

# Operator's manual



**Salt and sand spreader  
Park Ranger 2150**

# Introduction

## Dear Customer

### **Congratulations with your Egholm product**

The Park Ranger 2150 is a Danish designed and manufactured product, which offers a very flexible way of maintaining areas.

### **Optimal use of your Park Ranger 2150 salt and sand spreader**

To ensure optimal performance of your Park Ranger 2150 salt and sand spreader, please read this manual carefully before using the machine. Failure to do so can result in personal injury and damage to the machine.

### **Safety**

The salt and sand spreader is equipped with various devices to ensure optimal operational safety, both for the user and the surroundings. We therefore ask you to pay particular attention to Safety section 1.1. The machine must only be serviced by professionals.

The salt and sand spreader is intended only for professional use, and on delivery, the user will receive thorough instructions in the use of the machine and will thus become a competent operator. Do not lend the machine to anyone who has not been thoroughly trained and has not read this manual carefully.

The operator's manual should be considered as a permanent part of the machine and so must remain with it if the machine is sold.

### **Warnings**

Some items in this operator's manual are marked with this warning symbol.

The warning indicates areas where extra care has to be taken to avoid personal injury or damage to the machine and its accessories. The warning also shows what you should pay special attention to.



### **Reservations**

As it is Egholm policy to make continuous improvements, we reserve the right to alter the specifications and equipment at any time without notice. Egholm accepts no liability for errors or shortcomings in the operator's manual.

### **Contact us**

Should you have questions of any kind regarding your new Egholm product, do not hesitate to contact Egholm .

Best regards

Egholm A/S · Transportvej 27 · DK-7620 Lemvig

T. +45 97 81 12 05 · F. +45 97 81 12 10

e-mail: info@egholm.dk · www.egholm.eu



### **Egholm app - easy access to useful material**

Download our Egholm app, enter the serial number of your machine and possibly add attachments, and get access to videos, manuals, technical specifications and much more.

If you agree to receive notifications, you will be notified about product and service information, offers etc. The app is available for Apple and Android mobile phones.

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## General information

The salt and sand spreader was designed especially for the Egholm. It will ensure winter maintenance by use of salt, sand, gravel and grit.

The salt and sand spreader can ideally be combined with the dozer blade and the snow sweeper. In that way the driver is enabled to remove snow and spread salt at one go and thereby provide a safe route for the motorists and pedestrians.

A special designed roller stand enables one person to safely fit or remove the spreader.

The salt and sand spreader features a stainless steel container and a built-in air scoop, supplying the cooler with fresh air and thereby also protecting the engine of the basic unit from the fine salt particles.

The construction features only robust components. The new deflector plate with high wear resistance handles salt, sand and gravel.

# General information

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# General information

## 1.1 Safety

### Fitting

Before fitting the salt and sand spreader, check that the console cover is closed and locked. (Picture 1)

Make sure the salt and sand spreader is fitted correctly and that the locking handle is left in locked position. (See section 2.2)



#### **Warning!** **Rotating parts!**

Keep fingers and feet well away from the rotating spreader plate. (Picture 2)



#### **Keep a safe distance to the salt and sand spreader**

Make sure there is no one close to the machine when it is in use.



#### **Avoid crushing fingers**

Keep your hands and fingers away from areas where there is a danger of crushing. (Picture 3)



#### **Avoid roll-overs**

Do not drive the machine in a place where it can slide, tip or roll. Do not drive on slopes with an incline of more than 10°.



#### **N.B.**

As it is articulated, the rear of the machine swings out when turning. Make sure no one is near the machine while it is in use.



#### **Avoid blows from the lever when fitting the spreader**

Avoid blows from the lever when lowering the spreader. Keep a firm grip on the lever until the spreader rests safely on the machine. (Picture 4)



Bonnet lock



Deflector plate



Lowering the salt and sand spreader



Lever

# General information

## 1.1 Safety - continued

### Safety grating

Never use the salt and sand spreader unless the container is covered by a meshed grid safety grating. (Picture 1)

### Filling in salt and gravel

Never fill the container with material to a higher level than the container edges. The top point of the material must not be higher than the edges of the container.

### Rear protective guard

The rear protective guard must always remain in its holders except during cleaning.

(See section 3.1)

Before removing the guard, always stop the machine and detach the hydraulic hoses to the salt and sand spreader. Be very careful - there are hot hydraulic parts, a rotating feed screw as well as a rotating deflector plate behind the guard.

Make sure you are fully familiar with the warning labels on the guard. (Pictures 2-4)

### The deflector plate

Keep away from the deflector plate when the machine is in use.



Safety grating



## 1.2 EC Declaration of Conformity for Machinery

Manufacturer: **Egholm A/S**  
Address: **Transportvej 27 · DK-7620 Lemvig**  
Telephone: **(+45) 97 81 12 05**


hereby declares that

The machine: **Salt and sand spreader 2150**  
Type: **2150SG**

· has been manufactured in conformity with the provisions of the Machinery Directive, Directive 2006/42/EU

Any alteration, rebuilding or addition of implements, accessories or other equipment not manufactured by Egholm automatically results in the cancellation of type approval, CE approval, any other approval, as well as any warranty on machine and attachments.

Unless otherwise agreed in writing between the operator, customer and Egholm, Egholm is the data originator (data originator) of all data generated by the machine and attachments during use.

Place: Lemvig  
Date: \_\_\_\_\_  
Signature:   
Rainer Flanz, Senior Engineer

# General information

## 1.3 Technical data

<b>Dimensions</b>	<b>Assembled</b>	<b>Storage dimensions</b>
Length (L)	2,510 mm	1,175 mm
Width (B)	1,015 mm	800 mm
Height with cab	1,935 mm	
Height		1,350 mm
Own weight		89 kg
Weight Roller stand		31 kg
Tank volume		210 L
Spread width		1 - 5 m
Loading height		1,250 mm

### **Technical data**

Type	2150SG
------	--------

### **N.B**

Specifications may be changed without prior notice.



# Operator's manual

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# Operator's manual

## 2.1 Assembly of the roller stand

On delivery, you will find the roller stand collapsed. Before use the roller stand is to be assembled as follows:

- A) Unpack and unfold the roller stand.
- B) Assemble the roller stand with the two bolts included and it is ready for use. (Picture 1)

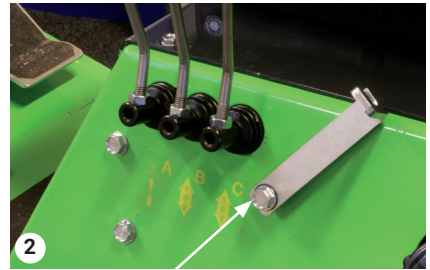


Two bolts on roller stand

## 2.2 Assembly/disassembly

### Fitting the valve lever bracket

Before starting use of the salt and sand spreader, the bracket for the valve lever must be fitted in order for the valve lever to stay in activated position. Unscrew the bolt to the right of the valve block and fit the bracket in the shown position with the enclosed nut and bolt. (Picture 2)



Valve lever bracket

### Fitting the salt and sand spreader

- A) Make sure that the console cover is closed before fitting the salt and sand spreader. (See page 5, Picture 1)
- B) Back up the basic unit to the salt and sand spreader which is stored on the roller stand. When the console is placed directly beneath the salt and sand spreader, stop the engine.
- C) Press down the lever, the barb releases the locking pawl and allows the salt and sand spreader to be lowered onto the basic unit. (Picture 3+4)



Lower the salt and sand spreader



Locking handle

## 2.2 Assembly/disassembly - continued



### Avoid crushing fingers

Avoid crushing fingers and feet when the salt and sand spreader is being lowered.

D) Release and pull away the roller stand.

E) Push the salt and sand spreader forward into place.

F) The locking handle on the basic unit is activated and the salt and sand spreader is now in position.

G) Make sure that the locking handle is left in locked position - the salt and sand spreader is locked in place. (Picture 1). Pull the salt and sand spreader to test a correct fit - it must not move.

H) Connect the hydraulic hoses:  
If fitted, disconnect the snap couplings of the rear lifter.  
Connect the snap couplings of the salt and sand spreader to the connectors C1 and C2. (Picture 2)

### Disassembly

Reverse the above procedure.



### Caution!

Make sure that all hydraulic hoses (and the electrical plug) are disconnected and that they are not caught in something when driving away from the salt and sand spreader.



The salt and sand spreader is in place



C-connector

# Operator's manual

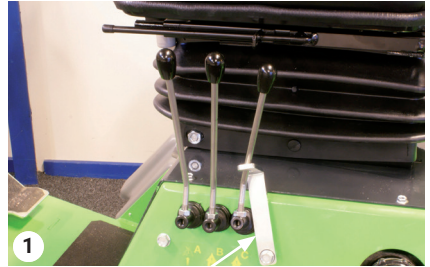
## 2.3 Start-up

Start the basic unit. Then place lever C in the bracket. (Picture 1)



**NB!**

Before start-up, make sure the rear guard is positioned correctly.



Bracket

## 2.4 Adjustment

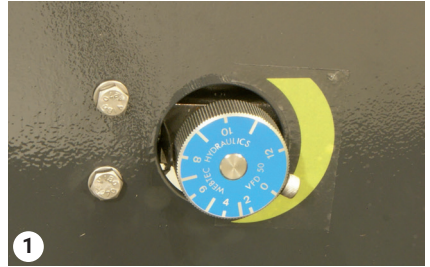
### Amount spread

To adjust the amount spread, turn the front knob on the left-hand side of the spreader. (Picture 1)

Turn the knob clockwise to reduce the amount spread per  $m^2$ .

Turn the knob counter-clockwise to increase the amount spread per  $m^2$ .

For additional details about spread settings, see the enclosed spreading chart.



Amount spread

### Spread width

Spread width is the width of material spread by the spreader. The material will be spread in a semicircular pattern with equal amounts spread on either side of the basic unit.

To adjust the spread width, turn the rear knob.

The spread width is adjustable from 1 to 5 m. (Picture 2)

Turn the knob clockwise to decrease and counterclockwise to increase the spread width.

For additional details about spread settings, see the enclosed spreading chart.



Spread width

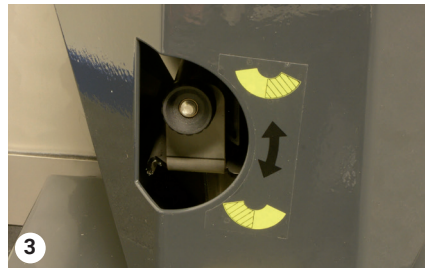
### Spread pattern

The spread pattern refers to the way the material is spread on the ground, when the basic unit is not moving. Let the basic unit stand still for a few seconds and the spread pattern will be visible on the ground. To achieve an even spread pattern, turn the adjusting knob on the back of the salt and sand spreader. (Picture 3) This will alter the spread pattern.

Turn the knob clockwise to increase the amount spread to the left.

Turn the knob counter-clockwise to increase the amount spread to the right.

For additional details about spread settings, see the enclosed spreading chart.



Spread pattern

# Operator's manual

## 2.5 Assembly/disassembly of the stirrer system

The stirrer system is necessary when spreading wet sand and is recommended for spreading sand and salt. We do not recommend the stirrer system when spreading grit or gravel as this material can be too heavy for the stirrer system.

### Disassembling the stirrer system

A) Stop the engine and deactivate the valve lever for the salt and sand spreader.

B) Remove the safety grating by loosening the four nuts on top. (Picture 1)

C) Remove the bracket holding the safety grating in place and lift off the grid.

D) Find the two 10 mm bolts which connect the stirrer system to the rest of the spreader. (Picture 2)

The stirrer system can now be removed. Be aware of the now unfastened sleeves!

### Assembling the stirrer system

Reverse above procedure.

Do not forget the two sleeves!



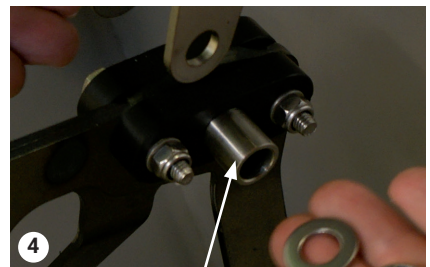
Four nuts hold the safety grating in place



Bolts for the stirrer system



Bolts, nuts, sleeves, etc.



Sleeves, etc.

## 2.6 Important



Make sure never to put items larger than 1 cm<sup>3</sup> in the salt and sand spreader. These items can become wedged between the feed screw and the container and may even cause damage.

The salt and sand spreader has been designed to stop before any components are damaged. Should the spreader stop, simply push the lever which activates the spreader briefly in the opposite direction. This will shortly reverse the direction of the feed screw and loosen any wedged objects. The manoeuvre may have to be repeated.

### Roller stand

When dismantling the spreader and moving the spreader on the roller stand, always make sure the roller stand is on a level and firm surface.

## 2.7 Field of application

The salt and sand spreader is only to be used with the Egholm Powerflex, Egholm 2100 or Park Ranger 2150.

Do not use the salt and sand spreader as a lime or fertilizer spreader.

Do not store corrosive materials in the salt and sand spreader.

The maximum load on the salt and sand spreader stored on the roller stand is 100 kg. For storage periods of less than a week, the maximum load is 300 kg.



# Service and maintenance

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# Service and Maintenance

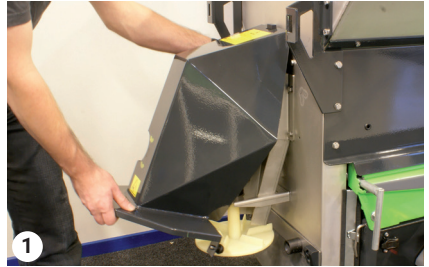
## 3.1 Cleaning

Daily cleaning will extend the life of the salt and sand spreader significantly and ensure correctly functioning parts.

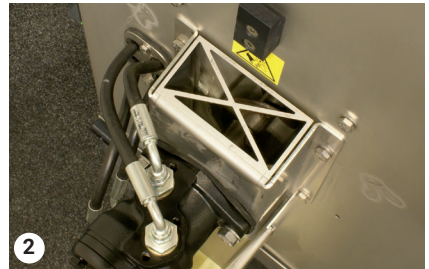
### Daily cleaning

- A) Remove and clean the snap couplings.
- B) Remove the rear guard to clean under it. (Picture 1)
- C) Dismount the salt and sand spreader from the basic unit. (See section 2.2)
- D) Clean the salt and sand spreader thoroughly with water to ensure that all salt residue etc. has been removed from the container, chute, and deflector plate and from under the attachment. (Picture 2)

Remember to also clean the basic unit thoroughly.



Remove the rear guard



Clean

# Service and Maintenance

## 3.1 Cleaning - continued

### Periodic/In-depth cleaning

At the end of the season or when storing the spreader for a longer period of time, corrosion prevention is essential.

A) Complete all procedures listed under "Daily cleaning".

B) Disassemble the front screen by removing the four bolts located at the bottom. Then simply pull off the screen. Clean the underlying parts thoroughly with water and dry them with a cloth. Finally, smear the parts with a rust-preventing fluid.

C) Grease the bearings.  
Only grease the large bearing if the stirrer system is not assembled. Also grease both of the joints if the stirrer system is assembled.

D) Smear all parts of the spreader with rust-preventing fluid - in time, even stainless steel can corrode.

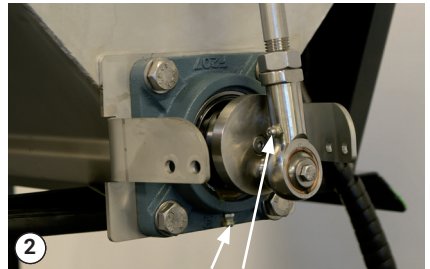
E) Wearing parts such as the feed screw are not made of stainless steel. Therefore, please pay extra attention to them when cleaning and applying rust preventive.

F) Make sure to remove all salt residue etc. from the roller stand.

G) As part of this procedure, make sure to check all nuts and bolts and tighten them if required.



Bolts



Lubrication nipple

# Conditions

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# Conditions

## 4.1 Warranty

The warranty period for the materials and manufacture of this salt and sand spreader is 12 months from the date of purchase.

In case of errors or defects on the machine within the warranty period, Egholm will carry out the necessary repairs at no charge to the customer, including materials and working hours, in accordance with the terms and conditions listed below.

### **The scope of warranty**

1. The Egholm warranty is only valid on presentation of the original receipt supplied with model description, serial number and date of purchase.
2. Regular checks, adjustments, services and technical alterations are not covered by the warranty.
3. All inquiries concerning the warranty are to be addressed to the place where the machine was purchased.
4. This warranty does not cover faults and defects which cannot be traced back to defects in material or production errors.
5. This warranty is valid for persons who have legally acquired the machine within the warranty period.
6. In the event of failure to perform and substantiate service in accordance with the applicable instructions, Egholm reserves the right to reject any claim made within the warranty period.
7. Egholm reserves the right to make improvements and design-related alterations to the machine without being obliged to modify previously delivered models in relation hereto.

### **The warranty does not cover**

- Wear and tear, accidents, damage to the attachment caused by operating errors, changes to the construction of the machine or use of non-Egholm spare parts or attachments.
- Machines with illegible serial numbers.
- Damage caused by force majeure such as lightning, flood, fire, war, civil disturbance, etc, or other causes over which Egholm has no control.

## 4.2 Complaints

All inquiries regarding the machine should be made at the distributor from whom the machine was purchased. This applies to inquiries concerning normal use, service, maintenance and spare parts as well as any complaints.

We wish you many years of safe and satisfied use of your machine.

Best regards  
Egholm A/S

## 4.3 Disposal

When, in many years from now, your salt and sand spreader has reached the end of its working life, it should be disposed of in a responsible manner that conforms with relevant disposal regulations.

1. Used hydraulic oil is to be disposed of at an approved waste disposal facility or site.
2. Remove the plastic and rubber parts and dispose of them in accordance with the applicable environmental legislation.
3. After the aforementioned parts have been removed, the machine is ready to be handed over to a local approved scrap merchants.

# Spreading Chart

## Spreading Chart 2150

### How much salt to spread

<b>Weather situation</b>	<b>Salt amount g/m<sup>2</sup> distance</b>
Preventive salting against frost/ice	Approx. 10
Preventive salting against snow: Road temp. 0-3°C	5-10
Road temp. generally below 0° C	Approx. 10
Road temp. -6-0° C and heavy snowfall	15-20
Glaze caused by: Subcooled rain	10-20
Slipperiness has already set in: Frost / glaze	5-15
Heavy snow / glaze	10-25

Salting is not recommended when the road temperature is above 3° C and below -10 ° C.

Estimate the necessary salt amount taking the following into account:

Is there already salt on the road? Is the weather about to change?

## Spreading Chart 2150

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Glaze caused by:  Subcooled rain	10-20
Slipperiness has already set in:  Frost / glaze  Heavy snow / glaze	5-15  10-25

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# Quantity Indication

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The speed of the feed screw and gas pedal on max.

1.	Throttle control max.	+	Spread width max.	=	Salt 11 g Sand 9 g Gravel 19 g	The numbers are approximate and can vary according to weather conditions, driving settings, different types of salting material as well as basic unit.
2.	Throttle control 50%	+	Spread width max.	=	Salt 19 g Sand 18 g Gravel 34 g	
3.	Throttle control max.	+	Spread width 50%	=	Salt 15 g Sand 15 g Gravel 34 g	
4.	Throttle control 50%	+	Spread width 50%	=	Salt 33 g Sand 29 g Gravel 54 g	



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# Notes



# Honest Work.

**Egholm A/S**  
Transportvej 27  
7620 Lemvig, Denmark  
T.: +45 97 81 12 05  
[www.egholm.eu](http://www.egholm.eu) - [info@egholm.dk](mailto:info@egholm.dk)