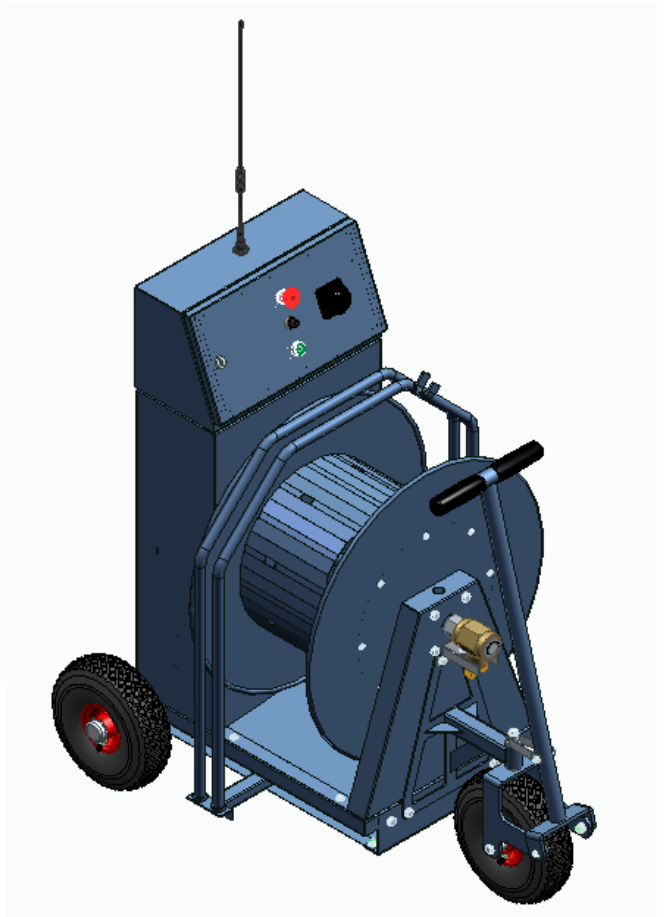
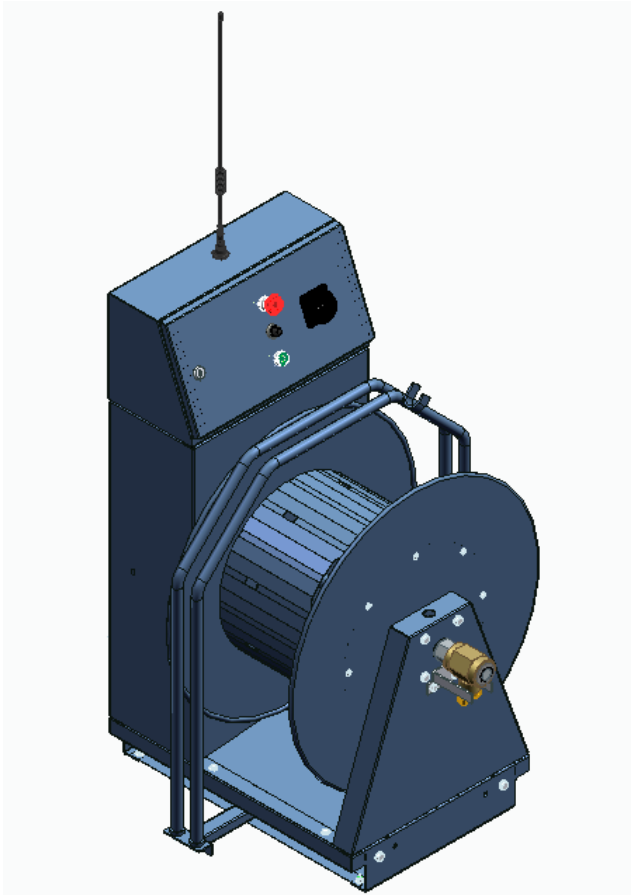




Technical Handbook

METOSWR



Berg Hortimotive

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Machine type plate

The *METOSWR* is fitted with a machine type plate which contains the following information: address details for Berg Hortimotive, CE mark, serial and type reference, serial number, year of construction.

If you would like to contact Berg Hortimotive, or one of their dealers with respect to this *METOSWR*, please ensure that this information is always readily available.



Version 1, November 2020

The machine is manufactured by:



Berg Hortimotive

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Tel: +31 (0) 174- 517 700

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1. Declarations

1.1 Copyright

Berg Hortimotive
De Lier, 2020

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1.2 Liability

Berg Hortimotive does not accept liability for dangerous situations, accidents and damage that occur as a result of ignoring warnings or instructions, such as those shown on the *METOSWR*, or contained in this documentation - for example:

- inexperienced or incorrect usage or maintenance
- being used for applications other than those for which it was designed, or in circumstances other than those given in this documentation
- the use of components or spare parts which are not prescribed
- repairs carried without the consent of Berg Hortimotive and/or a certified dealer
- changes to the *METOSWR* include the following:
 - alterations to the controls
 - welding, mechanical works, etc
 - extensions to the *METOSWR* or its controls

Berg Hortimotive does not accept liability when:

- customers do not meet their obligations with respect to Berg Hortimotive (financial or otherwise)
- consequential damage is caused by defects on the *METOSWR* - e.g. interruption of business, delays, etc.

1.3 Guarantee

For a period of 6 months after delivery, Berg Hortimotive gives the client a warranty on material and manufacturing defects that occur during normal use. This warranty does not apply if the defects are caused by improper use or causes other than by material and manufacture, if Berg Hortimotive - following consultation with the client - delivers used material or used goods or if the cause of the defects cannot be demonstrated clearly. The warranty provisions are set out in the METAALUNIE CONDITIONS as they read according to the most recent relevant text. The terms and conditions of delivery are available on request.

The warranty given by Berg Hortimotive for all goods and materials not manufactured by Berg Hortimotive will never be more than that given by its supplier. The warranty is ex works. Faulty machines and/or parts must be sent postage paid.

When it is not possible to send out machines or systems, any travel and subsistence expenses will be payable by the client.

Sold and delivered goods with manufacturer's, importer's or wholesaler's warranties are subject only to the warranty provisions set by the suppliers.

Hydraulic pumps are subject only to the manufacturer's warranty, provided the pump comes with an undamaged safety seal from the supplier.

Berg Hortimotive accepts responsibility for the availability of replacement parts, provided they are available from its suppliers at reasonable conditions.

1.4 Spraying Installation Approval

It is mandatory to register your machine with a certified inspection authority for spraying equipment. The hose reel (*METOSWR*) meets all the requirements of this inspection on leaving the factory, but must be periodically inspected in accordance with national regulations.

For more information about the inspection, please contact your dealer or the national inspection authority. The above resolutions and other relevant documents can also be downloaded on the site of the following inspection authorities.

<p>The Netherlands: Stichting Kwaliteitseisen Landbouwtechniek (SKL) Agro Business Park 24 6709 PW Wageningen Postbus 407 Tel: +31 (0) 317 47 97 06 Fax: +31 (0) 317 47 97 05 www.sklkeuring.nl info@sklkeuring.nl</p>	<p>Belgium: Secretariaat Keuring Sproeimachines Vlaanderen Technologie & Voeding, Agrotechniek. Instituut voor Landbouwkundig en Visserijonderzoek (ILVO, T&V-Agrotechniek) Burgemeester van Gansberghelaan 115 9820 Merelbeke Tel: +32 (0) 9 272 27 57 Fax: +32 (0) 9 272 28 01 www.ilvo.vlaanderen.be keuringspuit@ilvo.vlaanderen.be</p>
<p>England: Agricultural Engineers Association Samuelson House - Forder Way Hampton Peterborough PE7 8JB Tel: +44 (0) 845 64 48 7 48 Fax: +44 (0) 173 33 14 7 67 www.aea.uk.com ab@aea.uk.com</p>	<p>Poland: Plant Health and Seed Inspection Service Ul. Wspólna 30 00-930 Warsaw Tel: 022 623 24 04 Fax: 022 623 23 04 www.piorin.go.pl gi@piorin.gov.pl or: Research Institute of Pomology and Floriculture in Skjerniewice (www.insad.pl)</p>
<p>France: Cemagref Antony Parc de Tourvoie, BP 44F 92163 Antony Cedex T: +33 (0) 1 40 96 61 21 F: +33 (0) 1 40 96 62 25 www.cemagref.fr info@cemagref.fr</p>	<p>Germany: Julius Kühn-Institut, Bundesforschungs-institut für Kulturpflanzen Messeweg 11-12 38104 Braunschweig T: +49 (0) 531 299 5000 F: +49 (0) 531 299 3000 www.jki.bund.de pb@jki.bund.de</p>

2. Foreword

This handbook describes the *METOSWR*.

This handbook provides you with information including the safety aspects, a description of the *METOSWR* together with the working principles, as well as the operating instructions and maintenance of the machine.

Potentially dangerous situations are indicated together with recommendations for avoiding them.

It is important that this handbook is carefully read in order to learn how the *METOSWR* should be operated and maintained. By reading this handbook and then using the *METOSWR*, you, or anyone else, will be assisted in using the *METOSWR* in the correct manner thereby helping to avoid personal injury as well as damage to the machine.

Berg Hortimotive produces safe machines. The machines are designed to meet the latest standards and are manufactured in accordance with the latest CE approval markings. The user remains responsible for the proper operation and for carrying out maintenance on the machine.

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3. Introduction

3.1 General

You have made a good choice by purchasing the Berg Hortimotive *METOSWR*. You are the owner of an first class piece of equipment that has been manufactured with great care. You will gain the most advantage from the equipment provided that you carefully follow the instructions given in this handbook with regard to safety, operating and maintenance.

Please study this user's handbook carefully before starting to use the *METOSWR*. Always follow the safety instructions and recommendations given in this handbook.

Berg Hortimotive does not accept liability for damage or indirect damage resulting from not following the operating and safety instructions contained in this handbook.

Neither does Berg Hortimotive accept liability whenever you or a third party make modifications to the pipe rail trolley or its accessories, without receiving prior written permission from the manufacturer.

The *METOSWR* is supplied in accordance with the conditions of sale of the Dutch METAALUNIE, as determined by the registrar of the law court of Rotterdam and in accordance with the most recent text contained therein. A copy of the terms and conditions of supply can be provided on request. You can also contact the Koninklijke Metaalunie, PO Box 2600, 3430 GA Nieuwegein, the Netherlands.





3.2 Suppliers information

In the event of breakdowns or defects occurring on the *METOSWR* please contact your Berg Hortimotive dealer.

4. Safety

4.1 Explanation of the safety terminology

Safety terminology:

- Danger**  : Indicates serious or even fatal injury may occur if the instructions in the handbook are ignored.
- Warning**  : Indicates injury if the instructions described in this handbook are ignored.
- Caution**  : Indicates damage may occur to the equipment if the instructions described in this handbook are ignored.
- Warning**  : Indicates possible problems if the instructions described in this handbook are ignored.

4.2 Safety instructions

Read the following safety instructions carefully.

After reading the safety instructions they should be strictly observed at all times.

If the Pipe rail trolley safety instructions are not observed while it is being operated, it will become substantially more dangerous and may lead to serious physical injury.

DANGER!

- **Carefully read all of the user's handbook. Observe the operating and safety instructions at all times.**
- **Never exceed the maximum permitted system pressure.**
- **Never exceed the maximum permitted hose length.**
- **Use the METOSWR only for watering or spraying crops in a greenhouse.**
- **The METOSWR is only suitable for driving on a flat paved floor (concrete) that is rough enough to drive and stop safely, and to withstand the winding/unwinding forces.**
- **It is forbidden to use the METOSWR in spaces having insufficient lighting!**
- **Persons are not permitted to ride with/on the chassis.**
- **It is forbidden to remove the hose guide.**
- **Do not spray liquid on moving parts of the greenhouse structure and live electric wiring.**
- **It is forbidden to pull (steel) wire and to install protective canvas with the METOSWR.**
- **It is forbidden for persons or pets to enter a path where a METOSWR is being operated.**
- **While using the METOSWR, all shields and protective caps must be fitted and closed.**
- **Avoid the use of other transmitters, at the same frequency as the remote control, in the immediate vicinity, which could cause the hose reel to be inadvertently started or stopped.**

- ***When starting the hose reel remotely, one must be absolutely sure that no one in the immediate vicinity of the METOSWR reel is surprised by the turning of the drum.***
- ***In the case of a rotating drum, prevent any part of the body from being drawn into the space between the drum and the frame.***
- ***Avoid damage and faulty repair of the power cable, have worn or damaged power cables replaced by an approved specialist.***
- ***If a cable extension reel is used, it must be fully unwound before use and have a sufficient cross-section in relation to the length and the power consumption. The minimum cross-section of the cores should be $\geq 2.5 \text{ mm}^2$.***
- ***The METOSWR should be operated with protective clothing and protective equipment, which should be made compulsory in accordance with the requirements of the additive used.***
- ***After using the METOSWR, the supply lines (liquid) and METOSWR pipes should be emptied of liquids. This is because of the possible occurrence of legionella bacteria in stagnant water.***
- ***The operator of the METOSWR must be certified for the use of toxic substances for crop protection if they are sprayed with the METOSWR.***
- ***The METOSWR may only be operated by specially trained personnel who are familiar with the nature of the activities.***
- ***Use only legally permitted spray additives.***
- ***Additional options, accessories and spares must be ordered and supplied exclusively by the manufacturer, Berg Hortimotive.***

Warning! 

- ***Operating the METOSWR may only take place when there are no other persons in the vicinity (apart from the operator) of the machine.***
- ***The METOSWR may only be operated by persons of 18 years or older who have received thorough instruction about the METOSWR, who are fully familiar with this instruction handbook and are completely aware of the dangers associated with operating the machine.***
- ***The METOSWR may only be used if it is properly connected to the (high pressure) pump.***
- ***All personnel working in the area of the METOSWR should be made familiar with relevant safety rules and precautions that apply to the pipe rail system.***
 - *Instructions from the employer.*
- ***Repairs to the METOSWR may only be carried out by personnel who have received specific training from Berg Hortimotive.***
- ***Never carry out work on the METOSWR while it is being operated by someone else. Always switch it off using the main switch and remove the plug from the socket before carrying out maintenance.***
- ***Check the METOSWR daily for defects and carry out maintenance frequently - see chapter 9: maintenance.***

- **Keep the operating controls and safety pictograms clean.**
 - *operating controls and safety pictograms should always be clearly visible.*
- **After use, the METOSWR should always be switched off with the main switch and the plug should be removed from the socket.**
- **Never leave the METOSWR unattended.**
- **It is forbidden to carry out modifications or make alterations to the METOSWR without prior written permission from Berg Hortimotive.**
- **Before entering a path, remove obstacles and plant remains to minimise the risk of slipping and tripping.**
- **Never clean the METOSWR with a water hose, high-pressure water gun or steam cleaner.**
- **When moving the METOSWR, the hose must be fully wound up on the reel drum.**
- **Never use the METOSWR on the public highway.**
- **It is mandatory to wear shoes with protective toe caps (S1).**

Please note!



- **Always keep the workplace tidy.**
 - *An untidy working area can lead to dangerous situations.*
- **Be focused.**
 - *Always maintain the appropriate level of concentration when operating the hose reel. Do not operate the METOSWR when unable to concentrate properly, or when using medication that can impair your reaction times when operating machinery or participating in traffic.*

4.3 Safety pictograms

On the *METOSWR* a number of safety pictograms have been applied. These pictograms warn the operator about possible dangers or dangerous situations. Always observe the warnings and contact your suppliers whenever the actual danger illustrated by the pictogram is not clear.

Always make sure that the pictograms are visible and undamaged!

The *METOSWR* operator must have read and fully understood this handbook. When the operator does not understand the warnings given in either this handbook or on the machine (e.g. they speak another language), all the instructions, potential dangers, warnings and functions must be fully explained to them by a responsible person so that they can fully understand them.



Beware! Attention required

Use only inside (in the greenhouse)

Mass of the machine in kg

Maximum tyre pressure (option)

Dangerous voltage, system voltage 230VAC, **never use without rim earth!** *

Read the handbook before use!

Main (power) switch: vertical = ON, horizontal = OFF

With maintenance, make it dead and consult the handbook

Beware; danger of entrapment!

Keep your hands away from the scissor parts!

* See chapter 10. Technical Specifications

4.4 Residual risks

Despite the best possible design and the use of risk-reducing devices and the warnings about the dangers given in the handbook and applied to the machine itself, it is still possible that dangerous situations can arise. Beware of the following:

- Pinch hazard for hands, fingers, arms and head between the rotating parts!
- Pinch hazard for hands, fingers, arms and head between the rotating parts of the hose guide!
- Toppling over and/or rolling off the concrete path!
- The hose reel can topple over on exceeding the maximum hose length!
- Increased risk of toppling over when winding up the hose 'over the top!' (for model with pneumatic tyres)
- Toppling over of the hose reel with insufficient tyre pressure! (optional)

5. Intended application

5.1 Area of application

The *METOSWR* has been designed for use in the greenhouse horticulture sector. The machine may only be operated by one person with a minimum age of 18 years who has received thorough instruction in the operation of the *METOSWR* and who is already familiar with the safety instructions and this handbook, both of which they have fully understood.

The function of the hose reel is to rewind the manually unwound hose with a pre-set speed during spraying.

The automatic speed control ensures that the winding up speed of the hose remains more or less constant.

Winding up the hose can be started and stopped by means of a remote control (transmitter).

The hose reel is fed by a separate pump unit with a fluid to be sprayed.

The *METOSWR* hose reel is available in two versions:

- Type *METOSWR* structure that is suitable for mounting on a pump-tank trolley
- Type *METOSWR* on pneumatic tyre wheels

Use of the *METOSWR* for any other purposes is strictly forbidden.

5.1.1 Physical operating conditions

Ambient temperature;	
Transport & Storage	: 5 to +40 degrees Celsius
Working	: 5 to +40 degrees Celsius
Rel. Humidity (RH)	: 0% to 90%, <u>not condensing</u>
Lighting	: Normal ambient lighting.

The machine is not designed to be used outdoors.

The machine is not suitable for operating in explosive atmospheres.

5.2 Description METOSWR

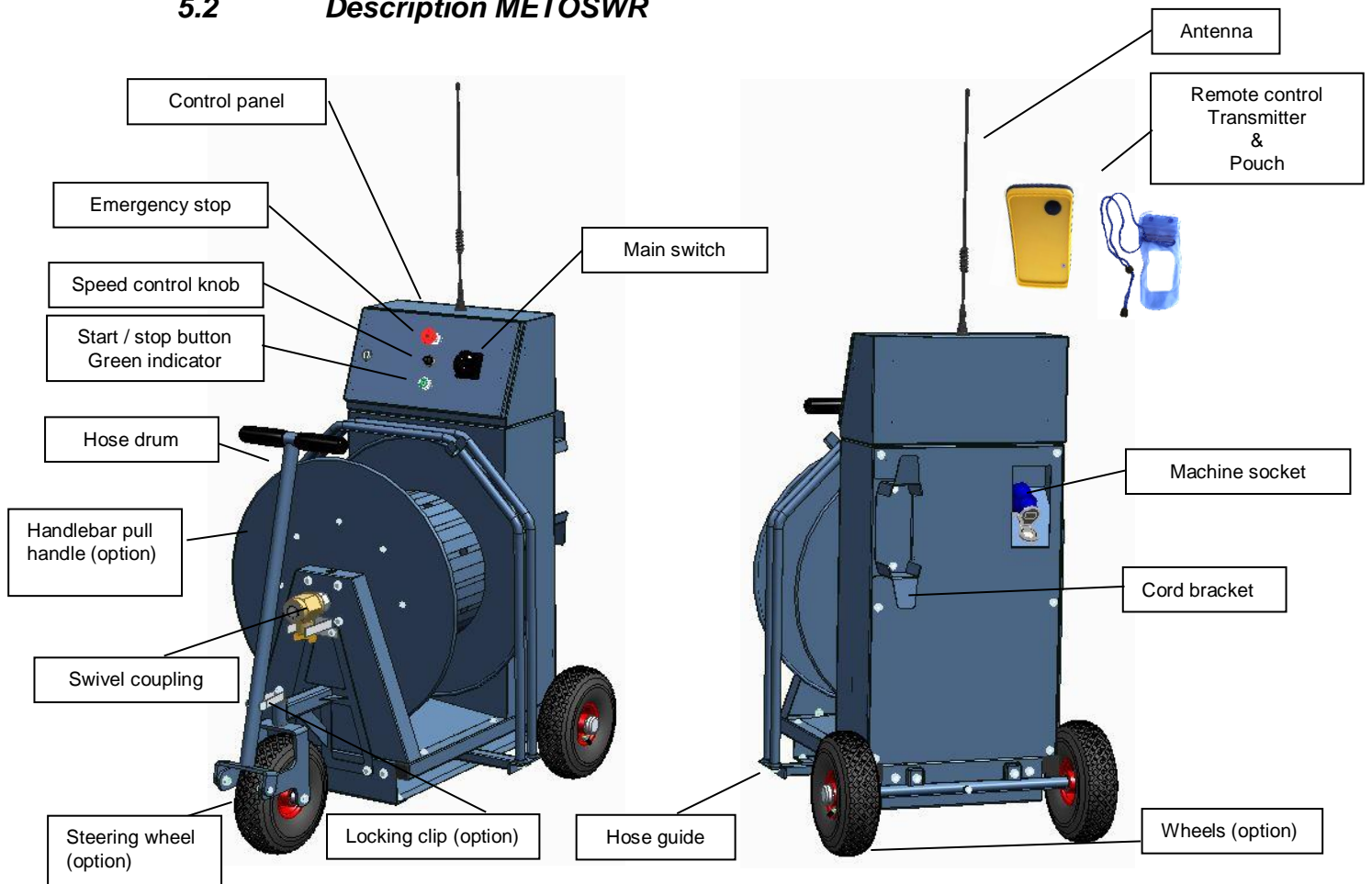


Figure 5.1; Names of the parts of the METOSWR

6. Transportation

6.1 *External transport (model on wheels)*

If the *METOSWR* needs to be transported, please follow the procedure below:

1. Wind up the hose completely.
2. Switch off the *METOSWR* by means of the main switch.
3. Remove the plug from the socket and wind up the cord.
4. Also disconnect the supply hose or wind it up.
5. Lock the handlebar pull handle with the locking clip.
6. Properly secure the *METOSWR* to prevent it from sliding, rolling or toppling over.
7. Ensure that the *METOSWR* remains dry and frost-free during transportation.
8. After having arrived at its destination, the *METOSWR* must be started up in accordance with the points described at chapter 7.1.

6.2 *Internal transport (model on wheels)*

The *METOSWR* can also be transported indoors (in the greenhouse). Always pull the *METOSWR* by hand and proceed as follows:

1. Wind up the hose completely.
2. Switch off the *METOSWR* by means of the main switch.
3. Remove the plug from the socket and wind up the cord.
4. Also disconnect the supply hose or wind it up.
5. Unlock the handlebar pull handle with the locking clip.
6. Pull the *METOSWR* while holding the handlebar pull handle.
7. On arrival at the destination, the handlebar pull handle must be locked in the vertical position with the locking clip, the *METOSWR* is then braked.

Attention!

- **Always remove the plug from the socket before moving!**
- **Wind the cord!**
- **Take care with ramps and trenches**
- **Drive slowly and carefully!**
- **Put the *METOSWR* on the brake, use the locking clip!**



7. Commissioning

The *METOSWR* is specially developed for winding and unwinding hoses with a remote control. The *METOSWR* may be mounted on a spray trolley with tank and pump, or be provided with three pneumatic tyres. The *METOSWR* was checked for proper functioning and safety before leaving the Berg Hortimotive factory. The items described in section 7.1 must be inspected prior to taking the *METOSWR* into service.

7.1 Inspection before starting operations

The following points should be checked before starting up the *METOSWR*

- There are no loose electrical connections (all the functions and buttons work properly).
- Remote control operation.
- Damaged cables and/or hoses (leakage).
- Tyre pressure (optional).
- Locking clip operation (optional).
- Hose guide operation.
- General mechanical damage.
- No damage to or impaired visibility of the control components, pictograms and symbols.

8. Use

Make sure that you are familiar with the *METOSWR* and the controls. Make sure that the person operating the *METOSWR* has received instructions regarding the hose reel and has read and understood this handbook.

- The *METOSWR* may only be operated if one is sure that no one is in the immediate vicinity of the hose reel.
- Before use, remove crop remains and other waste or obstacles from the work area.
- Keep the *METOSWR* clean; before cleaning, switch off the hose reel using the main switch and remove the plug from the socket.
- After using the *METOSWR*, switch off the hose reel using the main switch, remove the plug from the socket and wind up the cord.
- Maintain the *METOSWR* regularly and place it in a dry, frost-free place if it is not used for a longer period.

8.1 Controls

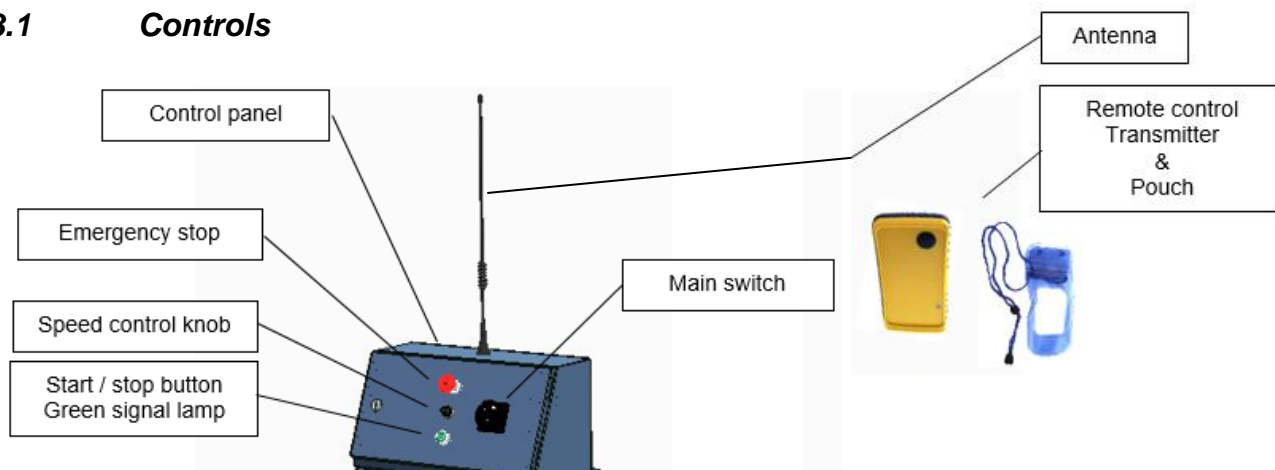


Figure 8.1; Operation of the *METOSWR*

MAIN SWITCH

The *METOSWR* can be switched on and off with the main switch. Here, the vertical position is ON and horizontal OFF. When the *METOSWR* is turned on, the green indicator will light up.

EMERGENCY STOP

Only use in case of emergency! The main switch must be used for switching off.

- Press = stop
- Turn-pull out = release

With an active emergency stop, the green indicator will blink!

Starting up after engaging the emergency stop



Never release an emergency stop (reset) if you do not know who engaged the emergency stop and why.

Release the emergency stop only when the dangerous situation has been resolved!

SPEED BUTTON

0 = minimum speed 10 = maximum speed

See for specifications chapter 10.

START/STOP BUTTON

You can use the start/stop button to start and stop winding up the hose.

REMOTE CONTROL

You can use the remote control to start and stop winding up the hose.

8.1.1 *Preparing for use*

Before the *METOSWR* can be used, the following steps must be completed, repeat these operations every time when the hose reel has been OFF and has been moved with the plug disconnected from the socket.

- The *METOSWR* has an automatic roll-up cut-off that is 'defined' as soon as the hose reel is switched on with the main switch.
 - Before switching on the reel, unwind the hose from the drum a little, this becomes the automatic switch-off length!
 - Make sure that the emergency stop is unlocked.
 - Set the main switch to ON.
 - The automatic roll-up cut-off is now defined.

While winding up, the reel will reduce the winding speed approximately four metres before the automatic cut-off point.

Upon reaching the automatic roll-up cut-off point, the drum will stop winding up.

- Test the correct operation of the *METOSWR*
 - Unwind the hose approximately five metres.
 - Press the start/stop button, the reel starts winding up to the automatic cut-off point.
 - Unwind the hose again for five metres.
 - Now test the remote control for proper operation, briefly press the transmitter button, the reel starts winding up to the automatic cut-off point.
 - Set the desired winding speed with the speed control button.

The *METOSWR* is now ready for use!

Drive the hose reel in front of the path to be sprayed, and make sure it is stable and fixed. Pull the hose and walk to the desired location, the reel drum will be unwound.

Start winding by briefly pressing the button on the remote control.

When the button on the remote control is pressed for longer than 2 seconds, the hose on the drum will wind up with a fixed (reduced) speed, until the button is released. The above also applies to the start/stop button on the control panel.

Attention! The hose reel will override the automatic cut-off point with this function.

To start and stop winding, repeatedly press the remote control button once until the automatic cut-off point is reached.

After using the *METOSWR*, switch off the hose reel using the main switch, remove the plug from the socket and wind up the cord.

8.2 Out of use

If the *METOSWR* is out of use, make sure it is switched off at the main switch, remove the plug from the socket and wind up the cord.

Provide a level surface and protect the *METOSWR* from direct sunlight. If after a longer period the *METOSWR* is put back into operation, it must first be inspected as described in section 7.1 (Inspection before starting operations).

8.3 Cleaning

Regularly remove any remains of plants, leaves, etc, and brush off any sand and dust. Clean the Pipe rail trolley with a dry/damp cloth and soft brush. It is also possible to clean the *METOSWR* using compressed air, provided that it is dry. Never pour water over the *METOSWR* or clean it using a steam or high-pressure water cleaner which can lead to serious damage being caused to the electrical circuits in the equipment.

Every week remove all sand and dirt from the chassis for the scissor sliding blocks.

See also *Appendix 4: Cleaning the powder coating*

8.4 Problems, causes & solutions

Problem A : The METOSWR does not wind up.

Cause : **Main switch is turned off**

Solution : Turn on the main switch (vertical)

Emergency stop locked

Release emergency stop (turn / pull out)

No supply voltage

Check the connection cable and power socket

Try another wall socket

Speed potentiometer at 0

Set a speed

Motor controller fault (green light blinking)

Turn the main switch off and on again

Hose blocked or too heavy (long)

Winding speed is too low, set the speed control button faster

Other causes

Consult your dealer

Problem B : Speed can be poorly adjusted.

Cause B : **Speed control button is defective.**

Solution : Consult your dealer

Winding up is too heavy

Winding speed is too low, set the speed control button faster

Consult your dealer

Motor controller is defective

Consult your dealer

Problem C : The automatic cut-off does not work.

Cause C : **The automatic cut-off point is not defined properly**

Solution : See 8.1.1 Preparing for use

Problem D : Feed through coupler leaks.

Cause D : **Worn by prolonged use**

Solution : Renew the feed through coupler

Worn by other causes

Forgotten to flush the system

Use of aggressive chemicals

Renew the feed through coupler

Consult your dealer

Problem E : The METOSWR has toppled over, type with pneumatic tyre wheels.

- Cause E** : - **Carelessness when moving**
- **Slippery concrete path**
- **Unstable surface**
- **Too heavy (long) hose used**
- **Winding up 'over the top' in combination with too long a hose**
- **Handlebar pull handle locking clip not used**
- Solution** : 1. Switch off the METOSWR with the main switch
2. Remove the plug from the socket
3. Clean the concrete path, restore grip
4. Use the METOSWR only on a stable surface
5. Use a shorter hose
6. Wind up from the bottom
7. Always use the handlebar pull handle locking clip
8. Locate the cause and solve (remove)
9. Check according to chapter 7

8.5 Dismantling

When your METOSWR is defective to such an extent that it must be dismantled, you must take it to your supplier or another company that specialises in dismantling vehicles. Never take your METOSWR to a scrap metal merchant or dump. The METOSWR must be dismantled and chemical parts disposed of (liquids and oil).



Dispose of oil as chemical waste.



9. Repairs & maintenance

The *METOSWR* is a very high quality product. In order to guarantee that the high quality remains, it is vital that the maintenance schedule given below is strictly adhered to. Repairs and maintenance activities should be recorded in the maintenance logbook - see Appendix 1. The employer is also responsible for periodically checking tools and equipment according to the current Working Equipment Guidelines that cover this. Before performing maintenance, switch off the *METOSWR* at the main switch and remove the plug from the socket:

Maintenance - Checks	Tools	Daily	Weekly	Monthly	Yearly
Damage to control components	Visually	X			
Damage to/visibility of pictograms and stickers	Visually	X			
Clean the hose reel after each use	Brush / Damp cloth	X			
Flush the hose reel after each use	Clean water	X			
Check for leakage and damaged cables and hoses before each use	Visually	X			
Check for ingrained dirt or string wrapped around wheels	Visually		X		
General mechanical damage	Visually		X		
Check tyre pressure (option)	Visually / inflate			X	
Grease hose guide chain and bearings (see 9.4)	Chain lubricant, ball-bearing grease				X
Grease the hinged parts of the handlebar pull handle and locking clip (see 9.5)	Spray grease				X
Check the condition, profile and drying out of the tyres	Visually				X
Check construction welds for (hairline) cracks and rust	Visually				X

If the above checks indicate that there is a fault with the *METOSWR*, immediate contact should be made with the *METOSWR* dealer. Continuing to use the machine after identifying defects could lead to dangerous situations and is therefore forbidden!

9.1 Specialist maintenance

Maintenance and repairs to the items listed below may only be carried out by qualified specialists appointed by Berg Hortimotive:

- Work on electrical components/wiring (excl. exchanging separate power cable and connectors)
- All work on the drive motor with reduction gearbox.
- All work on the hose guide system except for: Cleaning, lubricating and tensioning the chain.

9.2 Maintenance and inspection for the end user

All the activities from the above table that have not been excluded in section 9.1 'Specialist maintenance' should be carried out periodically. Some operations are described in more detail below.

9.3 Grease hose guide chain and bearings

The hose guide chain and the bearing blocks of the drum should be lubricated at least once a year, for the chain use e.g. spray grease and for the bearing blocks ball-bearing grease.



Figure 9.4; Greasing the chain guide and drum bearings

Remove the rear plate by loosening the six bolts, then spray the hose guide chain as indicated, while turning the drum manually until the chain has been completely lubricated. Use a grease gun to spray some grease into the bearing blocks and remove excess grease with a cloth.

Mount the rear plate and fasten it again with the six bolts before the reel is put into operation.

9.4 Handlebar pull handle and locking clip

The hinged parts of the handlebar pull handle and the locking clip must be lubricated at least once a year with e.g. spray grease. Spray this grease as illustrated below and remove excess grease with a cloth.

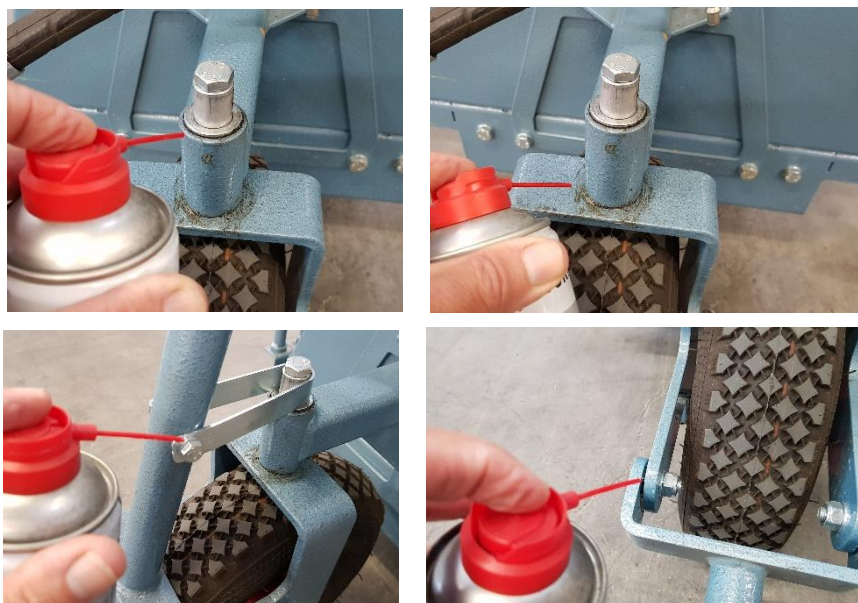


Figure 9.5; Greasing hinged parts

10. Technical Specifications

Type: Dimensions [mm]:	7251.35.7xxx mounted reel	7252.35.7xxx pneumatic tyres
Height * [mm] unmounted	1746	1842
Length [mm]	823	1205
Width [mm]	790	790
Rail width [mm]	n/a	613
Wheelbase [mm]	n/a	890
Tyre pressure [bar]	n/a	2.6
Weight [kg]	120	135
System voltage (nominal) relative to neutral [V AC]**	230	230
System voltage max. spread relative to neutral [V AC] (-15% + 10%)	200 - 240	200 - 240
Rim earth [⊕]	mandatory	mandatory
Max. earth leakage current [mA]**	5.1	5.1
Frequency [Hz]	50 - 60	50 - 60
IP Class	54	54
Motor power [kW]	0.37	0.37
Max. system pressure [bar] 1/2-3/4"	200	200
Max. system pressure [bar] 1" (Geka coupling)	10	10
Min. winding speed [m/min]	10	10
Max. winding speed [m/min]	50	50
Max. hose length 1/2" [m] H&S*	110	110
Max. hose length 3/4" [m] H&S*	65	65
Max. hose length 1" [m] H&S*	35	35
Max. hose length 3/8" [m]	170	150
Max. hose length 1/2" [m]	150	130
Max. hose length 5/8" [m]	100	100
Max. hose length 3/4" [m]	75	75
Max. hose length 1" [m]	50	50
Cord bracket for max. 15 m cord	n/a	Incl.
Neoprene connection cable H07RN-F [m]**	4	Excl.
Vibration level [m/sec ²]	<0.5	<0.5
Noise level [dB]	<70	<70

10.1 Explanation of the technical specifications

* According to the health and safety guidelines applicable in the Netherlands, in the case of repetitive operations, a person may be exposed to a maximum torque of 200 N. The corresponding length of hose where the hose was unwound on a concrete surface has been determined experimentally.

** Earth leakage circuit breaker at the end user:

The frequency converter in the *METOSWR* has a **maximum earth leakage current of 5.1 mA**.

The *METOSWR* hose reel is connected to a “general use” wall socket that is installed behind a 30 mA earth leakage breaker in accordance with NEN1010, which is applicable in the Netherlands.

Multiple devices can be connected behind an earth leakage circuit breaker with low leakage current, which together with the *MetoSWR* can cause a higher leakage current than 30 mA. The chance of any circuit breaker tripping is greatest when switching on a device. After re-engaging a tripped circuit breaker, one can usually continue working. Consult your installer if the problem persists, research can demonstrate which connected device has the largest share of the joint leakage current.

*** Connection voltage and cord specifications:

Both hose reel models have a supply voltage of 230 V AC with rim earth.

Using the hose reel with a power socket without zero and rim earth is strictly prohibited!

To ensure proper and safe operation, it is vital that the separate connection cable meets the following specifications:

Hose reel on pneumatic tyres:

- Neoprene cable H07RNF 3 x 2.5 mm² with KEMA certification or equivalent
- Maximum length 15 metres
- The use of (multiple) extension leads is not recommended

Mounted reel:

- You dealer has skilfully mounted and connected this model to a pump/tank-spray trolley combination with a 3-phase + N supply voltage
- For proper operation, this assembly must be connected to a 5-pin socket with a neutral (N) connection!
- In the cord, the neutral (N) must always be connected!
- Neoprene cable H07RNF 5 x 2.5 mm² with KEMA certification or equivalent
- Maximum length 15 metres
- The use of (multiple) extension leads is not recommended

11. EC Declaration of Conformity

(according to Annex IIA of the Machinery Directive)

Berg Hortimotive
Burg. Crezeelaan 42a
2678 KZ De Lier - Holland
T: +31 (0)174 – 517700
www.berghortimotive.nl

While taking full responsibility, hereby declares that the product:

- **Hose reel type METOSWR mounted reel 7251.35.7xxx**
- **Hose reel type METOSWR on pneumatic tyre wheels 7252.35.7xxx**

Article number:

Serial number:

- Meets the requirements of the Machinery Directive 2006/42/EC

Satisfies the following other EC directives:

- Electromagnetic Compatibility Directive (EMC) 2014/30/EU (as recently amended)
- Low Voltage Directive 2014/35/EU (as recently amended)

The Netherlands, De Lier, date-.....-.....

Signature of managing board or authorised signatory.

Appendix 1: Maintenance logbook

Repairs and/or maintenance activities can be described on the form underneath.

Date	Description of repair/maintenance Type no.:.....Serial no.:.....	Name of company / engineer

Appendix 2: Technical drawings

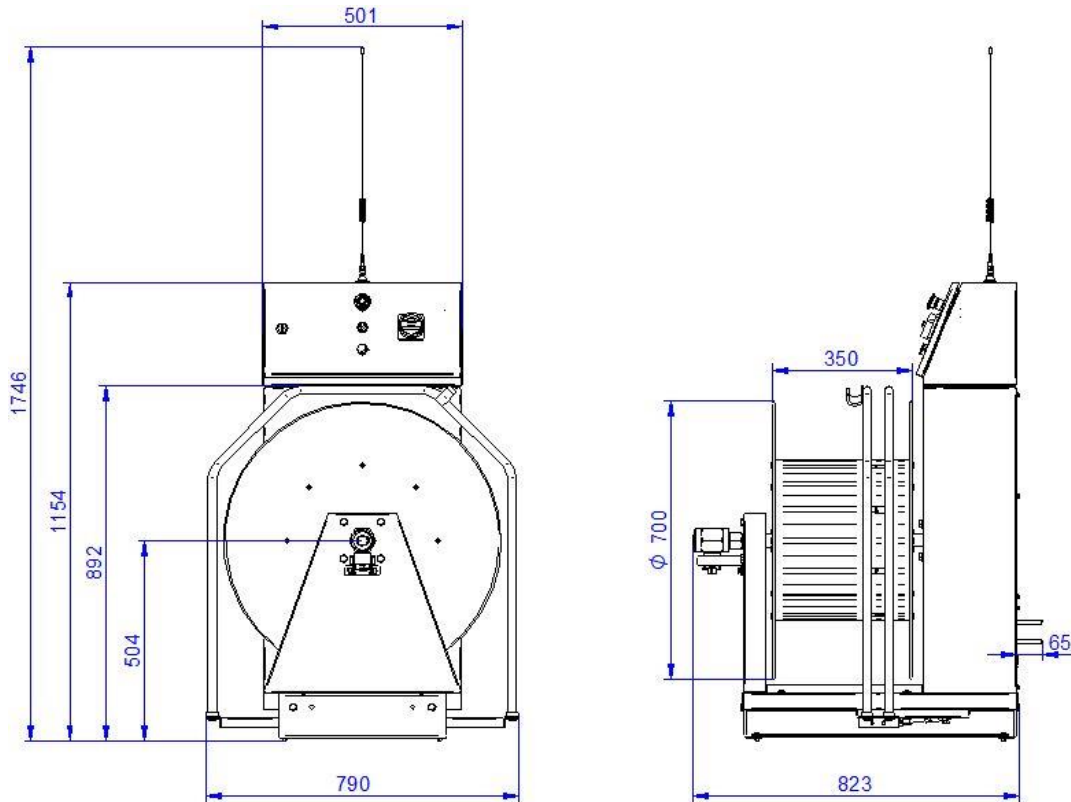


Fig. 2.1; Dimensions build up reel in mm

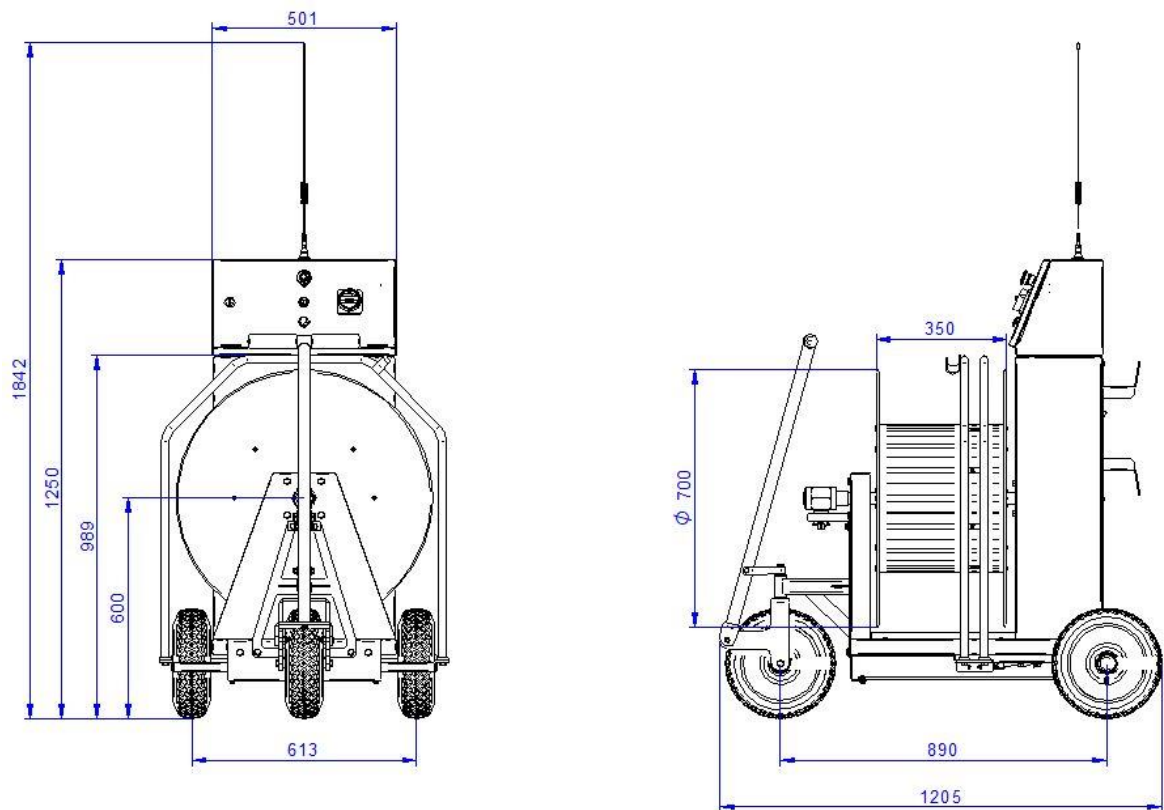


Fig. 2.2; Dimensions pneumatic tires reel in mm

Appendix 3: Cleaning the powder coating

The importance of cleaning and maintenance:

- It retains the appearance and image of the product over a longer period.
- It extends the life-span.
- It prevents corrosion.
- It helps prevent the spread of plant diseases.
- It stimulates employees to operate the machines with care.

Removing contamination periodically prevents any chemical substances that may be present from affecting the powder coating. The protective layers are vulnerable to acids, salts and corrosive substances which cause premature aging. Moreover, thick layers of dirt and contamination absorb more moisture which increases the effects of corrosion on the protective layers.

The cleaning frequency depends on the following factors:

- The level of contamination depends on what is being grown.
- Type of product, or usage between the crops or, e.g. usage only on concrete tracks.
- Exposure to chemical fluids (spraying equipment).
- Exposure to chemical vapours or mists (treating the air space in the greenhouses).
- Exposure to sunlight and UV rays.
- Humidity in the air and condensation.

The above results in a load factor that depends on the type of usage, and where applicable, the following cleaning schedule should be followed.

When to clean:

- | | |
|--|------------------------------|
| • Plant and product residues. | daily |
| • Earth and sand | 2x weekly |
| • Glass, string, plastic, elastic, clips, wire hooks, etc. | 2x weekly |
| • Exposure to chemicals | immediately after use |
| • Dullness or contamination on the top layer | periodically after detection |

How to clean:

- Remove dirt or contamination on the top layer using a soft brush or cloth, or a compressed air line (<6 bar).
- Chemical contamination should be removed using a coarse sponge or soft cloth drenched in tap water.
- Clean a dull or contaminated top layer using a neutral cleaning agent with a pH value between 5 and 8 (check the label on the packaging) and a sponge or soft cloth.
- **Tip**, when a cleaning agent is used for the first time it is recommended to initially test the agent on a small section of the top layer before continuing.

What you must not do:



- Never clean the powder coating using an abrasive or burnishing cleaning agent.
- Never use cleaning equipment with an abrasive surface (steel wool, pot scourer, etc).
- Pressing down, polishing or scrubbing, etc, is not permitted.
- Never use organic cleaning solutions for cleaning or maintaining the powder coating.
- Pouring over water, using a water hose or high pressure cleaner can cause damage.

After cleaning:

- Ensure that the cleaned surfaces are properly dry and temporarily remove overlapping protective covers and screens.
- All pivots and hinges, etc, that have been in contact with cleaning agents should be lubricated according to the recommendations given in the maintenance schedule in the user manual.
- Treat any damaged areas on the powder coating layer with lacquer or paint.

Please note:

The above are only **recommendations** and therefore responsibility for the proper cleaning remains with the person carrying it out. Please contact the manufacturer if you have any queries regarding the appropriate cleaning products to be used.