



# **XLs** **GERBERSpreader™**

**Getting Started Manual**

**Manual de Inicio**

入门手册

 **GERBER TECHNOLOGY**  
Expect More.

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# Introduction

The XLS-series GERBERspreaders™ is ergonomically designed in its physical dimensions and in its software interface. It features a redesigned and simplified software interface which is easy to learn and easy to train new employees to operate. Many languages are supported, including Simplified Chinese, Spanish, and English. All of these are implemented throughout the product's documentation and software

This manual has been prepared to supply the operator with clear and easy-to-follow instructions for operation thereby ensuring safe operation and long life of the equipment. It is important that the operator reads and fully understands the information and guidelines set out in this manual before attempting to start up the equipment.

Pay special attention to the safety precautions and warnings listed in this manual. Disregard thereof may result in loss of life, severe personal injury to the operator, or damage to the equipment.

The following support documentation is included to help with understanding and using the XLS GERBERspreaders™ and CutWorks™ SPR software.

<b>Documentation</b>	<b>Format of Documentation</b>	<b>Location of Documentation</b>
XLs Getting Started Manual	Printed manual Adobe Acrobat PDF file	Included with spreader Cutworks™ SPR CD
CutWorks™ SPR Online Help	Context sensitive, non-searchable help system	XLs Touch Screen
XLs Installation Manual	Adobe Acrobat PDF	CutWorks™ SPR CD

## Customer Support

If you have questions or problems, please call the local GERBER office where you have purchased your GERBERSpreader™. Have the following information ready:

- Sales order number
- Purchase date
- GERBERSpreader™ model (XLs50 or XLs125)
- Optional equipment used (For example: face to face, end catcher, smoothing roller)
- Software used (include version number)
- Description of problem(s)
- Exact wording of any error messages seen on your touch screen

Local Support Number: \_\_\_\_\_

# Safety Instructions

Before running the GERBERSpreader™, please read the safety instructions, warnings, and all warning signs on the equipment. Make sure that you can read all warning signs on the machine.

## Safety labels

The labels described below are located at various parts of the GERBERSpreader™.

Symbol	Description
	Electrical shock potential
	Pinch point

Never use the equipment outside the operating parameters for which it is specified. This applies to all components.

The successful and safe operation of the spreader is dependent on its proper handling, installation, operation and maintenance.

## Warnings and Cautions

This Gerber manual contains Warnings and Cautions that precede steps or procedures. Always follow these precautions to avoid injury or equipment damage.

**Warnings** are put before a procedure that could result in personal injury, death or equipment damage.

**Cautions** are put before a procedure that could result in equipment damage.

## Dangerous Procedures

Always follow warnings and cautions. Follow all other safety instructions that are necessary for safe operation of the equipment in your installation.

## Do No Maintenance When Alone

Do no maintenance on the equipment when you are alone. Make sure there is another person who can give emergency first aid if necessary.

## Energized Circuits

High voltages are inside the electronics covers. There are no parts inside these covers that can be serviced by the operator.

## De-energize Spreader before Maintenance

An on/off switch is mounted on the left side of the Spreader. Turn off this switch to remove power to all systems.

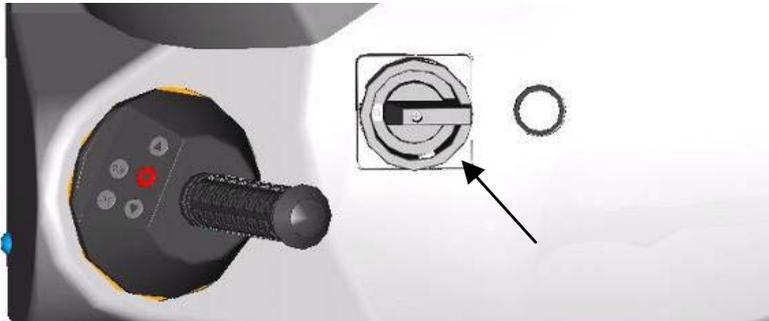


Figure 1. On/off Switch

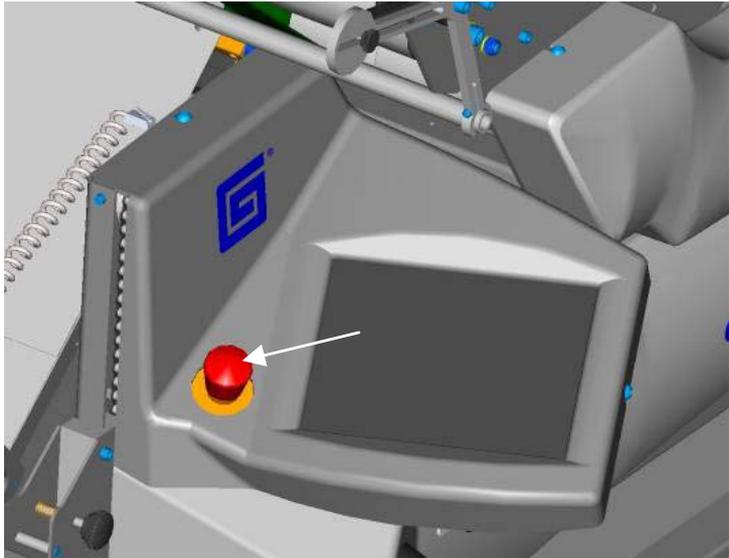
## De-energize Spreader for Periods of Inactivity

Use the on/off switch located on the cover of the spreader (see picture above) to energize and de-energize power to the spreader, computer, touch screen, and low voltage supplies.

## Emergency stop

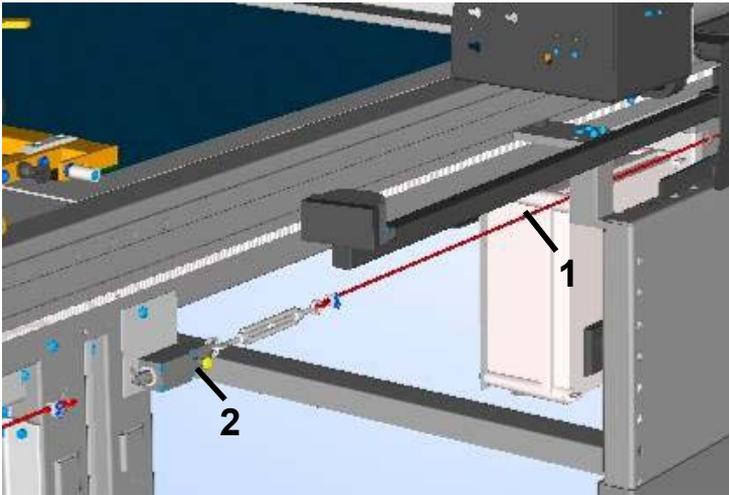
The machine is equipped with two types of emergency stop:

- A red emergency stop button right above the touch screen.



**Figure 2. Red Emergency Stop Button**

- Emergency stop wires on both sides of the spreader table.



**Figure 3. Emergency Stop Wires**

Key to Figure  
1-Emergency stop wire, 2-reset button

When activating the red emergency stop button, all machine functions will stop. The power supply to the spreader will not be disconnected.

When activating the emergency stop wires, the power supply will be disconnected, and the machine will stop. If the emergency stop wires break, the power supply will also be disconnected.

**CAUTION:** Do not use the emergency stops for stopping the spreader in connection to daily operations.

**CAUTION:** An emergency stop does not provide the necessary safety in connection to repairs or maintenance work. Always turn main switch to OFF-position before beginning repair and maintenance work.

**Reset of emergency stop:**

- Turn the emergency stop button counter-clockwise (to the left) until it clicks.
- Press the release button (positioned next to the speed throttle and main switch). The release button will then be lit.

**Reset of emergency stop wire:**

- Pull the reset button on the wire switch.
- Press the release button.

## Control Unit

The control unit monitors the machine and if any unusual situation is detected, the machine will stop immediately. When the machine stops under this condition, an error message will occur on the operator panel.

## Moving Machinery

Keep hands away from moving parts to avoid personal injury. Make sure no one else is near the table when operating the GERBERSpreader™.

## Replacing Parts

Tell your Field Service representative if you have broken or missing parts. Do not use parts or modifications that are not approved by Gerber. Equipment damage or personal injury could result.

## Cradle

Be cautious when the cradle is active, as it runs automatically, it will not stop its movements though you enter its operating area.

## Knife Blade

The knife blade is very sharp and runs with high speed across the table when cutting the material, therefore be careful when you work near the knife blade to prevent personal injury. Always remember to wear safety gloves when replacing the knife.

To avoid cuts do not touch the edge of the knife when replacing it, but hold on the flat sides.

## Clothing

Do not wear loose clothing, neck chains, neckties, jewelry, when you are near the spreader. Long hair must be worn back. Failure to obey these instructions could result in personal injury.

## Working Area

Operate the spreader from the platform from where you can reach the operator panel and the speed throttle. From the platform, you have an overview of the working area.

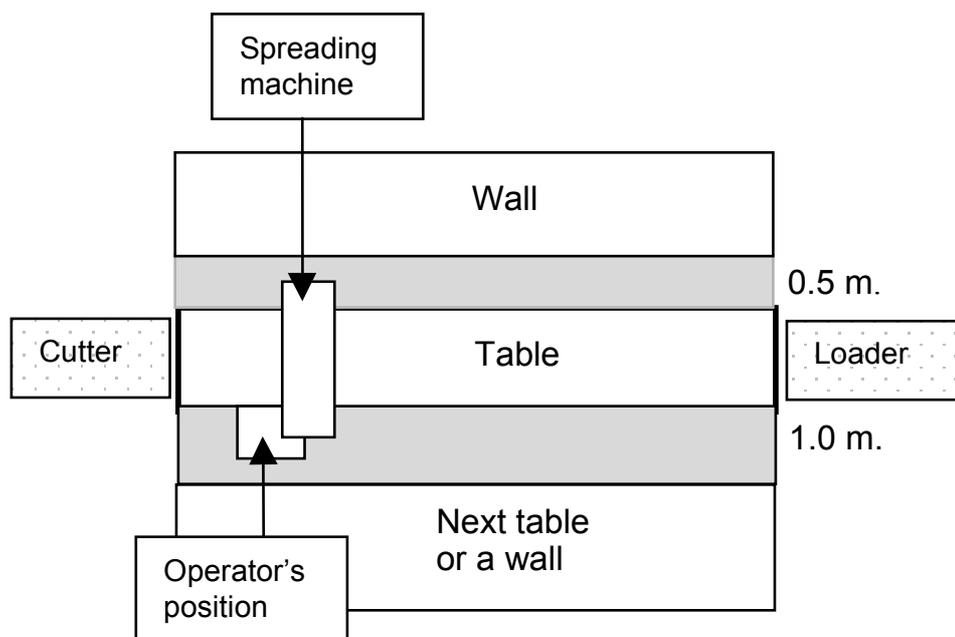


Figure 4. Overview of Working Area

**CAUTION:** From the operator platform, it can be difficult to see what is happening on the opposite side of the machine.

**CAUTION:** When you operate the spreader be aware of people entering the working area as they can be hurt if hit by the spreader.

## Remaining Risks

Notice that though all the safety precautions are followed we still advise you to be cautious when being around the machine. The following risks still exist:

- Pushes and punches in connection to unintentional contact with the machine.
- Stumble injuries when stepping up and down the platform – the risk of stumbling injuries increases simultaneously with the increase of spreading speed.
- Small cuts when replacing the knife.

## Definitions

Throughout this manual a lot of terms for the spreader will be used. You can find some of them on the drawing below. Further information on terms used can be found in the Glossary listed in the back of the manual.

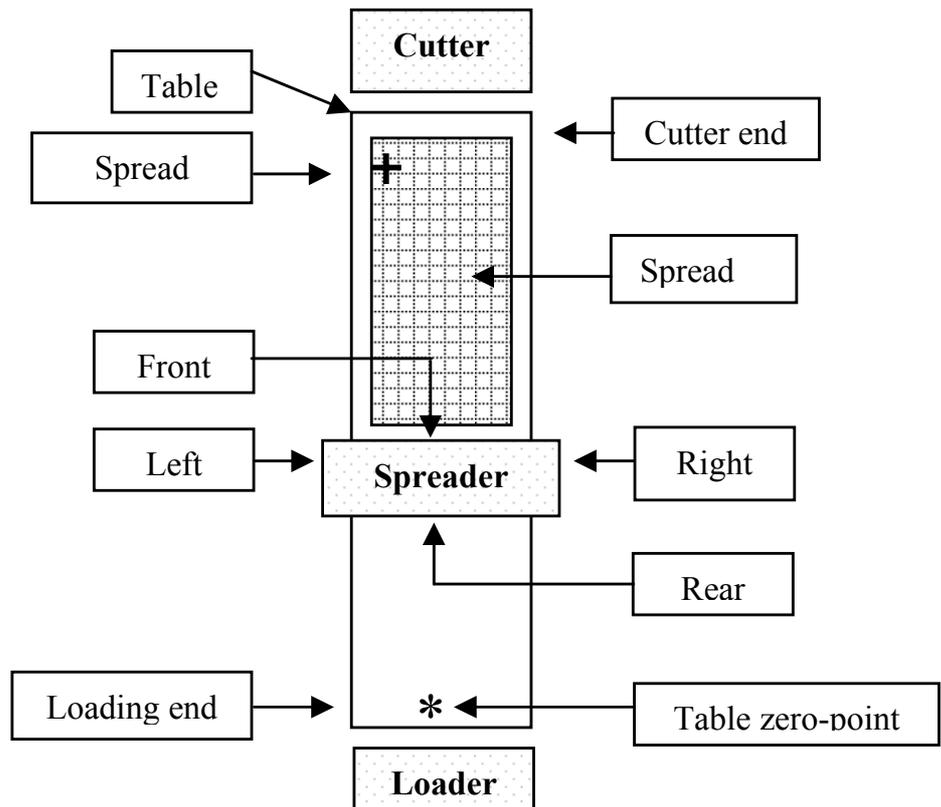
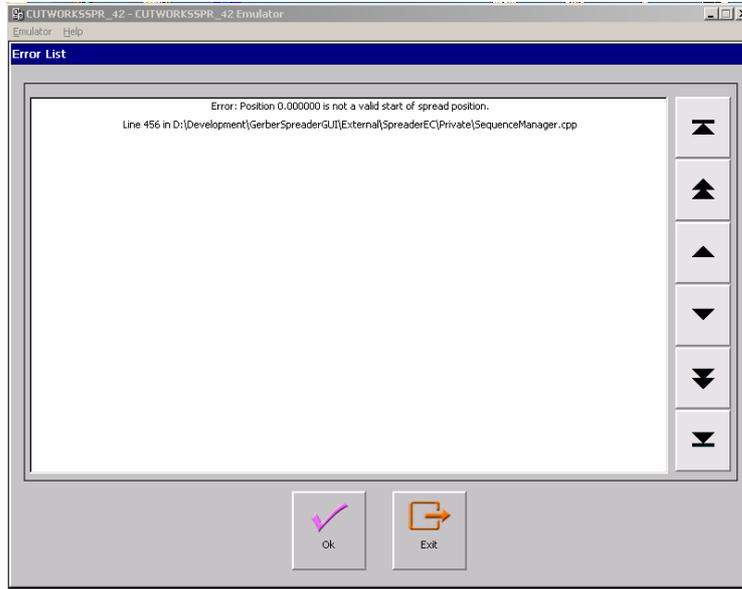


Figure 5. Definition of Terms

## Alarms

When an alarm occurs, the current menu will change to the alarm page shown below.



**Figure 6. Alarm Page**

1. Press **OK** if you want to continue.
2. Press **EXIT** to exit the application/restart.

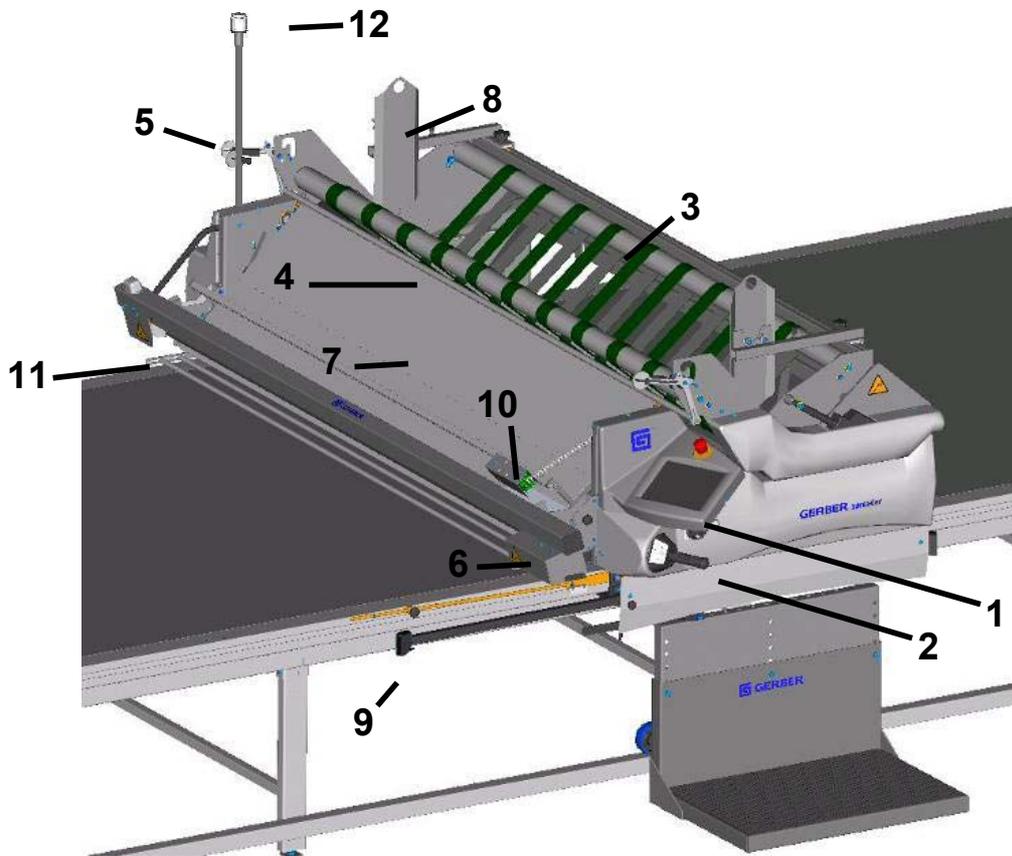
# System Description

The XLs spreaders use manual settings to control the spread.

## Hardware Overview

The spreader parts shown in Figure 7 and listed in the Key to Figure 7 are described in more detail in the next section “Hardware Description”. As the general principles are the same for all XLs spreaders, only the XLs50 have been illustrated below.

English



**Figure 7. XLs50 GERBERSpreader™**

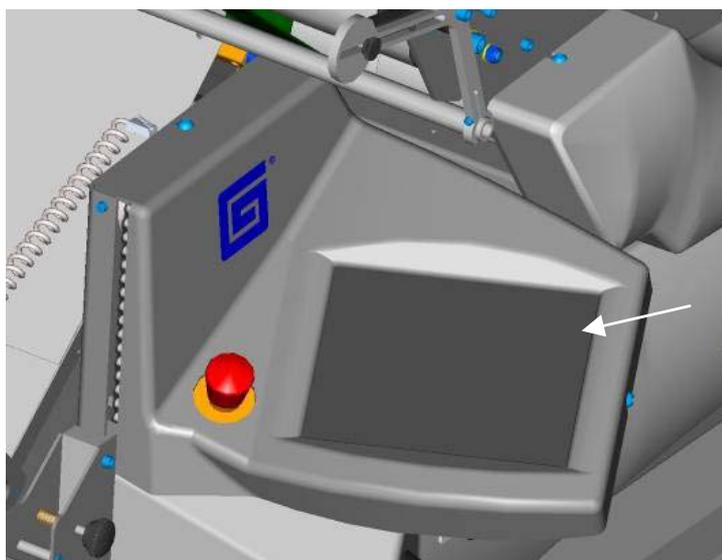
### Key to Figure

- 1-Operator panel, 2-Speed throttle, 3-Cradle, 4-Dancer bar,
- 5-Counterweights, 6-Elevator, 7-Guide plate, 8-Material roll guide, 9-Obstacle sensor, 10-Edge Sensor, 11-Cutting device, 12-Warning light

## Hardware Description

### 1- Operator Panel

The machine is operated partly from the operator panel, partly from the speed throttle. The operator panel is a touch screen. A slight touch is sufficient to activate any of the keys on the operator panel.



**Figure 8. Operator Panel**

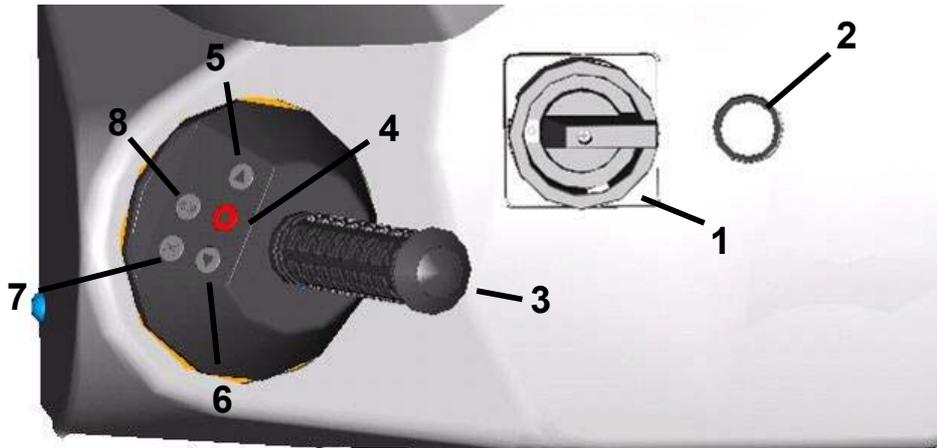
**CAUTION:** Do not press hard on the operator panel.

**CAUTION:** Do not use any sharp tools or objects to activate the keys on the operator panel.

To clean the touch screen, wipe the screen with a soft, lint-free cloth. This removes dust and other particles that can scratch the screen.

## 2 - Speed throttle

The speed throttle is used for operating the machine manually. When turning the throttle, the machine will start in the desired direction. The more the throttle is turned, the faster the speed.



**Figure 9. Speed Throttle**

Key to Figure

1-Main switch, 2-Release button, 3-Speed throttle, 4-Stop, 5-Rewind, 6-Wind down, 7-Manual cutting, 8-Start automatic spreading.

## 3 - Cradle

The material roll is loaded into the cradle.

## 4 - Dancer bar

The dancer bar controls the tension of the material. The spreader can be operated with or without the dancer bar.

## 5 - Counterweights

Counterweights are used for adjusting the dancer bar. See the section “Operating the GERBERSpreader™” about adjusting counterweights.

## **6 - Elevator**

Use the Elevator to position the front equipment as low as possible, but always above the top ply of the spread.

## **7 - Guide plate**

Guides the material to the spreading table.

## **8 - Material roll guide**

The material roll guide keeps the material roll in the correct position.

## **9 - Obstacle sensor**

The obstacle sensor in the operator side is standard equipment. It senses if anything is in the way of the spreader. The obstacle sensor is adjustable lengthwise.

## **10 - Edge sensor**

The edge sensor registers the edge of the material and aligns the material edge.

## **11 - Cutting Device**

The cutting device cuts the material at the end of each ply.

The grinding house on the cutting device must always be mounted when you operate the machine and you should always keep the grinding house clean and free of dust.

NEVER attempt to clean the grinding house during operation.

## **12 – Warning Light**

The warning light indicates that the main motor is active.

## Software Overview

You control the GERBERSpreader™ with the CutWorks™ SPR Graphical User Interface (GUI) and the operator touch screen. There are five different screens where you can enter data to control the spreader: Prepare Job, Execute Job, Reports, Preference, and Service. Help and Exit buttons are also located on the Menu Bar

## Parts of the Touch Screen

Each of the five operation screens has three parts:

- Status bar (1) – shows status information for the current screen.
- Main screen (2) – contains the software controls for monitoring and providing input to CutWorks™ SPR.
- Menu bar (3) – lets you navigate to any of the five operation screens.



Figure 10. Parts of the Touch Screen

Key to Figure

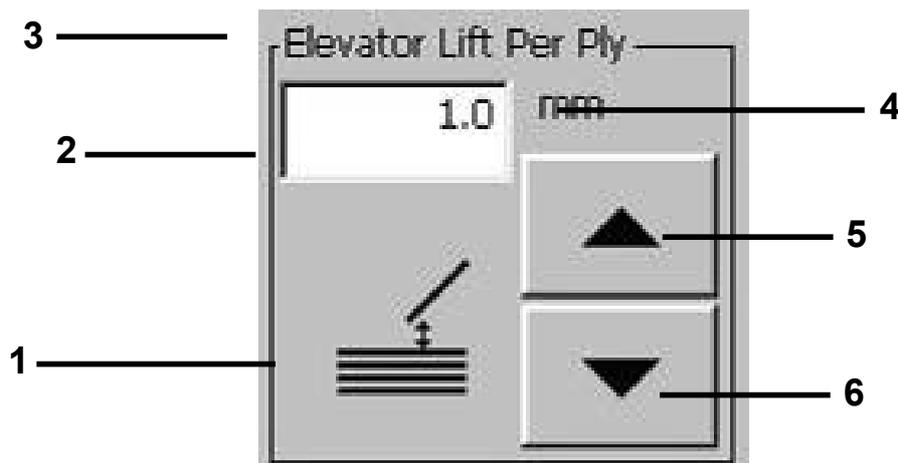
1-Status Bar, 2-Main Screen, 3-Menu Bar

## Touch Screen Interface Software Controls

### Numeric Data Input

The primary procedure for entry of numeric data is with the Numeric Input control. The Numeric Input Control displays a numeric value and lets you modify the value. Increment the value with the buttons, or by entering a new value.

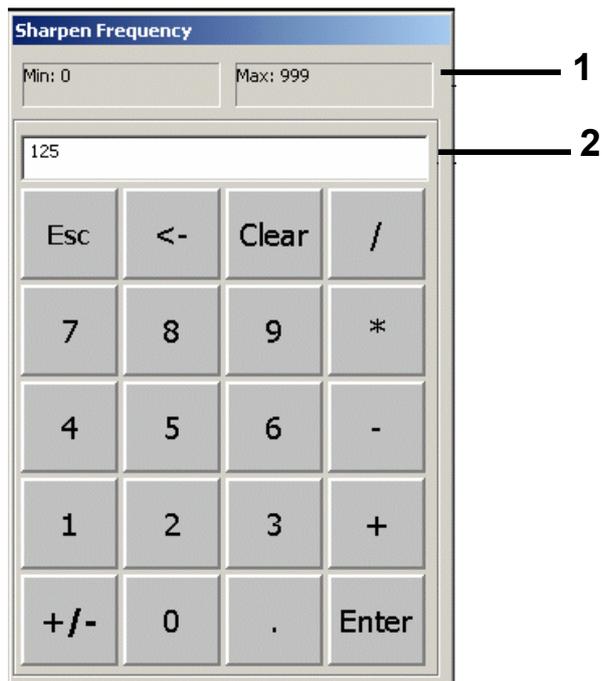
When you touch the edit field in the Numeric Input Control, a Virtual Numeric Keypad is shown on the screen that overlaps the current screen in the farthest corner from the Numeric Input Control. This lets you enter any number within the Min and Max displayed value limits. An error message is displayed on the Virtual Numeric Keypad if the value is outside the acceptable range.



**Figure 11. Numeric Input Control**

#### Key to Figure

1-Descriptive Icon, 2-Numeric Value (touch to show Virtual Numeric Keypad) 3-Descriptive text, 4-Units, 5-Up Increment Button, 6-Down Increment Button

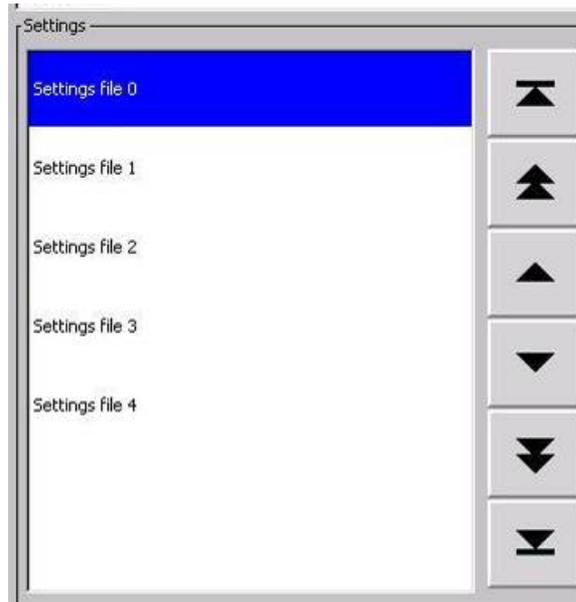


**Figure 12. Virtual Numeric Keyboard**

Key to Figure  
1-Range, 2-Value

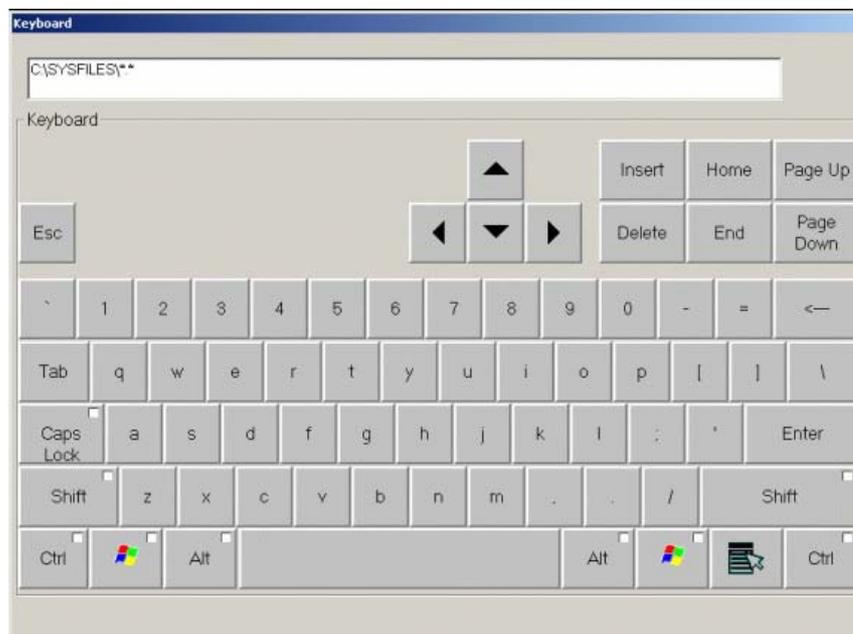
### List Box

There are two methods to enter text data. If CutWorks™ SPR has a list of text items that you want to select from. They are in a list box. Touch the necessary text to notify CutWorks™ SPR which item you want. The item highlighted is automatically the item chosen.



**Figure 13. List Box**

The Virtual Keyboard is another method to enter text data. When you need to enter text, a Virtual Keyboard is shown after you touch an edit box that allows alphanumeric data. For example, the virtual keyboard will be displayed after pushing the Service button on the menu bar.



**Figure 14. Virtual Keyboard**

## Security

Security levels are used to restrict access to some settings and controls. To enter an area of the software that contains security controls, you must enter a password. Security Levels distinguish between the types of users on the GERBERsreader™. Those types are:

- Operator (no password needed)
- Supervisor (password protected)
- Technician (password protected)

## Entering and Leaving Security Levels

When CutWorks™ SPR is in the Operator security level and you want to enter an operation mode that contains settings that require a higher security level, the software will prompt you to enter a password. The password entered determines which security level the software will go to after the OK button is pushed. If you change to an operation mode that has protected controls, you will be prompted again if you use the operator (none) password. You will enter the operation mode at the current security level.

Entering the Prepare Job or Execute Job mode brings the security level back to Operator.

## Security Levels

### Operator Level

When CutWorks™ SPR starts, you are automatically at the Operator Level. There you have access to all of the controls in the Prepare Job and Execute Job modes. If you try to enter the Preferences or Service mode, you will be prompted to enter a password. Push Enter without entering a password. You will be allowed into the Preferences or Service mode, but you will only have access to those controls allowed to an Operator.

### Supervisor Level

The Supervisor has access to all Operation Modes. However, in the Service mode he will only have access to some of the functions on the diagnostics and

calibration screens. He will not have access to all of the hardware settings.

### Technician Level

The technician has access to all of the Operation Modes. He can change all of the Hardware settings.

## Error Levels

CutWorks™ SPR has error levels that determine the possible responses by the user. They are listed with their allowed responses.

- Warning – OK, Exit
- Recoverable Error – OK, Exit
- Critical Error – Exit

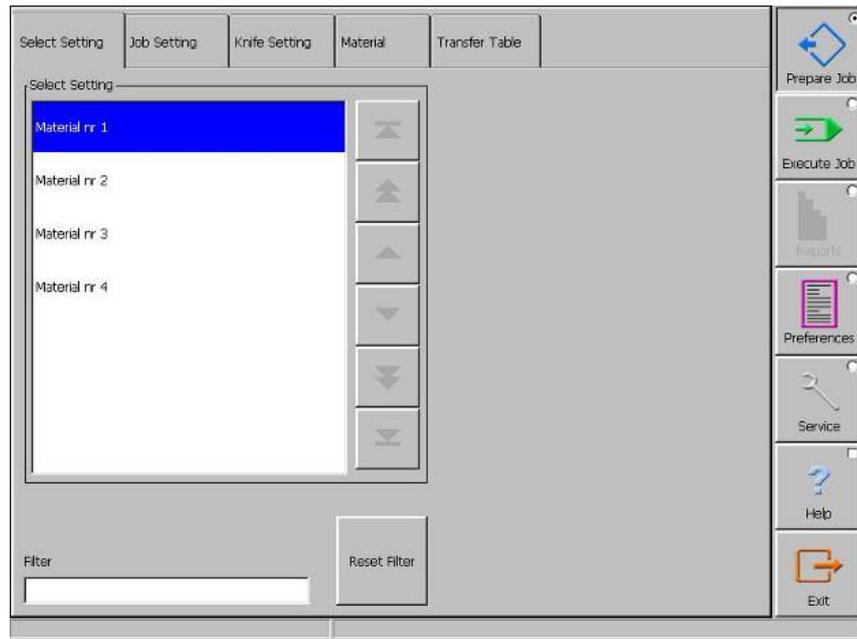
## CutWorks™ SPR Functional Areas

There are seven functional areas to navigate from: Prepare Job, Execute Job, Reports, Preferences, Service, Help, and Exit.

### Prepare Job



When you are setting up the spreading job, you are in this mode. From this mode you can select a Settings File with the preset settings for doing the desired type of job, and you can make some job specific job and knife settings.

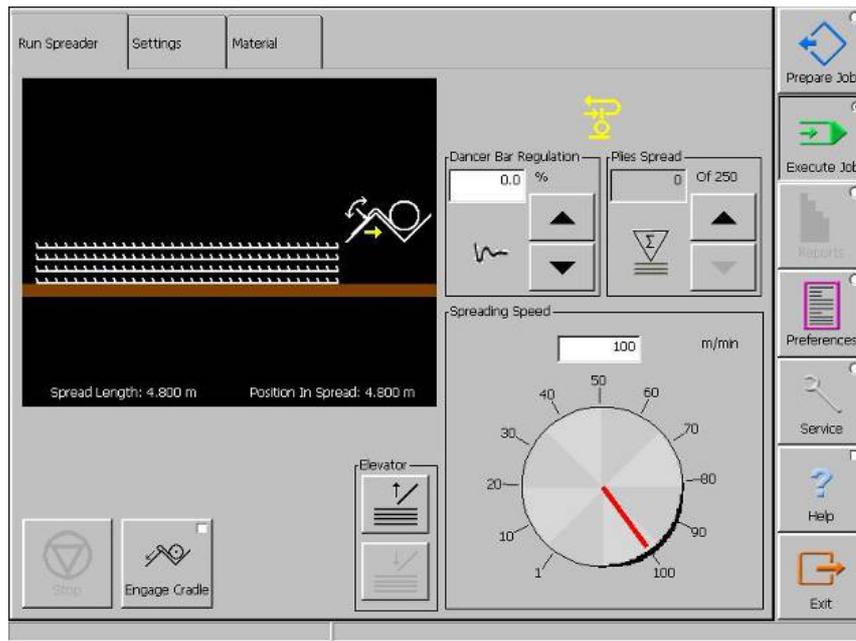


**Figure 15. Prepare Job, Select Settings Screen**

## **Execute Job**



Before starting the job, go to the Execute Job mode. Press the start button on the speed throttle to start spreading.



**Figure 16. Execute Job, Run Spreader Screen**

Controls on this screen include items such as:

- Elevator up and down button
- Speed control button
- A display showing the spreader with the chosen equipment (entered by the operator under Prepare Job).

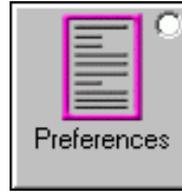
Under Execute Job you can also set material dependent settings and enter loading mode.

## Reports



Not available at present time on the spreader.

# Preferences



Lets you modify settings that are not changed often. These might span the life of several jobs/orders:

- Display Preferences
- Modify “global” configuration settings that can be used for more than one job
- Create/Edit material or job specific Setup Files

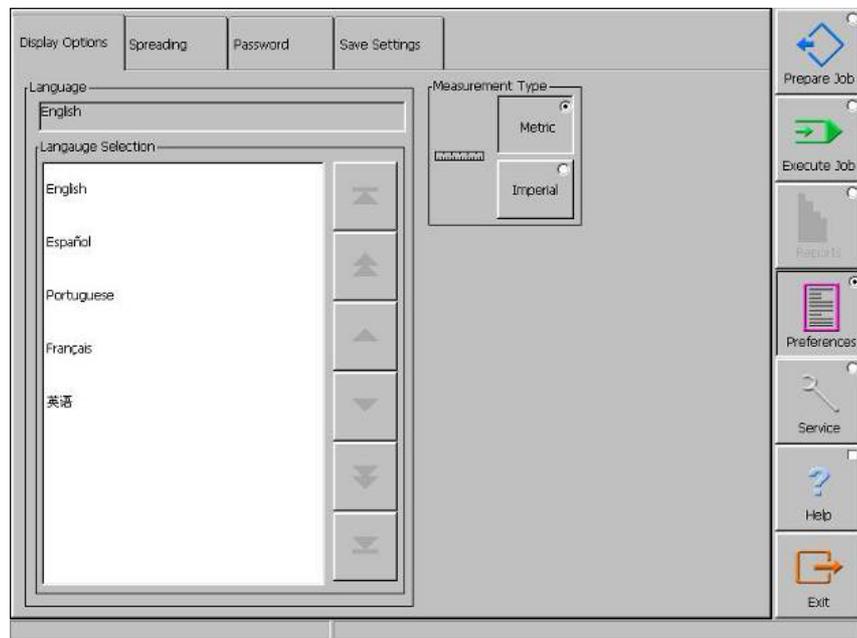


Figure 17. Preferences Screen

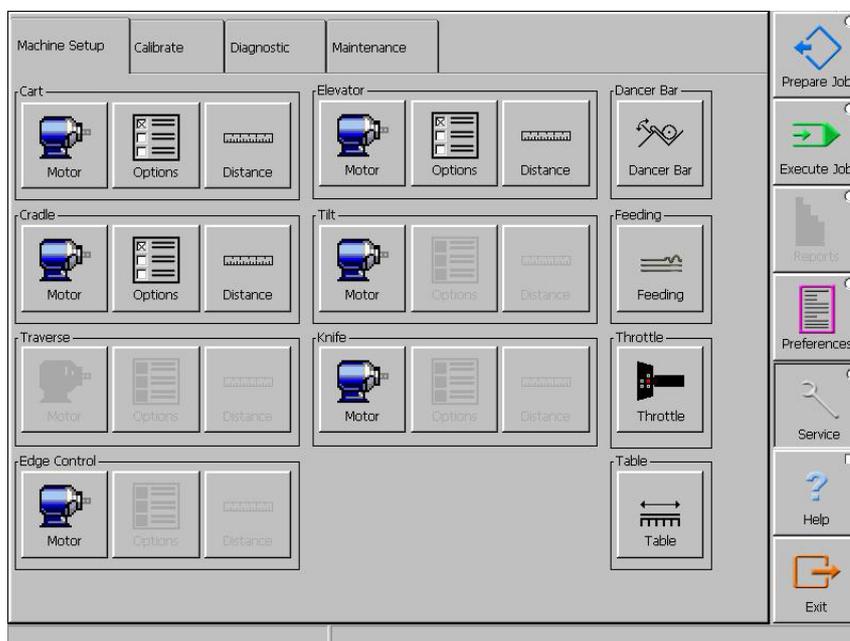
## Service



The service screen lets you access maintenance, diagnostic, and calibration utilities, and hardware settings that are hardware dependent.

Diagnostic utilities provide service personnel with software tools to troubleshoot software and hardware problems. These include hardware input/output, and logging problem reports.

CutWorks™ SPR has many settings that an experienced user (such as a service technician) needs access to. For example, the Hardware Settings screen contains a set of buttons for all the hardware components for spreader.

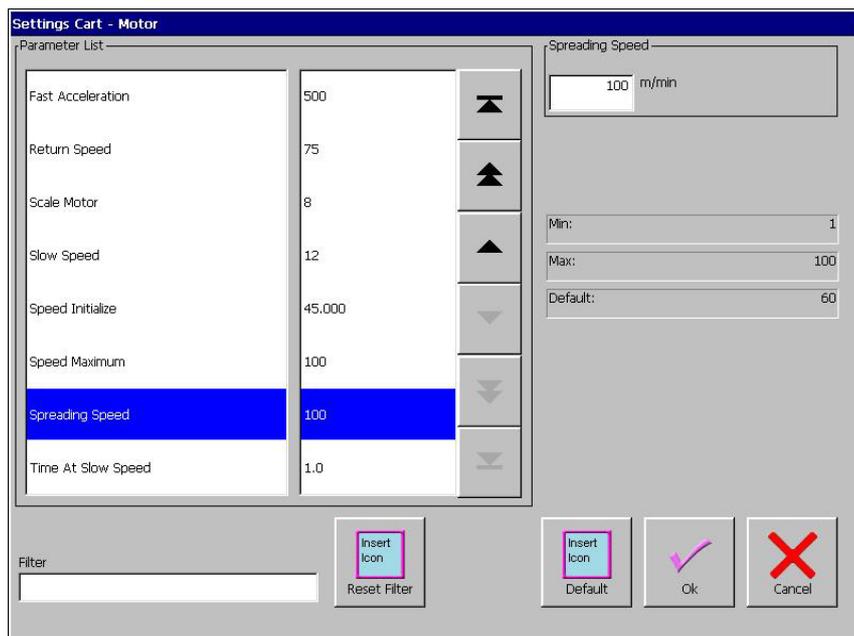


**Figure 18. Service, Machine Setup Screen**

When a hardware component is selected, a dialog box appears with a list box. The list box contains all the settings for that component. This example is for the Spreading Speed. Select the Motor button in the Cart group box.

When a setting is selected, a numeric input control is shown (if setting is numeric), or a list box containing possible enumerated values. After modifying the setting or settings in the list box, you have the following options:

- Default will only reset the selected parameter. Screen will not close.
- OK will accept ALL changes made on the screen and close the screen.
- Cancel will cancel ALL changes made on the screen and close the screen.



**Figure 19. Settings Cart – Motor Dialog Box**

## Help



Help is used when you want help information about a control or setting on the touch screen:

1. Push the **Help** button on the right side of the menu bar. This puts CutWorks™ SPR in the Help mode
2. Push the button of the control or setting you have a question about. The help window will open with the information you need.
3. Close the help screen by pressing the red cross on the help screen, or by pressing the Help button again.

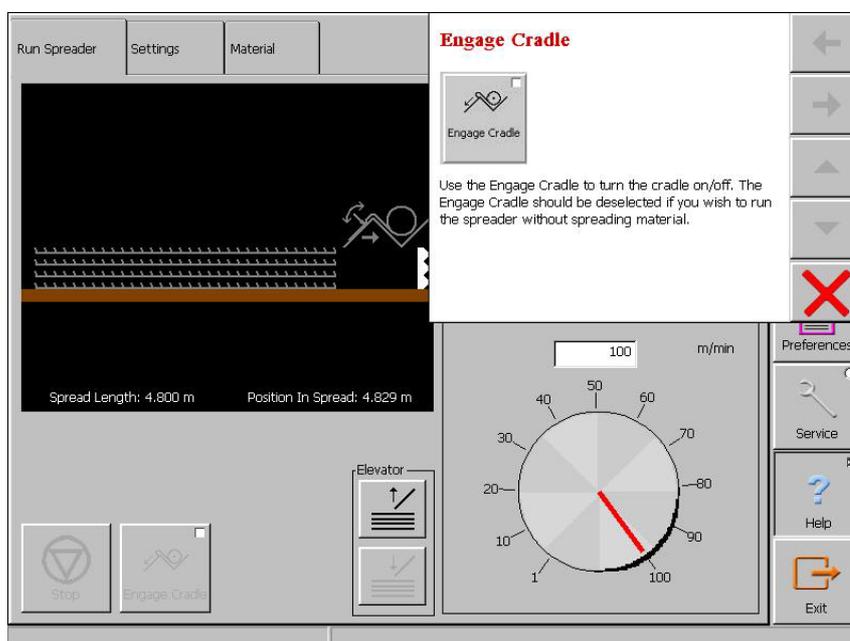


Figure 20. Getting Help

## Exit



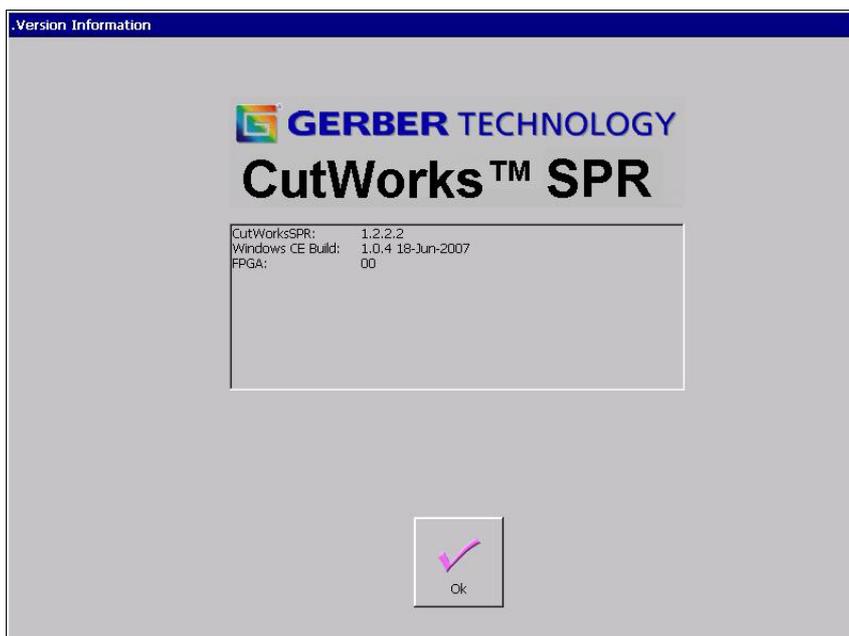
Push the Exit button on the menu bar to exit CutWorks™ SPR. A prompt will ask if you really want to terminate the spreading program, or Cancel to return to the state that existed before the Exit button was pushed.

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# Operating the Spreader – detailed description

## Starting the spreader

1. Turn on the main switch. The following screen appears:



2. After a few seconds, the screen picture changes to the start screen.
3. Press the release button and the Prepare Job/ Select Settings screen appears.

## Loading material roll

Load the material roll in the following way:

1. Go to Prepare Job/Material page or Execute job/Material page and press  $\langle \rangle$  . The spreader goes to loading position i.e. tilts down. If material is already in the machine this will be rewound.
2. Place the material roll in the cradle.
3. Press the Load Cradle button.



4. When leaving the Material page, the spreader exits the load mode.

## Change material roll during spreading

When the cradle is empty and the material stop eye is uncovered, the spreader stops automatically. An alarm appears on the operator panel.

5. Press OK to cancel the alarm.
6. Go to the Execute Job/Material page.
7. Press  $\langle \rangle$  on the speed throttle to run to load end and tilt cradle.
8. Place the material roll in the cradle.
9. Press the Load Cradle button.



10. Press  $\langle \rangle$  on the speed throttle. The machine runs back to the position on the table where the spreading stopped. The operator panel changes over to the Execute Job/Run Spreader page.
11. Press  $\langle \rangle$  on the speed throttle to resume the spreading job.

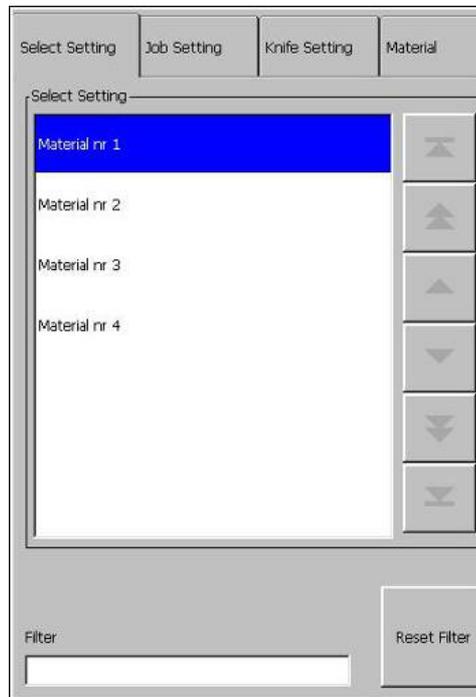
## Load Saved Settings

If your administrator has saved settings for a particular type of material, you can select the settings for this particular material under Prepare Job/Select Settings. This will save time as you do not have to enter all the material specific settings.

1. Go to Prepare Job/Select Settings.
2. Load the saved setting that you want to change.

**Note:** To find a specific file, enter the first letter of the file name in the edit field. This will limit the amount of files shown in the list box. (Press Reset Filter if you want the list box to show all files available).

3. The file highlighted is automatically selected.



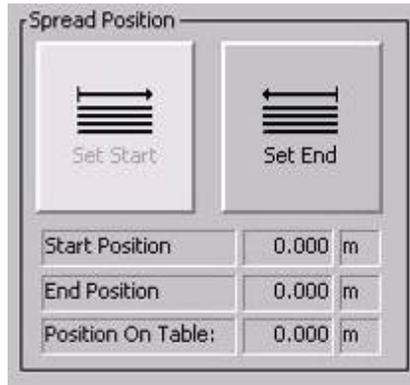
## Set Length

You set the length of the spread in the following way:

1. Go to Prepare Job/Job Settings.
2. Enter spreading length in the edit field of the Spreading Length button.



3. Move the spreader to the position on the table where you want the spreader to start or end.
4. Press Set Start or Set End depending on where you moved the spreader.



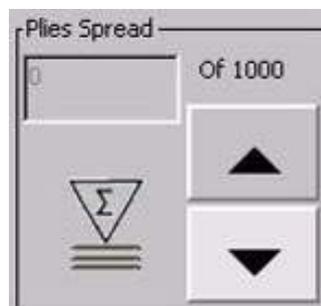
5. If there is not enough space on the spreading table to place the spread, the affected Spread Position button will be dimmed.

## Ply Count

When you set up the spread, you typically need to set a specific number of plies to be spread, which is what Ply Count is for.



1. Go to Prepare Job/Job Settings
2. Enter the number of plies you want to spread in the edit field.
3. During the spreading process you can see how many plies that have been spread on the Execute Job/Run Spreader page.
4. Use the up and down arrows on this button to regulate the number of plies spread. For example if you remove a ply due to material errors.



5. If you wish to set the number of plies spread to zero, use the New Job button on the Prepare Job/Job Setting page.

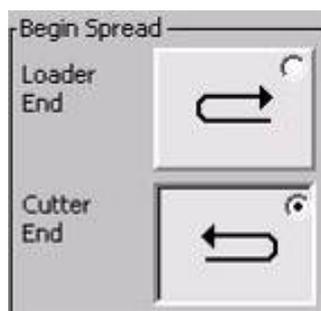


## Change of Spreading Direction

When you use face to face spreading, you can change the spreading direction of the first ply. This means that you can choose to start either in the loader or cutter end.

**Note:** When spreading with a normal roll, this will change the first ply from being spread face up reverse to face down forward.

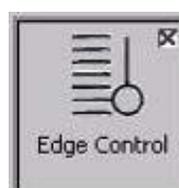
1. Under Prepare Job/Job Settings choose face-to-face with or without end catcher.
2. Select if you want to begin in loader or cutter end.



3. Continue setting up the job or move on to spreading.

## Edge Control

When Edge Control is selected, the cradle adjusts automatically to the edge of the material.



1. Go to Prepare Job/Job Settings.
2. Select the Edge Control.

## Material Sensor

When the Material Sensor is selected, the sensor registers when the material roll is empty and automatically measures the remaining length from the table up to the roll.

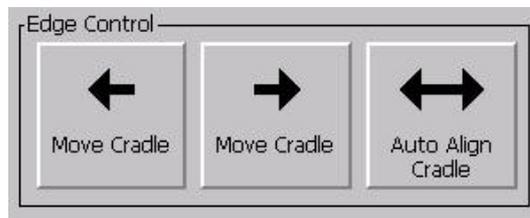


1. Go to Prepare Job/Job Settings.
2. Select the Material Sensor.

## Move Cradle to Sides

If you want the cradle to move to one of the sides (towards or away from the operator when standing on the operator platform), use the Move Cradle buttons.

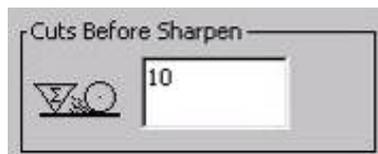
1. Go to Execute Job/Material.
2. Hold the button in until the cradle has reached the wanted position.



## Knife Settings

You can adjust the amount of cuts before sharpening the knife depending on the type of material being spread.

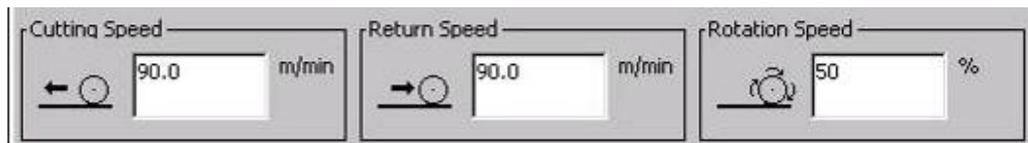
1. Go to Prepare Job/Knife Settings.
2. Press the edit field to enter the number of cuts before sharpening.



3. Press the Sharpen Knife button if it is necessary to sharpen the knife in-between these intervals.



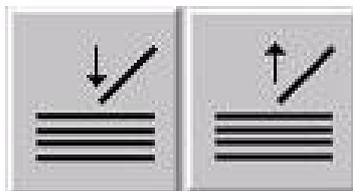
- If you wish to adjust the cutting speed (how fast it runs across the table), the return speed (how fast it returns to parking mode after cutting) or Rotation Speed (how fast the knife blade rotates), this can also be done under Knife Settings/Prepare Job.



## Adjustment of Elevator

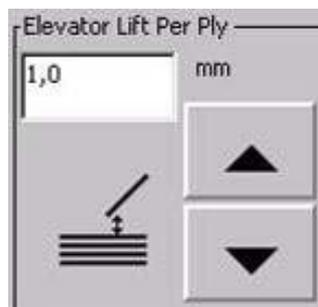
Use the two elevator buttons to move the elevator up and down.

- Go to Prepare Job/Settings page, Prepare Job/Material page, Execute Job/Run Spreader or Execute Job/Material page.
- Press elevator up or down.



As the pile of material gets higher for every ply that is spread, it is necessary to make the elevator lift a little after each ply which is done on the Elevator Lift Per Ply button.

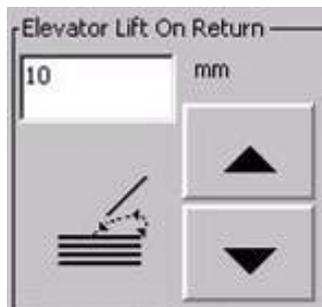
- Go to Execute job/Settings.
- Set the Elevator Lift Per Ply – press the edit field and enter a value or use the up and down arrows.



If the material bends up so the spreader hits it when returning, use Elevator Lift on Return to make the elevator rise a little bit

extra at the end. The elevator will move down again further in on the table.

1. Go to Execute job/Settings.
2. Set the Elevator Lift on Return – press the edit field and enter a value or use the up and down arrows.



## Override to Transfer Table

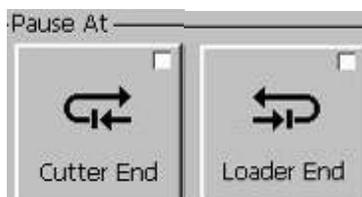
It is possible to move the spreader from the table to a transfer table and likewise move the spreader from a transfer table to the table.

1. Go to Prepare Job/Transfer Table.
2. Follow the instructions on the screen.

## Pause at Loader End, Cut, or Cutter End

Use Pause at Loader End or Cutter End if you wish to check the ends before the spreader continues the spread.

1. Go to Execute/Job Settings.
2. Press the Cutter End button to stop the machine in the cutter end or the Loader End button to stop the machine in the loader end.

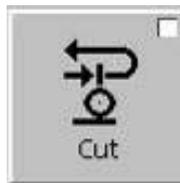


3. To start the spreader again, press  on the speed throttle.

Use Pause at Cut if you want to check the ends before the spreader cuts the material.

1. Go to Execute Job/Settings.

2. Press the Cut button to stop the machine before cutting.



3. Cut the material by pressing  on the speed throttle. After cutting the material, the machine will continue the spreading process.

## Fast Rewind of Material Roll

When you spread thin or soft material, the material roll can become loose. Fast rewind can help tighten the roll again.

1. Go to Execute Job/Material.
2. Press the Fast Rewind button until the roll is tightened again.



3. Go to Execute Job/Run Spreader.
4. To start the spreader again, press  on the speed throttle.

## Running spreader without spreading material

If you need to run the spreader without spreading material, for example in connection to cutting out a flaw, you can use the Engage Cradle to turn the cradle on/off.

1. Go to Execute Job/Run Spreader.
2. Deselect the Engage Cradle button and the material will not be spread while running the spreader manually.



## Spreading Reverse Wound Material

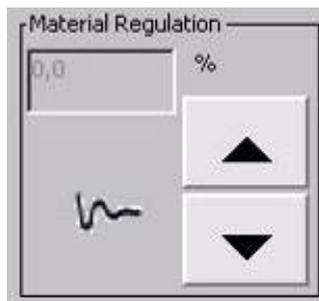
1. Mount roller for reverse wound material.
2. Go to Prepare Job/Job Settings.
3. Activate the Reverse Roll button.



## Regulating the material tension

When Cradle Regulation is chosen under Prepare Job/Job Settings, you can manually regulate the tension of the material i.e. control if you want more or less material to be fed during spreading.

1. If too much material is fed, wrinkles will occur in the material on the table. Press arrow down on the material regulation button to decrease the amount of material.



2. If too little material is fed, tension will occur, see Figure 21. Press arrow up to increase the amount of material.



**Figure 21. Too Much Tension in Material**

## **Adjusting counterweights on dancer bar handles**

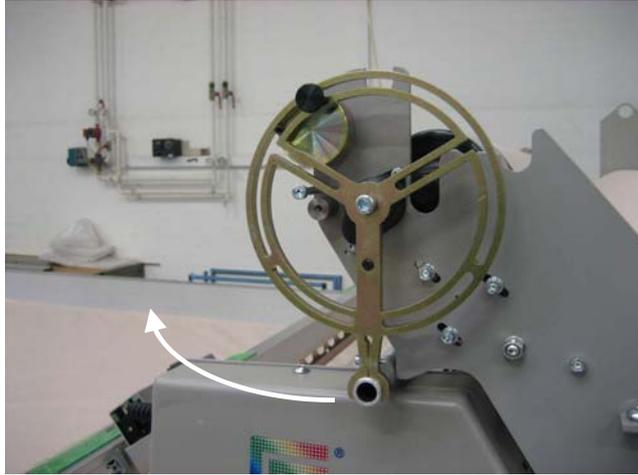
When Dancer Bar Regulation is chosen under Prepare Job/Job Settings, the spreader automatically regulates the tension of the material. If tension or wrinkles occur in the material, it is typically the counterweights on the dancer bar that require fine tuning.

This section describes how to adjust the counterweights on the dancer bar. Notice that the counterweights do not have to be set to the same in both sides. By following the procedure below the operator can adjust the counterweights from the operator side every time a new material is loaded:

1. Put the dancer bar (counterweight) to bottom position in the operator side.
2. Go to the opposite side and adjust the dancer bar so it fits the lightest material being spread at the factory (follow the procedure described below).
3. Whenever a heavier material is loaded, the operator only has to adjust the dancer bar in the operator side.

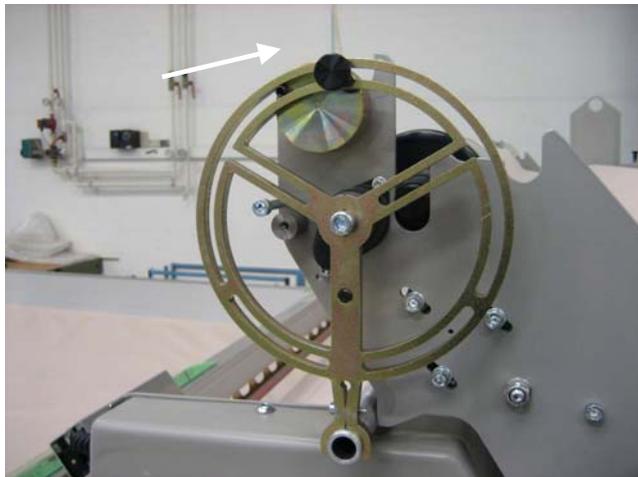
### **Adjustment procedure:**

1. Wind down material by pressing ▼ on the speed throttle and lift the dancer bar at the same time.



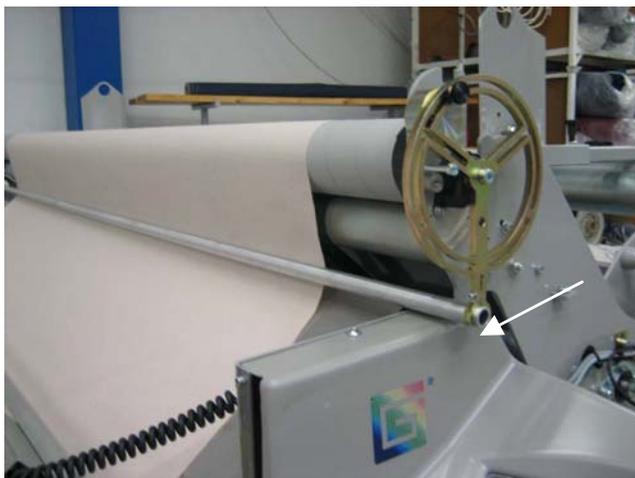
**Figure 22. Lift Dancer Bar**

2. Lower the dancer bar.
3. Pull out the dancer bar until it no longer touches the material.
4. Let the dancer bar drop down.
5. Check that the dancer bar only just goes down to bottom position.
6. If the dancer bar does not fall into place, the counterweights must be pulled further outwards.



**Figure 23. Counterweight on Dancer Bar**

7. If the dancer bar falls down heavily, the counterweights must be pulled further inwards.
8. Repeat step 3-5 until the dancer bar has been adjusted correctly.
9. The picture below shows how the material lies between the follower plate and dancer bar, when the weight of the dancer bar has been correctly adjusted.



**Figure 24: Dancer Bar Correctly Adjusted**

## Dancer Bar Delay

The Dancer Bar Delay lets you regulate how far the spreader runs before the dancer bar is active. Set the delay distance differently depending on the material you are spreading; the lighter material, the longer dancer bar delay. If you stop the spreader in the middle of a spread, there is no delay of the dancer bar as it is only active at ends.

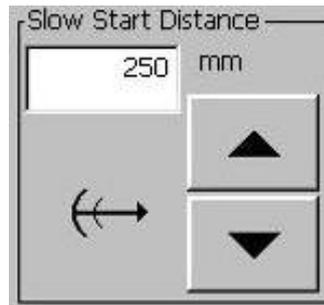
1. Go to Execute Job/Settings
2. Enter the necessary Dancer Bar Delay distance



## Slow Start Distance

Use Slow Start Distance when you are spreading thin and light material without end catchers to prevent the material from flying over the table after start. The lighter the material, the longer Slow Start Distance.

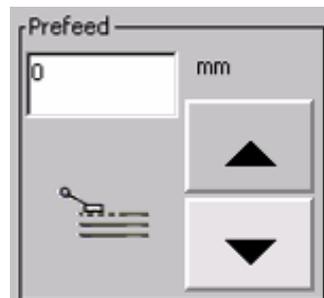
1. Go to Execute Job/Settings
2. Enter the necessary Slow Start distance



## Prefeed

Use Prefeed to control the amount of material being fed before the cart starts moving. You can use Prefeed when spreading one way with end catcher only.

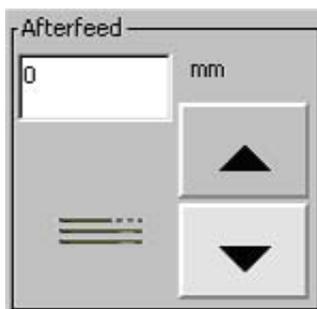
1. Go to Execute Job/Settings.
2. Enter the necessary Prefeed distance.



## Afterfeed

When spreading one way only, you can use Afterfeed to control the amount of material fed at the end of each ply before cutting. The distance is measured from when the dancer bar is in the neutral position.

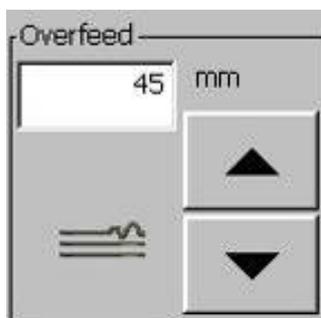
1. Go to Execute Job/Settings.
2. Enter the necessary Afterfeed distance.



## Overfeed

You can use Overfeed when spreading face to face to make the spreader feed extra material just before the cart stops. This will make the end looser and reduce tension.

1. Go to Execute Job/Settings.
2. Enter the necessary Overfeed distance.



## End Feed

This function is only available for a person with administrator rights.

In order to release the tension of the material when stopping at the ends, End Feed can be activated.

1. Go to Preferences/Spreading.
2. Activate End Feed.



## Auto Neutralize

This function is only available for a person with administrator rights.

Auto Neutralize makes the cradle speed up when the dancer bar has been too far out for too long time during spreading. This will make the dancer bar move to neutral position again.

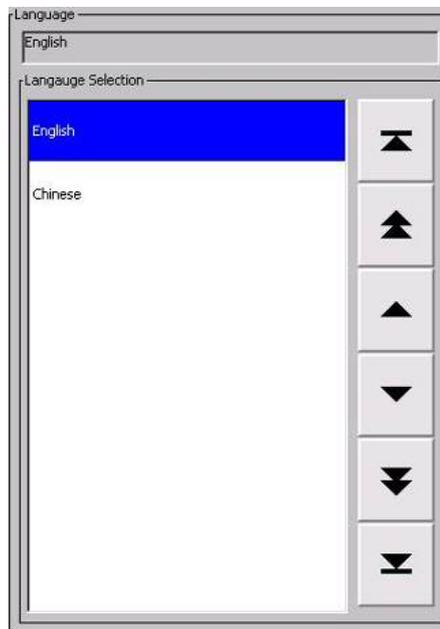
1. Go to Preferences/Spreading.
2. Activate Auto Neutralize.



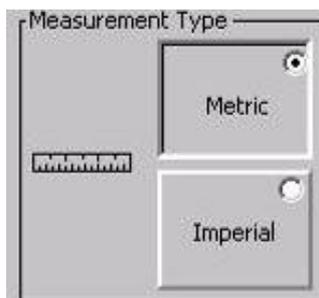
## Language and Measurement Type

You can change the language and measurement type on the touch screen if necessary.

1. Go to Preferences/Display Options.
2. Find the wanted language in the list box – the language highlighted is automatically selected.



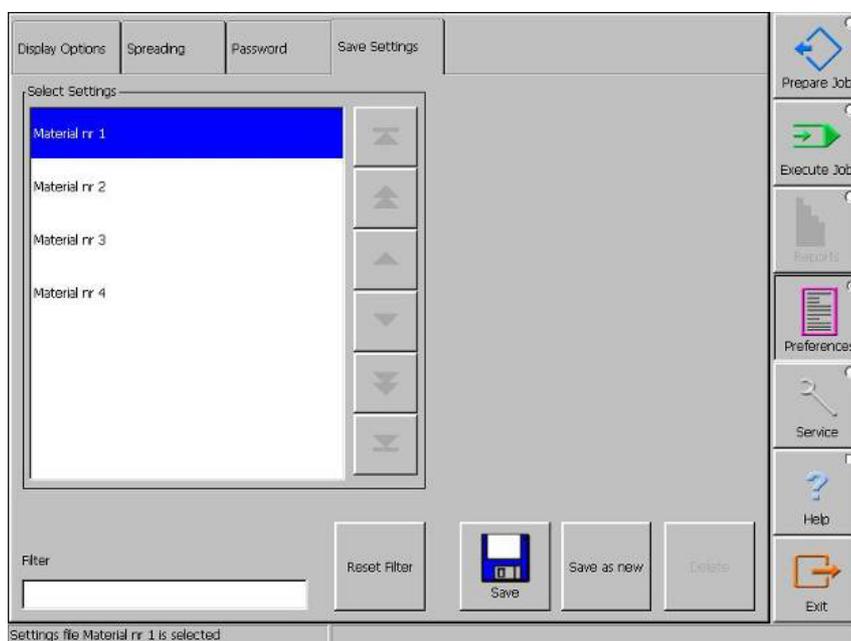
3. Select if you want the measurements in Metric or Imperial.



## Save and Delete Settings

If you have administrator rights, you can save material-dependent settings so that these do not have to be entered every time the specific material is used.

1. Set the material dependent settings you wish to save for the specific material.
2. Go to Preferences/Save Settings.
3. Press Save if you want to override the existing item. Press Save as New if you want to make a new item in the list box. A keyboard pops up.
4. Enter the name of the settings item on the keyboard
5. Press ENTER on the keyboard



You also have the possibility of changing the settings for a previously saved material.

1. Go to Prepare Job/Select Settings.
2. Load the saved setting that you want to change.

**Note:** To find a specific item, enter the first letter of the item name in the edit field. This will limit the amount of items shown in the list box. (Press Reset Filter if you want the list box to show all items available).

3. Enter the new settings.
4. Go to Preferences/Save Settings.
5. Press Save if you want to override the existing item. Press Save As New if you want to make a new item in the list box.

You can also delete a saved settings item.

1. Go to Preferences/Save Settings.
2. Select the item you want to delete.

**Note:** To find a specific item, enter the first letter of the item name in the edit field. This will limit the amount of items shown in the list box. (Press Reset Filter if you want the list box to show all items available).

3. Press Delete.

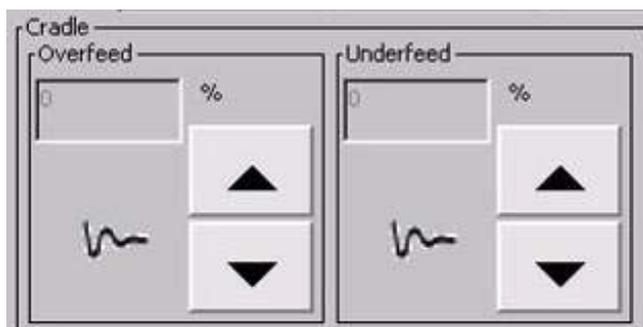
## Cradle Overfeed and Underfeed

If you have administrator rights, you can control how much the material is regulated when pressing the material regulation buttons on the speed throttle.

Underfeed controls the up arrow on the speed throttle 

Overfeed controls the down arrow on the speed throttle 

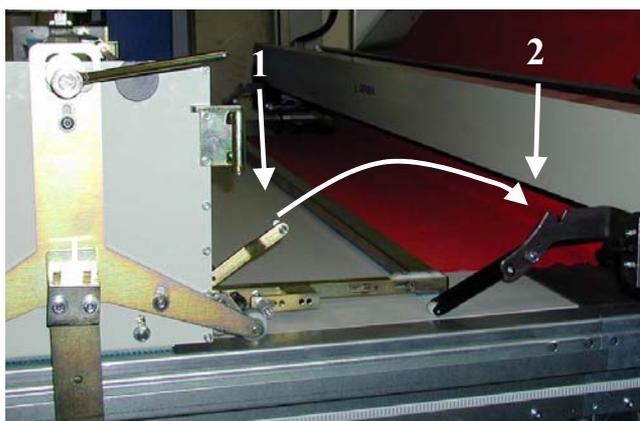
1. Go to Spreading/Preferences
2. Enter the distance for Overfeed and Underfeed in the edit field.



## Spreading with Movable End Catcher

The following section describes which procedure to follow when using movable end catcher and spreading face to face.

To connect the end catcher and spreader, couple them up by means of the connection clamp on the end catcher and the connection fitting, which is placed on the lifting device on the zigzag equipment, or on the cutting device, see Figure 25.



**Figure 25: End Catcher and Connection Fitting**

Key to Figure

1-Connection Clamp, 2-Connection Fitting

**Use following procedure when you set length according to a paper marker:**

1. Place paper marker in the stationary end catcher in the Loading End.
2. Pull down the locking handle of the end catcher in Cutter End to unlock the end catcher (see Figure 26).
3. Move the movable end catcher to the other end of the paper marker.



**Figure 26: Locking Handle**

4. Press new job on the Prepare Job/Job settings page
5. Set number of layers on the Prepare Job/Job settings page
6. Press the Find End Catcher button on the Prepare Job/Job Settings page.



7. Go to the Execute Job/Run Spreader page
8. Run the spreader slowly into the end catcher.
9. Deselect the Find End Catcher button when the end catcher and the spreader are connected.

**Use the following when setting length according to the marker length:**

1. On the Prepare Job/Job Settings page select in which end you want to begin spreading spread.
2. Set number of layers on the Prepare Job/Job settings page
3. Press the Find End Catcher button on the Prepare Job/Job Settings page.



4. Go to the Execute Job/Run Spreader page
5. Run the spreader slowly into the end catcher.
6. Deselect the Find End Catcher button when the end catcher and the spreader are connected.
7. Pull down the locking handle of the end catcher in cutter end to unlock the end catcher (see Figure 26
8. Press the Move End Catcher Button on the Prepare Job/Job Settings page.



9. Move end catcher to the desired position on the spreading table.
10. Deactivate the Move End Catcher Button

## Exit CutWorks SPR

Close the CutWorks™ SPR program in the following way:

1. Make sure that the spreader has finished the spreading job.
2. Push the Exit button on the bottom of the menu bar.



3. When you are prompted by "Are you sure that you wish to terminate the GerberSpreader software," push the OK button.



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# Operating the GERBERSpreader™

## Basic Concepts

The GERBERSpreader™ is an efficient computer-controlled spreading system, developed for elastic and solid material. It features a unique cradle feeding system that assures tension-free spreading of even the most difficult fabrics at speeds up to 100m/min (110yds/min)

Adherence to GERBER recommendations for preventive maintenance makes sure that optimum mechanical performance of the GERBERSpreader™ system is achieved.

## Material Storage

In order to obtain a satisfying spread, consideration must be given to the material being used. If the material is not stored correctly, marks and wrinkles will occur in the spread material.

The material is stored correctly when it is stacked in rolls all turning the same direction as shown in Figure 27.



**Figure 27. Correct Material Storage**

If the material is stored in different directions alternately, marks will occur. Figure 28 shows how NOT to store material.



**Figure 28. Incorrect Material Storage**

Correct storage is also essential when working with flat-folded material. When stacked, the packs of material should lie neatly on top of each other as shown in the figure below.



**Figure 29. Correct Storage of Flat-folded**



**Figure 30. Incorrect Storage of Flat-folded**

## **Dancer Bar and Counterweights**

The performance of the spreader, i.e. how even the spread is, is very dependent on the adjustment of the dancer bar and the counterweights.

Here are a few things to remember that will enhance the performance of the spreader.

- The dancer bar has been designed to control the tension of the material.
- The counterweights are used to adjust the dancer bar.
- Adjusting the counterweights should be done every time a new type of material is loaded.
- The spreader software has various settings “Material Regulation, Dancer bar Delay, and Overfeed” which all help to ensure a tension free spread as they control the Dancer bar and cradle movements. Different settings in these are required for different types of material.

## **Spreading Speed**

Always remember to adjust the spreading speed according to the type of material you wish to spread and the state of the roll – if the roll is tightly wound, the spreading speed must be faster than if it is loosely wound.

## **Cutting Speed**

The cutting speed of the cutting device should always be adjusted according to the material being spread.

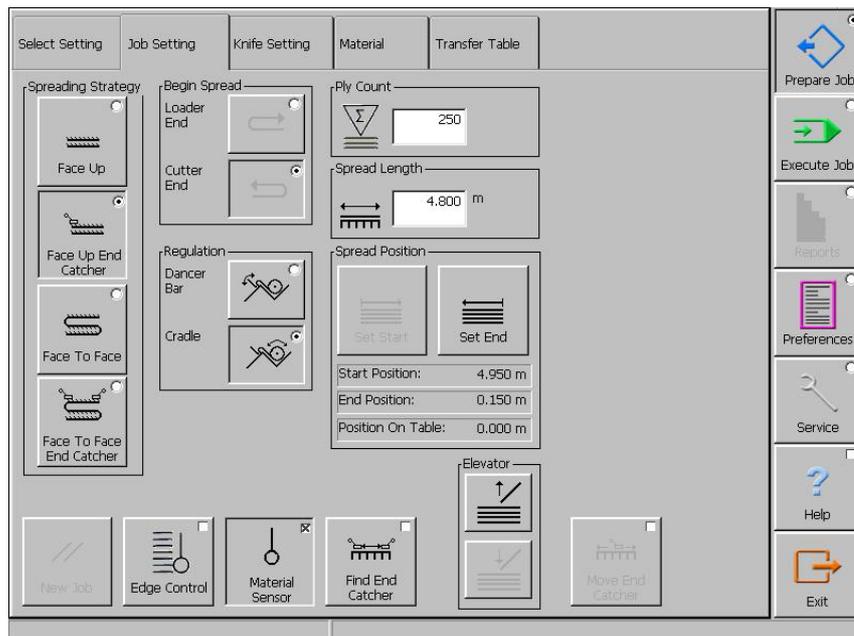
## Making a Spread

In helping you become more familiar with the spreader, we will take you through the process of spreading using simple step-by-step instructions.

The first section includes the general settings and procedures common for all spreading modes and material selections. Further down, you will find separate sections which are specific for the selected spreading mode and material.

### Common settings for all spreading modes

1. Read the safety instructions at the beginning of this manual before operating the spreader.
2. Start the spreader.
3. Load material onto the cradle.
4. Go to Prepare Job/Job Settings.

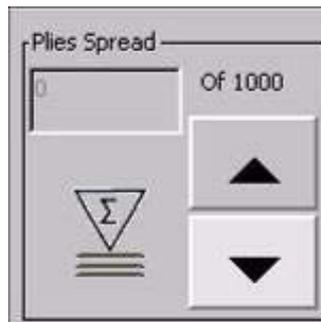


5. Mount any necessary front and/or cradle equipment or end catchers.
  - See the separate sections above for information on how to make the necessary settings for the type of equipment mounted.

6. Press the New Job button to start a new job. This will set the ply counter to zero on the Execute Job/Run Spreader page.



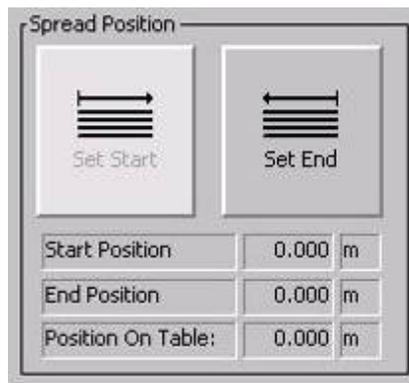
7. Set the number of plies.



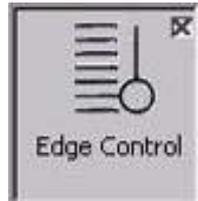
8. Set length in the spreading length field.



9. Select where you want the spread to be on the table by using the Set Start or Set End button.



10. As default the Edge Control is selected, which makes the cradle adjust automatically according to the edge. Press Edge Control if you wish to turn this function off.



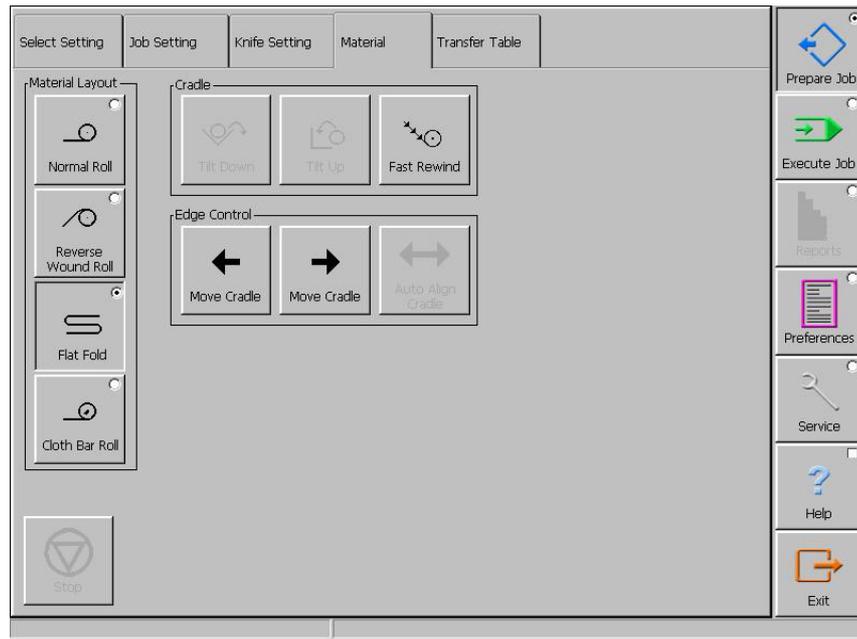
11. Select Spreading Mode.



12. As default the Material sensor is set to register when the material roll is empty. Press Material Sensor if you wish to turn this function off.



13. Go to Prepare Job/Material.



14. Select Material Layout

15. Go to the section which describes the settings for your selected spreading mode, type of front equipment, and material.

16. *Face up, without end catcher, elastic material*

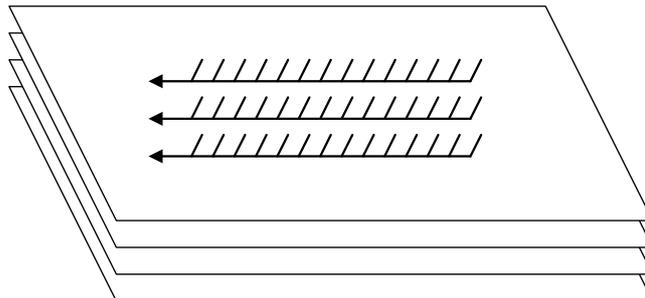
17. *Face up, without end catcher, solid material*

18. *Face up, with end catcher, solid material*

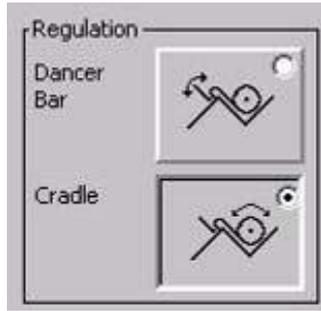
19. *Face to face, without end catcher solid material*

20. *Face to face, with end catcher, solid material*

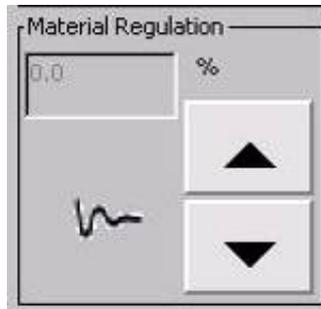
### 16 - Face up, without end catcher, elastic material



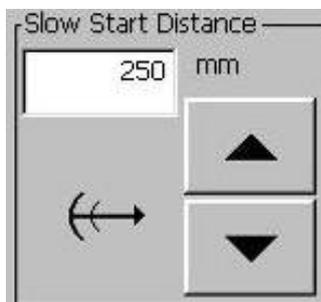
a) Select Cradle under Prepare Job/Job Settings.



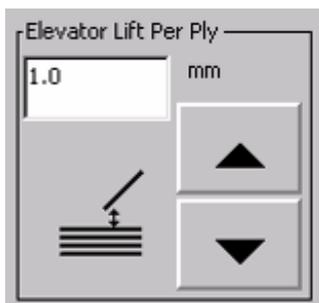
- b) Go to Execute Job/Run Spreader.
- c) Adjust Material Regulation to correct setting – the tighter the roll is wound, the higher the percentage entered should be.



- d) While spreading, keep adjusting the material regulation up and down depending on the material roll. Use the arrows or enter the value in the edit field.
- e) Go to Settings/Execute Job.
- f) If you are spreading light material, adjust Slow Start Distance.



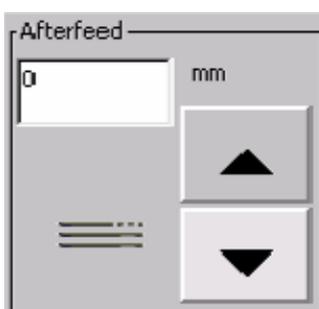
- g) Set Elevator Lift Per Ply to fit fabric thickness.



- h) If necessary, adjust the Elevator Lift On Return.

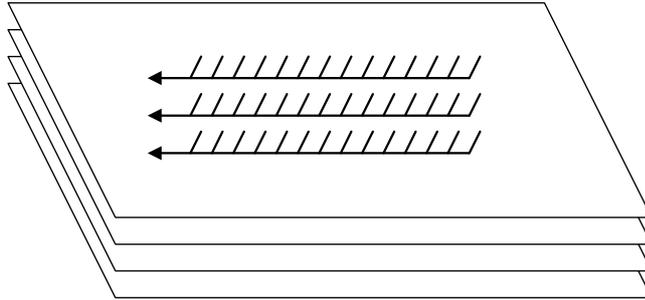


- i) Set Afterfeed to make the dancer bar move to neutral position before cutting.

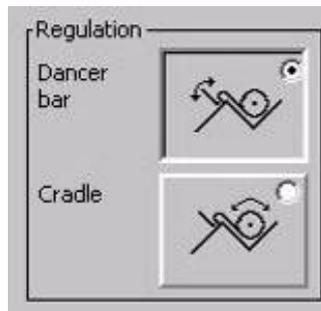


- j) If the material is not spread correctly, the material regulation probably requires fine tuning.
- k) Continue with step 21 at the end of this section.

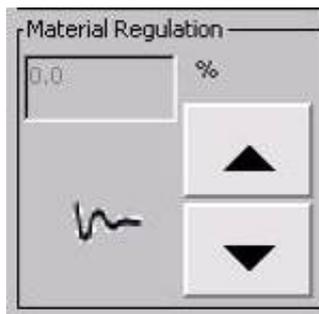
## 17 - Face up, without end catcher, solid material



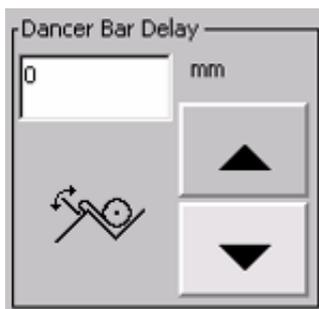
- a) Adjust the dancer bar weight equal to the weight of the fabric reaching the cutting device (see section “Operating the Spreader – detailed descriptions” for information on how to adjust the counterweight on the dancer bar).
- b) Select Dancer bar under Prepare Job/Job Settings.



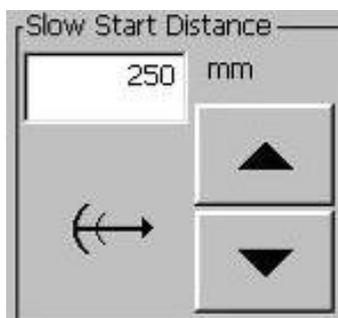
- c) Go to Execute Job/Settings.
- d) Adjust Material Regulation to correct setting – the tighter the roll is wound, the higher the percentage entered should be.



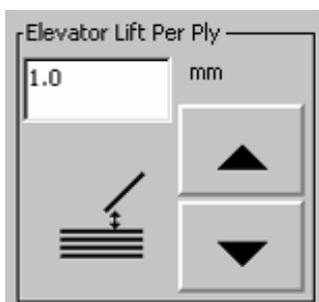
- e) Set the Dancer Bar Delay distance.



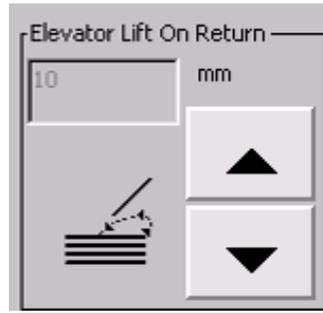
- f) Set Slow Start Distance if you are spreading light material.



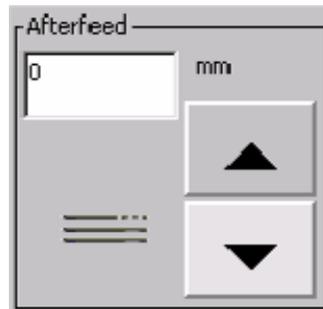
- g) Set Elevator Lift Per Ply to fit fabric thickness.



- h) If necessary, adjust the Elevator Lift On Return.

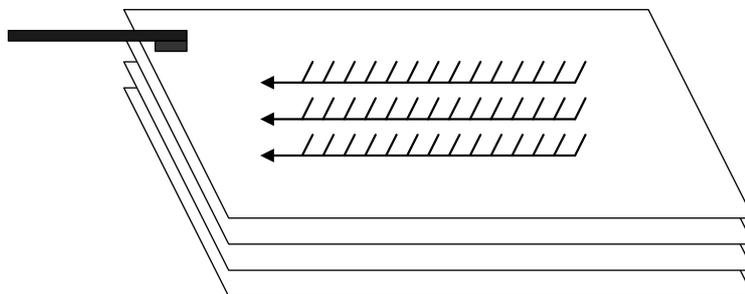


- i) Set Afterfeed to make the dancer bar move to neutral position before cutting.

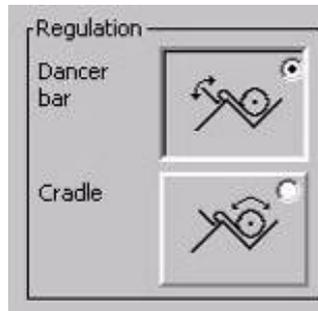


- j) If the material is not spread correctly at the beginning of the lay, the material regulation probably requires fine tuning. If the material pulls back when the dancer bar takes over, the delay distance is probably set too low. If the ends are uneven, check that the dancer bar goes to the neutral position.
- k) Continue with step 21 at the end of this section.

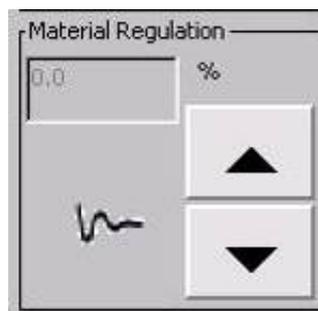
### 18 - Face up, with end catcher, solid material



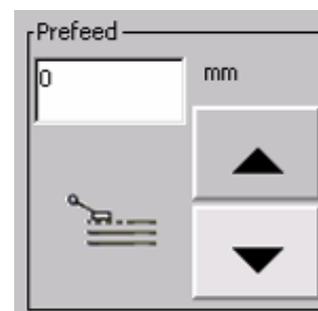
- a) Adjust the dancer bar weight equal to the weight of the fabric reaching the cutting device.
- b) Select Dancer bar under Prepare Job/Job Settings.



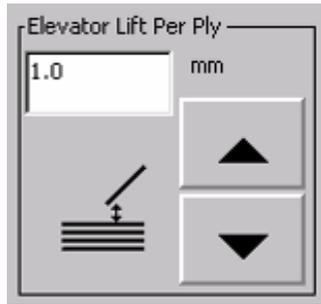
- c) Go to Execute Job/Settings.
- d) Adjust Material Regulation to correct setting – the tighter the roll is wound, the higher the percentage entered should be.



- e) Set the Prefeed distance



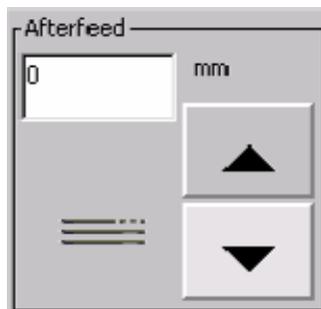
- f) Set Elevator Lift Per Ply to fit fabric thickness.



- g) If necessary, adjust the Elevator Lift On Return

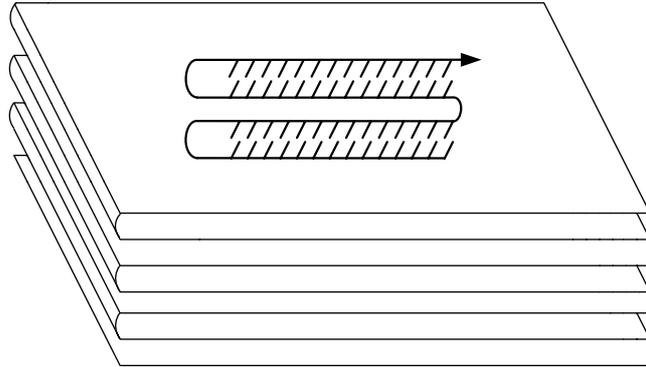


- h) Set Afterfeed to make the dancer bar move to neutral position before cutting.

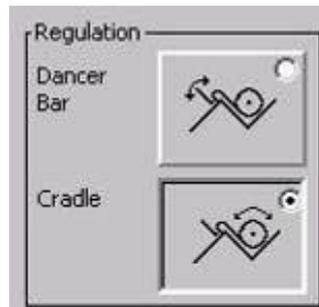


- i) If the material is not spreading correctly at the beginning of the lay, the material regulation may require fine tuning. If the fabric pulls out of the end catcher, the value in Prefeed is too low. If the ends are uneven, check the impulse feed. The dancer bar must go to the neutral position.
- j) Continue with step 21 at the end of this section.

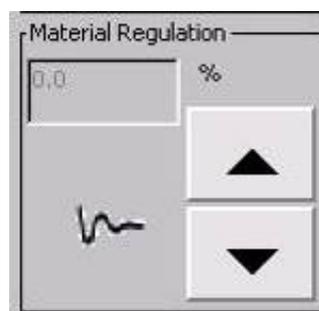
## 19 - Face to face, without end catcher, elastic material



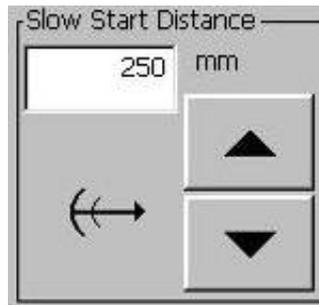
- a) Select Cradle under Prepare Job/Job Settings.



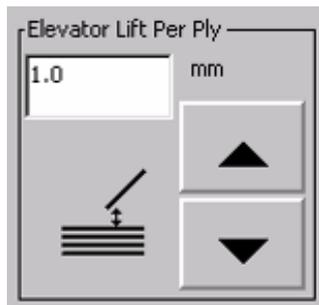
- b) Go to Execute Job/Run Spreader.
- c) Adjust Material Regulation to correct setting – the tighter the roll is wound, the higher the percentage entered should be.



- d) Go to Execute Job/Settings.
- e) Set Slow Start Distance if you are spreading light material.



- f) Set Elevator Lift Per Ply to fit fabric thickness.



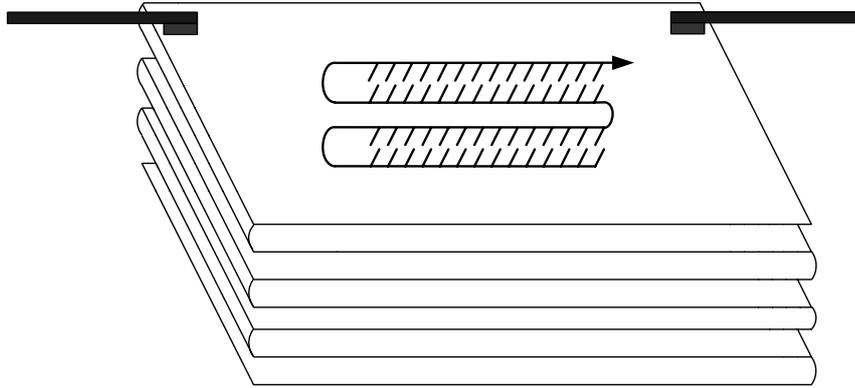
- g) Go to Preferences/Spreading.

- h) Set Elevator Lift For Face To Face.

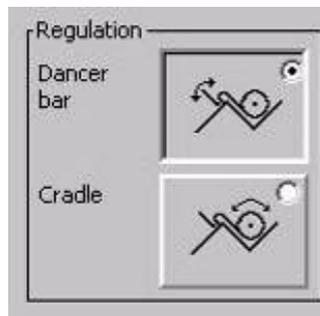


- i) If the material is not spreading correctly, the material regulation probably requires fine tuning.
- j) Continue with step 21 at the end of this section.

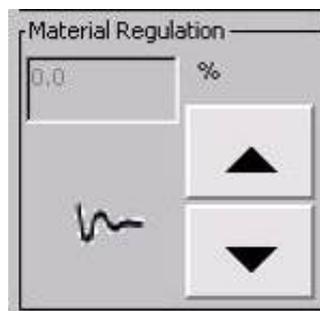
## 20 - Face to face with end catcher, solid material



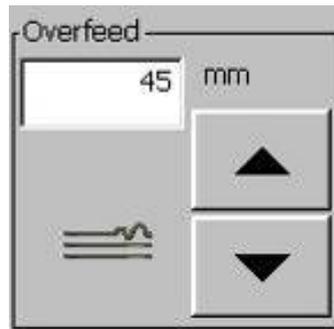
- a) Select Dancer bar under Prepare Job/Job Settings.



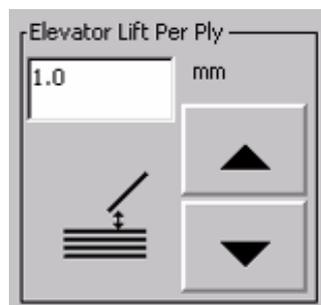
- b) Go to Execute Job/Settings.
- c) Adjust Material Regulation to correct setting – the tighter the roll is wound, the higher the percentage entered should be.



- d) Set Overfeed so the dancer bar reaches neutral position before turning.

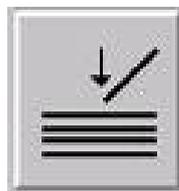


- e) Set Elevator Lift Per Ply to fit fabric thickness.



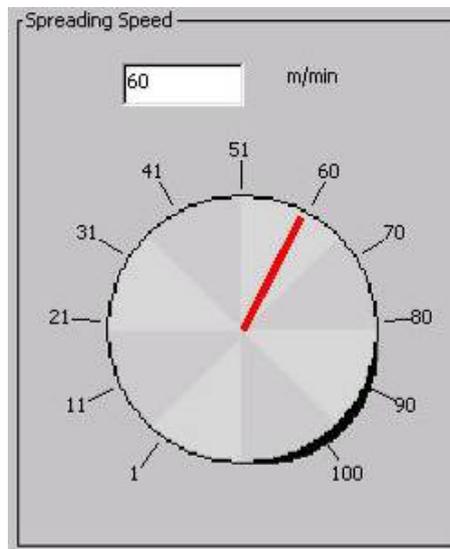
- f) The end catchers should travel equal distance into the face to face tray at each end. If the material pulls out of the end catcher, the material regulation is set incorrectly or the weight on the dancer bar is too heavy. If the ends are uneven, check that the dancer bar goes to neutral position.
- g) Continue with step 21 below.

21. Go to Execute Job/Run Spreader.
22. Position the elevator as close as possible to the spreading table



23. Start automatic spreading by pressing  on the speed throttle. If you wish to spread manually, you have to turn the speed throttle. The Run Spreader page will always appear during spreading.

24. Adjust spreading speed if necessary on the speed dial button. The lighter material is, the slower the speed should be.



Next time you start the spreader, the settings you have made in the steps above will be remembered.

**Note:** If the spreader stops in the middle of a spread, such as during a power failure, the spreader does not remember where in the spreading process it stopped. To continue, you must manually adjust the numbers of plies spread. All other settings will be remembered.

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# Glossary

## CD-ROM

Electronic media on which GERBER software and manuals are delivered.

## Covers

All sides are covered for safety issues.

## Cradle

Device in which the fabric roll lies when being spread.

## Cut point

The cut point is a point in the marker, at which it is possible to cut the material to take out defects.

## Cutter end

The end of the spreader table where a cutting machine will be placed. On a left hand operated spreader, this will be to the left of the operator.

## Dancer bar

Controls the tension of the material during spreading

## Data

Digital information

## Default

A setting that is programmed into your computer at the factory or set by Field Service when the spreader is first installed. This is used until your supervisor overrides it by selecting another setting.

## Elevator

Used for positioning front equipment as low as possible but always above the top ply of the spread.

## End catcher

A device that catches/grabs the ends of the fabric and makes sure that the fabric lies flat on the table.

## EStop

A red push button that can be pressed during an emergency to immediately stop all GERBERSpreader™ motion.

**Flat-folded**

The material is stacked instead of being on a roll.

**Guide plate**

Guides the material to the spreading table

**Job**

A pre-programmed spread. A job can contain spreading mode, allowances for cutter and loading end, material type, number of plies, etc.

**Lay**

See spread.

**Left side**

Side of spreading table when seen from the loading end.

**Loader**

Separate machine sold by Gerber Technology which helps the operator loading new material into the spreader.

**Loading end**

The end to which the spreader is moved when loading a new roll of material with a loader. On a left hand operated machine this will be to the right of the operator.

**Material roll guide**

Keeps material roll in the correct position.

**Obstacle sensor**

Senses if anything gets in the way of the spreader and stops the machine immediately.

**Platform for flat-folded**

Platform mounted on the back of the spreader to put flat-folded material.

**Right side**

Side of spreading table when seen from the loading end.

**Safety ruler**

Prevents the spreader from running longer than allowed. Also referred to as End stop bar,

**Setup**

A setup file is a file containing parameters which enable or disable various features, options, and modes depending on considerations as ply height, material characteristics, or marker width.

**Speed throttle**

The handle which the operator uses to control speed and direction of spreader.

**Spread**

One or more layers of material spread on the spreading table. May also be called a lay.

**Spreading mode**

The way the spreader places the material on the table.

**Zero point**

As far back on the table as the spreader will go (towards loader).

**Face to face equipment**

Used for spreading face-to-face.

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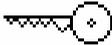
# Appendix

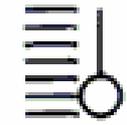
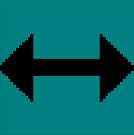
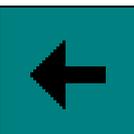
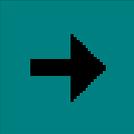
## Spreader specifications

Base System	XLs50	XLs125
Spreading width and machine width	180cm (72 in.) = 250cm machine 200cm (80 in.) = 270cm machine 240cm (96 in.) = 310cm machine	160cm (63 in.) = 230cm machine 180cm (72 in.) = 250cm machine 200cm (80 in.) = 270cm machine 220cm (88 in.) = 290cm machine 240cm (96 in.) = 310cm machine
Total Spreader height over table top	85 cm	82 cm
Spreader Weight	450 kg	450 kg
Max Roll Weight	50 kg	125 kg
Max Diameter of Roll	400 mm (15½ in.)	650 mm (25½ in.)
Max Ply Height	35 cm	43 cm
Operational Side	Left	Left
Noise Level around the machine	74 dB	74 dB
Noise Level 5 meters away from the machine	68 dB	68 dB
Maximum Temperature	43 C	43 C
Minimum Temperature	10 C	10 C
Maximum Humidity (non - Condensing)	80%	80%
Maximum Operational System Altitude	No restrictions	No restrictions
To run in dusty environment	-	-

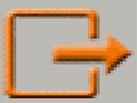
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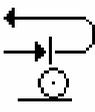
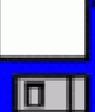
## Icon Identification

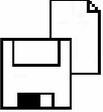
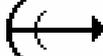
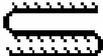
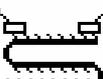
Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Access Level	Nivel de Acceso	访问级别
	Afterfeed	Alimentación Final	后送料
	Begin Spread Cutter End	Iniciar Tendido Extremo de la Cortadora	开始铺布裁 割端
	Begin Spread Loader End	Iniciar Tendido Extremo de Carga	开始铺布加 载端
	Busy	Ocupada	忙碌
	Calibrate Cart	Calibrar Carro	摇篮车
	Calibrate Dancer Bar Dancer Bar Regulation	Calibrar Barra de Tensión Regulación de Barra de Tensión	校准跳动杆
	Calibrate Throttle	Calibrar Manubrio	校准节流阀
	Calibrate Cradle Cradle Regulation	Calibrar Cuna Regulación de la Cuna	校准摇篮 摇篮调节器

Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Cancel	Cancelar	取消
	Cradle Fast Rewind	Rebobinado Rápido Cuna	摇篮快速回转
	Cradle Tilt Down	Cuna Inclined Hacia Abajo	摇篮向下
	Cradle Tilt Up	Cuna Inclined Hacia Arriba	摇篮向上
	Edge Control	Control de Orilla	边缘控制
	Edge Control Auto Align Cradle	Control de Orilla Auto Alinear Cuna	边缘控制 自动对齐摇篮
	Edge Control Move Cradle	Control de Orilla Mover Cuna	边缘控制 移动摇篮
	Edge Control Move Cradle	Control de Orilla Mover Cuna	边缘控制 移动摇篮
	Elevator Lift For Face To Face	Elevador Arriba Para Cara a Cara	面对面升降器
	Elevator Lift On Return	Elevador Arriba al Regreso	升降器向上返回
	Elevator Up	Elevador Levantado	升降器上升

Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Engage Cradle	Engranar Cuna	启动摇篮
	Execute Job	Ejecutar Tarea	执行任务
	Exit	Salir	退出
	Help	Ayuda	帮助
	Info	Información	信息
	Initialize	Inicializar	初始化
	Knife Cutting Speed	Velocidad de Corte de la Cuchilla	刀片裁割速度
	Knife Return Speed	Velocidad de Regreso de la Cuchilla	刀片返回速度
	Knife Rotation Speed	Velocidad de Rotación de la Cuchilla	刀片旋转速度
	Knife Sharpen Interval	Intervalo de Afilado de la Cuchilla	磨刀间隔

Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Load on Each Ply	Cargar en Cada Capa	每一层加载
	Material Layout Cloth Roll	Esbozo de Material Rollo de Material	面料布局 布滚筒
	Material Layout Flat Fold	Esbozo de Material Doblez Plano	面料布局 平折
	Material Layout Normal Roll	Esbozo de Material Rollo Normal	面料布局 普通滚筒
	Material Layout Reverse Wound Roll	Esbozo de Material Rollo al Revés Invertido	面料布局 反转滚筒
	Material Sensor	Sensor de Material	面料传感器
	Measurement Type	Tipo de Medida	量度类型
	New Job	Trabajo Nuevo	新任务
	Next Screen	Próxima Pantalla	下一界面
	Ok	Ok	确定
	Overfeed	Alimentación Extra	过量送料

Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Pause At Cut	Pausa al Cortar	裁割时暂停
	Pause At Cutter End	Pausa en el Extremo de la Cortadora	裁割端暂停
	Pause At Loader End	Pausa en el Extremo de Carga	加载端暂停
	Ply Count	Cantidad de Capas	层数
	Prefeed	Alimentación Inicial	预送料
	Preferences	Preferencias	参数
	Prepare Job	Preparar Trabajo	准备任务
	Previous Screen	Pantalla Previa	上一界面
	Reports	Informes	报告
	Return Speed	Velocidad de Regreso	返回速度
	Save	Guardar	保存

Icon Ícono 图标	English Inglés 英文	Spanish Español 西班牙文	Chinese Chino 中文
	Save As	Guardar Como	另存为
	Service	Servicio	服务
	Sharpen Knife	Afilar Cuchilla	磨刀
	Slow Start Distance	Distancia Inicio Lento	缓慢启动距离
	Spreading Strategy Face to Face	Estrategia de la Tendedora Cara a Cara	铺布方法 面对面
	Spreading Strategy Face To Face With End Catcher	Estrategia de la Tendedora Cara a Cara con Sensor de Límite	铺布方法 面对面末端 压布装置
	Spreading Strategy Face Up	Estrategia de la Tendedora Cara Arriba	铺布方法 面朝上
	Spreading Strategy Face Up End Catcher	Estrategia de la Tendedora Cara Arriba Sensor de Límite	铺布方法 面朝上末端 压布装置
	Spread Length	Longitud de Tendido	铺布长度
	Spread Position Set Start	Seleccionar Inicio Posición de Tendido	铺布位置 设置开始

<b>Icon</b> <b>Ícono</b> <b>图标</b>	<b>English</b> <b>Inglés</b> <b>英文</b>	<b>Spanish</b> <b>Español</b> <b>西班牙文</b>	<b>Chinese</b> <b>Chino</b> <b>中文</b>
	Spread Set End Position	Seleccionar Final Posición de Tendido	铺布位置
	Stop	Parar	停止
	Transfer Table Override	Sobrepasso Mesa de Transferencia	转换台重叠
	Warning	Precaución	警告