DecoRad® Floormate, including the installation of non-approved replacement parts.
- Inadequate maintenance. The required level and frequency of maintenance depend on the intensity of use.

The manufacturer is not liable for consequential loss in case of malfunctions of 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 any maintenance work.

2.1 Safety symbols 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.

2.2 Symbols used:

	Always wear the UV protective DecoRad® face shield
	Always wear the UV protective DecoRad® suit
	Always wear the UV protective DecoRad® gloves
	Caution! Hot Surface!
	Caution! UV light! Never look directly into the UV light without wearing eye- and face protection.
	The user/maintenance mechanic should be acquainted with the entire contents of this user manual, before using the DecoRad® Floormate.
	Keep the room ventilated, depending on the type of UV lamp. Only the DecoRad C type UV-lamp produces ozone.

2.3 Usage

The DecoRad® Floormate may 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 maintenance mechanic should be acquainted with the entire content of this user manual.

The intensity of use is decisive for the degree of maintenance required.

Examples of these are:

- The wheels (which should be undamaged and clean)
- The lamp & reflector (dirt, dust and ageing reduce UV energy output), clean with IPA (isopropyl alcohol) and a paper tissue.

2.5 Safety Regulations

The DecoRad® Floormate meets the fundamental safety and health demands of the relevant guidelines of the European Community.



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 ultraviolet or UV has a wavelength shorter than that of purple. This part of the UV radiation is not visible.

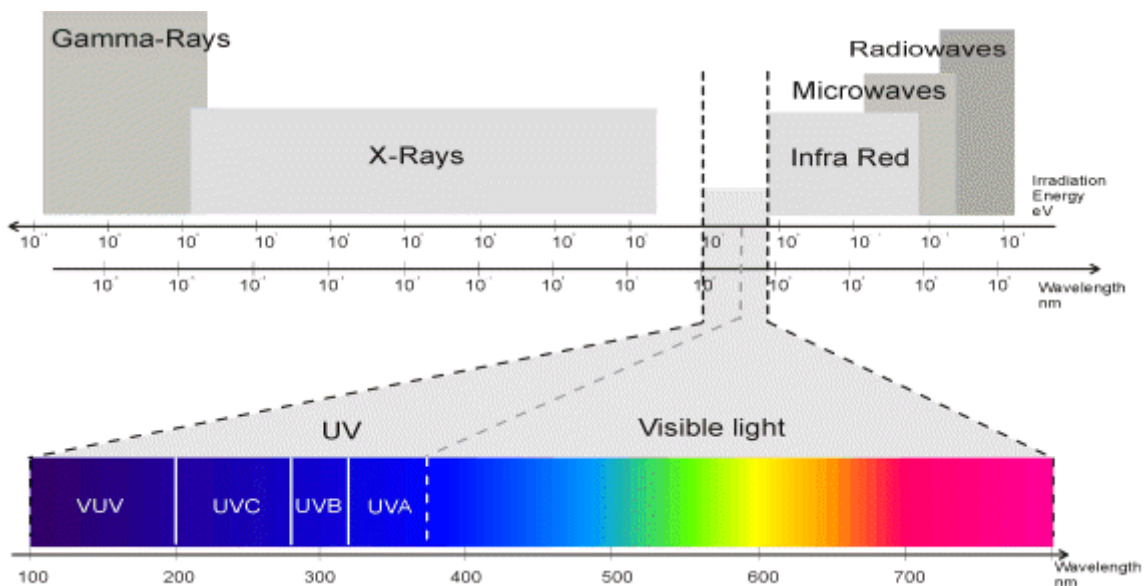
Most of the UV radiation we get comes through sunlight. Not all UV radiation reaches the earth: a part is blocked by the ozone layer.

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 UV 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 UV face shield, protective clothes and gloves.

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 this user manual before operating the DecoRad® Floormate.



Before switching on the DecoRad® Floormate, ensure that the personal protective equipment (PPE) as described in this user manual is worn. The UV face shield and protective clothing (including gloves) are mandatory.



The lamp emits significant amounts of heat; keep it away from explosive atmospheres and highly flammable materials.



Make sure that the room where the DecoRad® Floormate will be used is properly lit and ventilated. This is crucial when using a full spectrum ozone-producing UVC lamp.



**The Floormate should be lifted by 2 persons.
Fold down the handlebar and secure to lift.
Never lift from the UV lamp housing.**



Dirt on the lamp and/or reflectors (e.g. from coatings, dust or fingerprints) can shorten the life span of the lamp or reduce the UV energy output. If needed, clean the reflector and the cooled lamp using isopropyl alcohol and a paper tissue.



**Visually inspect the Floormate (e.g. wheels, UV lamp, reflector etc.)
Carefully tilt the DecoRad® Floormate backwards and let it rest on the folded-out handlebar.**



Ensure that bystanders without appropriate UV PPE protection remain at a safe distance of at least 10 meters / 33 ft.

3. Machine Description

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

3.1 Function

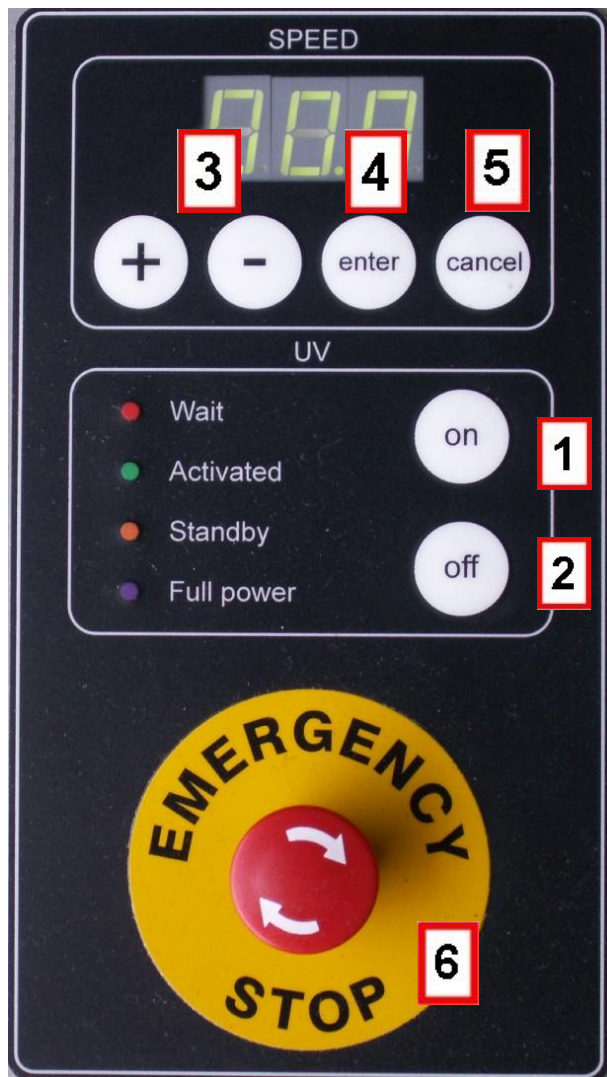
The DecoRad® Floormate is the ultimate tool for instantly curing site applied UV floor coatings, varnishes and oils. With the help of UV, it can instantly cure up to 250 m²/hour (depending on the type of substrate, layer thickness and product). Please consult our website, www.decorad.com for a recent overview of suitable products.

3.2 Overview of the DecoRad® Floormate



1. Fold-down handlebar
2. UV lamp housing unit
3. Adjustment levers for setting the height of the UV lamp
4. Display

3.3 Display



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 standard accessories

- UV-personal protective equipment PPE
- Extension cord
- Heat shield
- Custom-made flight case (for transport)
- UV yellow safety cones
- User manual and quick guide



For optional accessories and spare parts check our website.

4. Putting into operation

Always wear PPE Personal Protective Equipment (UV face shield, gloves and UV-protective clothing)! Make sure that bystanders remain at sufficient distance (10 meters)



Remove the Floormate from the transportation stand by following the instructions shown in the images below.

1. Pull the handlebar to release it.
2. Raise the handlebar to the upright position and lock (secure) it into red horizontal bar.



Drive the Floormate, tilted on its black wheels, to the location where you intend to use it.

Power cable CEE – UL

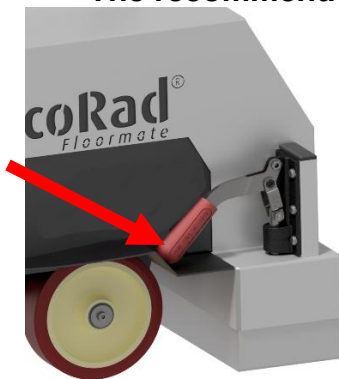
1. Connect the supplied power cable with the blue connector to the DecoRad® Floormate as shown in the images below.
2. ATTENTION: Ensure that the power cable connector is firmly connected to the blue machine outlet using the twist-lock!



As soon as the power ON button on the display is pressed, the Floormate's electronics will start working.



Adjust the UV lamp to the right height by using the red adjustment levers. The recommended height for UV curing is as low as possible. The recommended height for transport is completely up.



Place the heat shield underneath the UV lamp housing before starting the UV lamp, and also during cooling down.



The heat shield prevents the floor from burning.

5. Operation

5.1 Switching the DecoRad® Floormate ON

Connect the power cable to the Floormate and the mains power.
Press the Power On button in the rear of the Floormate next to the blue power connector.
The software version will shortly appear on the screen and the ventilator will turn on.

Press the "On" button on the display.

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



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.

Cure speed: ask your coating company

Cure speed: is shown in meters per minute

USA: Cure speed in feet per minute



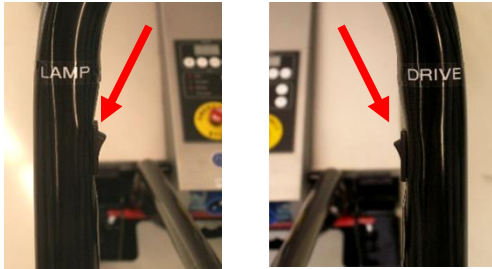
As soon as the orange "standby" LED illuminates, the Floormate is ready for use.
Drive (by pushing) the Floormate away from the heat shield to the location where you intend to use it.



Keep the Floormate in motion with activated UV lamp at all times.

Press the left push button on the handlebar once.
The UV lamp will switch to full power (the purple LED will illuminate).

Press the right push button on the handlebar once.
The Floormate will start moving at the previously set speed.
The set speed will be displayed while the machine is moving.



When the Floormate is not moving for 4 seconds with the UV lamp at full power, the Error Code U92 will appear on the display and an acoustic beeping signal will sound. The UV lamp will automatically switch to the dimming position.

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



If the notification is not suppressed by pressing Enter and the Floormate remains in “non movement”, Error Code U93 will appear on the display. The UV lamp will then switch off automatically.



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 the "Lamp" button on the handlebar; the UV lamp will switch to the 20% dimming position. Press the "Off" button on the display to switch off the DecoRad® Floormate. Place the Floormate on the heat shield and let the cooling program run until auto off.

Unplug the DecoRad® Floormate from the mains power.
Remove the power cable from the DecoRad® Floormate.
Press down the red bar to release the handlebar.
Fold the handlebar down and secure, pull both red UV lamp housing levers to the highest position.
The DecoRad® Floormate is now ready for transport.

6. Error Messages / tips

- Always start by connecting the power cable to the Floormate and then to the correct power supply.
- Verify the power cable is plugged in correctly and firmly connected. (outlet/connector)
- Verify that a stable and adequate voltage is available.
- Use the correct extension cord: Max 30 meters and 3x 2,5mm².
- Set the correct speed and UV lamp housing height (matching with the UV coating, please check with your supplier).
- Turn OFF the Floormate wait for cool down and restart in case of unwanted or unexpected actions (=reset)
- If curing results are unsatisfactory, please consult your coating supplier and/or order a new UV lamp housing.

Error	Description	Solution
General		If an error cannot be solved directly by pressing ENTER, restart after cooling down
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 electronics are damaged, please consult DecoRad® Systems BV
E13	Lamp Fail	Switch off the Floormate and leave the UV lamp to cool down. Restart the Floormate / Replace the UV lamp housing.
E14	Temperature Fail	The 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 a power source with more voltage
E21	Motor Fail	Please consult DecoRad® Systems BV
U91	Tilt error	The Floormate is tilted too far. Press ENTER
U92	Non-movement error 4 seconds	The Floormate is not moving for 4 seconds while operating at full power. The lamp will switch to dimming position. Press ENTER to avoid U93.
U93 (after U92)	Non-movement error 15 seconds	The Floormate is still not moving after U92. The Floormate will shut down after 10 seconds. Restart after cooling down.
U94	Auto Off after 3 minutes no use	The Floormate will shut down after not being used for 3 minutes while in dimming position and placed on the heat shield. Restart after cooling down.

7. Specifications

Floormate GEN6	
General	
Brand and Type	DecoRad® Floormate GEN6
Colour	Silver / black
Cure path	45 cm
Lamp housing height adjustable to floor	✓
Zero degree turn radius	✓
Adjustable digital cure speed in meters or feet	✓
Wheels with PU tyres	✓
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	Free of choice
Warranty (excluding UV lamp(s))	
Manufacturer's warranty	1 year
Warranty type	Carry-in
Inspections	
CE Marking	✓
TÜV certified (radiation)	✓
Accessories	
Standard included	High quality flight case, 2 safety cones, user manual and quick guide, heat shield, power cable, personal protective equipment PPE.
Optional	Spare lamp housing with same/different spectrum UV lamps, line marking 20 cm lamp housing, extra PCB (main print), spare wheels, pigtails power adapters (3 phase to 1 phase) <i>See website for prices and details</i>

8. Service parts

8.1 Standard scope of delivery

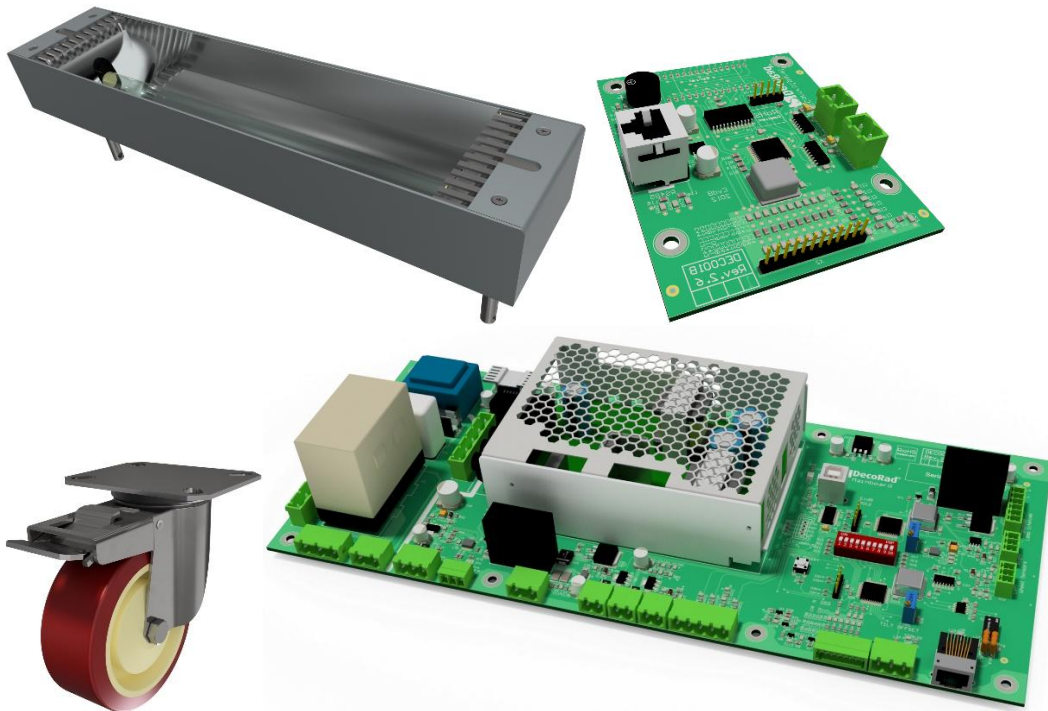
The DecoRad® Floormate is supplied as standard with:

- Flight case (protection and transport)
- 2 yellow Safety cones
- User manual and quick guide
- Personal UV Protective Equipment (PPE)
- Power cable
- Heat shield

8.2 Field Replaceable Service Package

In order to prevent on-site downtime, the following package is optionally available.

- Spare UV lamp housing
(field replaceable by the operator in 10 minutes, see chapter 9.1).
- Spare PCB Main circuit board
(field replaceable by the operator in 15 minutes, see chapter 9.2).
- Spare set of wheels
(field replaceable by the operator in 10 minutes)
- *See website for prices and details*



9. Replacing Service Parts

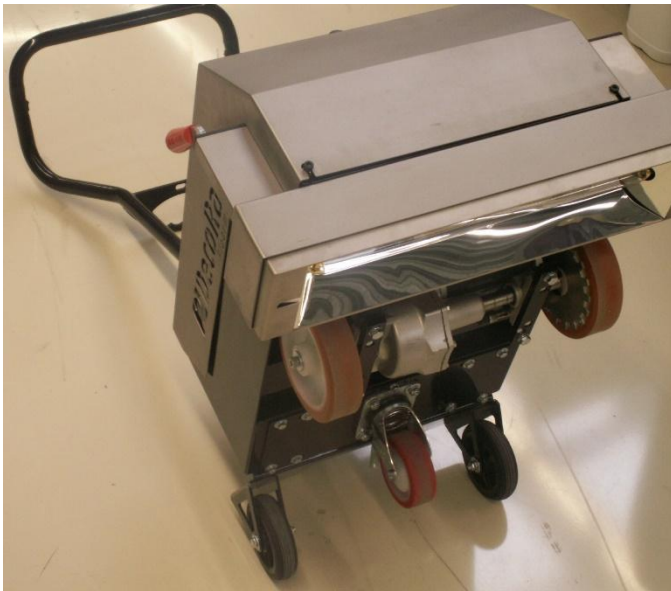
9.1 Replacing the UV Lamp



**Make sure the DecoRad® Floormate is cooled down.
Remove the power cable.**

Follow the steps below for replacing the UV lamp.

1. Carefully tilt the DecoRad® Floormate backwards until it rests on the unfolded handlebar.



2. Lower the red levers as much as possible; the lamp housing is now in the lowest position.



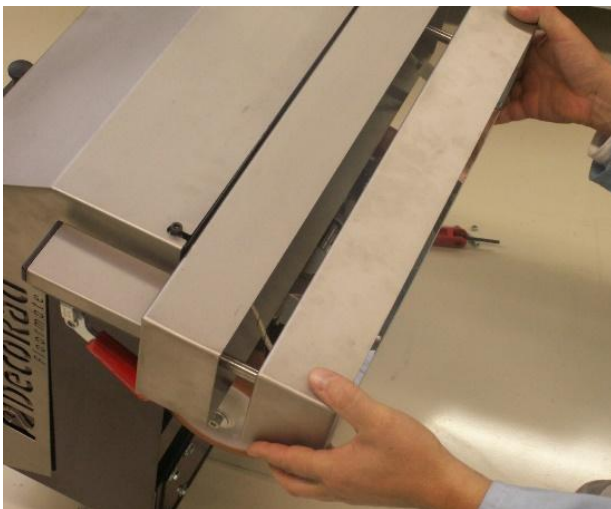
3. Loosen the lower socket head screw on both sides with a Hex Key and an open-end wrench.



4. Remove the socket head screws on both sides of the lamp housing.



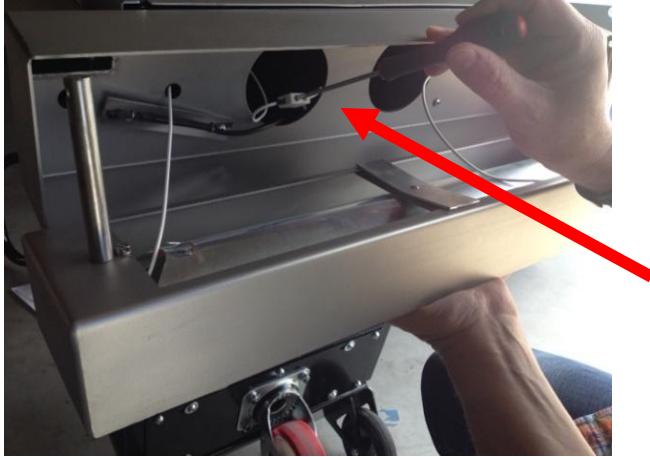
5. Carefully remove the complete lamp housing.



6. Loosen both ceramic connectors using a screwdriver.



**LOOSEN THE CERAMIC CONNECTORS ON THE WIRE SIDE OF THE LAMP
(THE CERAMIC CONNECTORS REMAIN INSIDE THE MACHINE!)**



7. Replace the complete UV lamp housing.

8. Connect the wires of the new UV lamp housing to the two ceramic connectors.

9. Reinstall the lamp housing into the DecoRad® Floormate.

10. Install and tighten the socket head screws on both sides of the UV lamp housing.

11. Pull both red levers straight upwards. The UV lamp housing is now in the highest position.

9.2 Replacing the PCB main circuit board

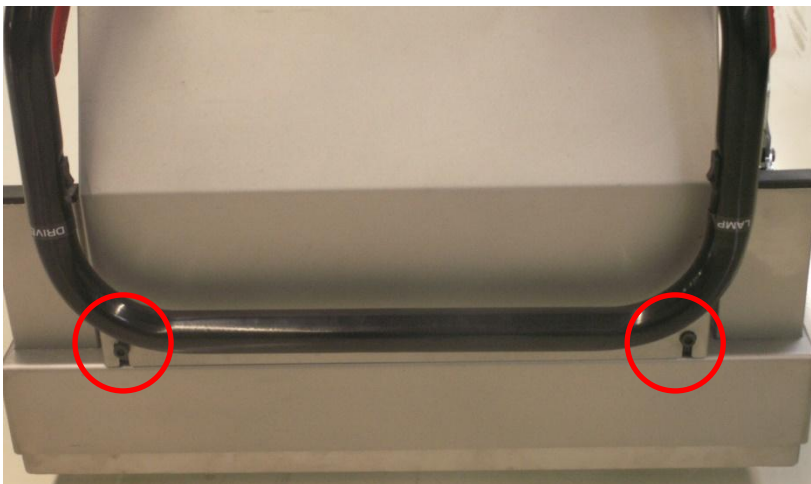


**Make sure the DecoRad® Floormate is cooled down.
Remove the power cable.**

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



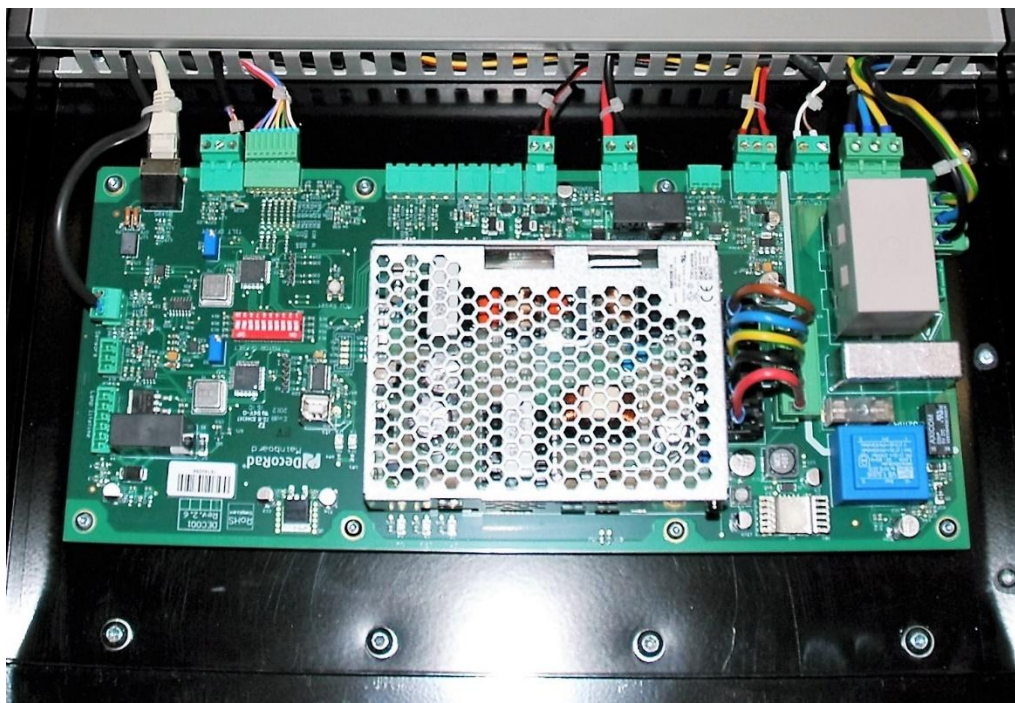
2. Half-loosen the 2 indicated socket head screws.



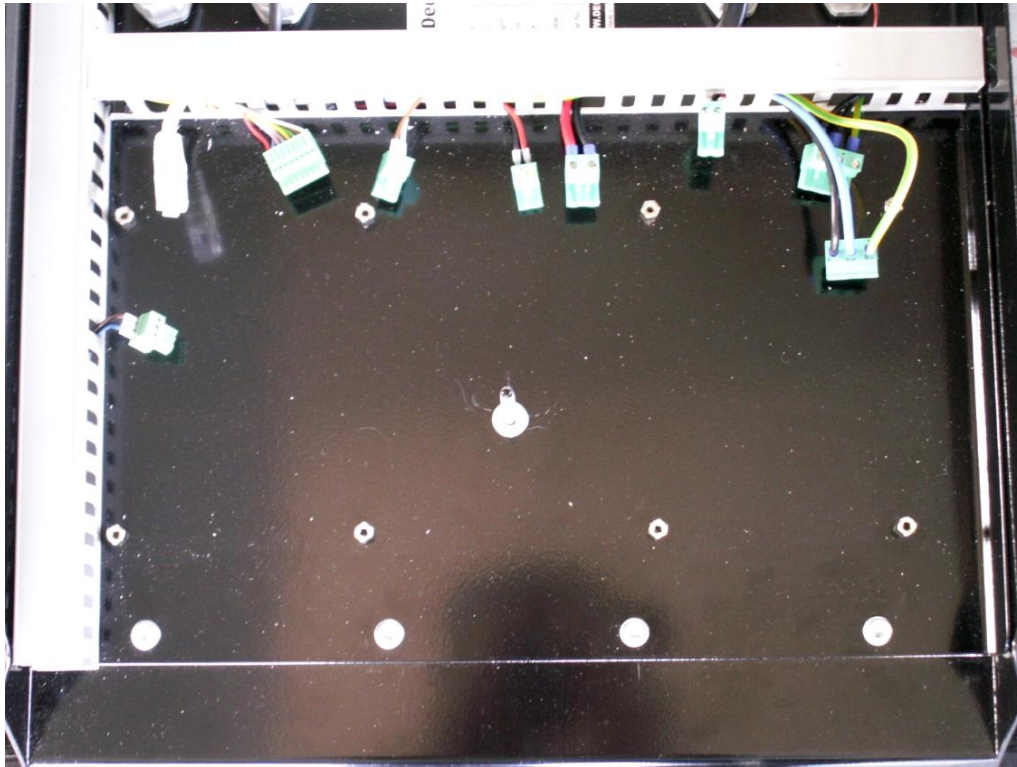
3. Open the lid.



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



5. Remove the 8 socket head screws with which the print is attached.
6. Remove the PCB main circuit board from the DecoRad® Floormate.



7. Reinstall the new PCB main circuit board into the DecoRad® Floormate.
8. Secure the PCB main circuit board in the DecoRad® Floormate using the 8 socket head screws.
9. Reconnect all connectors to the PCB main circuit board

9.3 Replacing the fuses of the PCB main circuit board

Follow the steps below for replacing fuses on the PCB main circuit board.

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

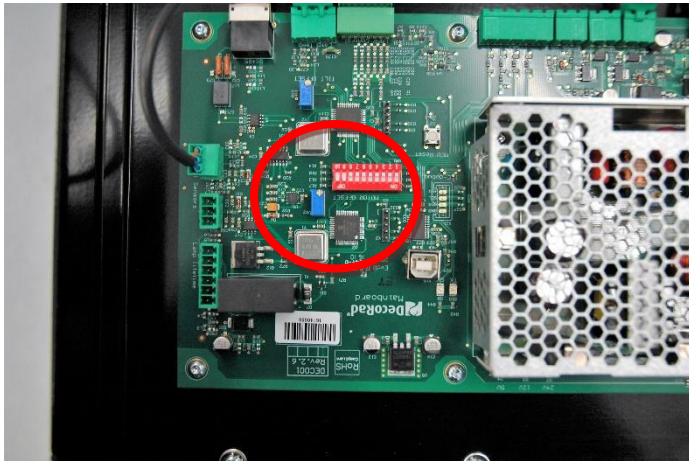


2. Remove the indicated fuse cap and then the fuse.
3. Insert the new fuse.
4. Reinstall the fuse cap.

9.4 Calibrating speed

Please follow the steps below to calibrate the speed of the DecoRad® Floormate.
(Check the speed frequently)

1. Measure and mark a distance of 5 metres / 15 feet.
2. Set the speed of the DecoRad® Floormate to – metres/feet per minute.
3. Measure the distance travelled during 1 minute.
4. If the measured distance differs from the set value, adjust the potentiometer on the PCB main circuit board to calibrate the correct speed (see red circle).
5. Turn the potentiometer screw in small increments until the correct speed is achieved.



10. Appendices

10.1 CE Marking



We DecoRad® Systems BV
Fokkerstraat 25
3905 KV Veenendaal
The Netherlands

Declare fully under own responsibility that the equipment specified in this document 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
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Veenendaal, Date	May 2020
Name	A.J. Maatkamp
Function	General Manager

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

b.m.


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

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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:
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5600 HE Eindhoven
Tel. +31 (0)88 888 7 888
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Vestiging Enschede:
Josink Esweg 10
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7500 AH Enschede
Tel. +31 (0)88 888 7 888
Fax +31 (0)88 888 7 859

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besloten vennootschap ingeschreven
bij de Kamer van Koophandel voor
Oost Nederland onder nummer
27288788
info@nl.tuv.com
www.tuv.com/nl