

# Bottom discharge spreader

Type OL

## Operator's manual ENG

Read carefully before use



Manufactured by: Flingk Machinebouw B.V.

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## PREFACE

De onderlosser van Flingk Machinebouw is een hoogwaardige machine waarmee u snel en efficiënt, zeer gelijkmatig een bodembedekker kunt strooien in uw stal. Ga goed na in de technische specificaties voor welk type strooisel uw onderlosser geschikt is!

The Flingk bottom discharge spreader is a high quality and durable machine, designed and built to collect and spread a ground cover in your stable very evenly. Take a careful look in the technical specifications for which bedding material your type of bottom discharge spreader is designed!

This manual has been prepared to enable you to obtain the best results from the Flingk bottom discharge spreader under safe working conditions, so please read and observe this operator's manual carefully before you start working and make sure you follow the instructions while working.

Although, the machine has been designed conform the EC certificate of conformity, always use extreme caution when operating the bottom discharge spreader. Read all instructions which are written in this operator's manual and those within the operators manual of the connected machine carefully and make sure you take them into account..

Because Flingk Machinebouw strives towards continuous product improvement, they reserve the right to change design and/or specifications without notice. This does not include an obligation to make changes to machines previously supplied.

If anyone does not fully understand every part of this operator's manual, please obtain further assistance by contacting the dealer from which this product was purchased or by contacting Flingk Machinebouw. Keep this manual available for reference whenever this product is being handled or used. Provide this manual to any new owners and/or operators.

Flingk Machinebouw wishes you a pleasant use!

Your supplier:



## GENERAL SAFETY PRECAUTIONS

The Flingk bottom discharge spreader is designed for different bedding materials. Check within the technical specifications, before using the spreader, for which bedding material your type of bottom discharge spreader is build. Do not use the bottom discharge spreader for materials it was not designed for!

The bottom discharge spreader may only be used by those persons which have read and understand the within this operator's manual specified safety and operating instructions. Only completely competent operators which now how to use the controls, the bottom discharge spreader's capabilities, dimensions and all safety requirements may operate the bottom discharge spreader.

Before using the bottom discharge spreader, check whether the combination of the bottom discharge spreader and connected machine is safe. Pay special attention towards the maximum lifting capacity and hydraulic power of the connected machine.

Use the bottom discharge spreader only for the purposes for which it was designed! Nobody, no persons, animals or other goods shall ride on/in the bottom discharge spreader during transport and/or operation.

The bottom discharge spreader is solely designed for use on private terrain, do not use or drive with it on the public road. In case you want to transport the bottom discharge spreader always adhere to the traffic, safety and environmental regulations and transport the machine in a responsible and safe manner.

Take care that nobody will be within the dangerous zone while operating, transporting or riding with the bottom discharge spreader. As an operator always ensure that nobody is within the reach of moving parts, within the operating area, or within close proximity of the machine while working. Make sure nobody stays between the bottom discharge spreader and the bedding material while filling the bottom discharge spreader.

Maintenance and repair practices may only be performed by skilled specialists. Any work done on the hydraulic system should be done by Flingk Machinebouw or authorized dealers.

Never attempt to work on or repair the bottom discharge spreader while it is running! All power sources must be completely disengaged and the bottom discharge spreader should be placed in the forward position on a firm, level surface that is large enough to safely accommodate the bottom discharge spreader while repairing, cleaning or adjusting.

Never leave the connected machine unattended while the engine is running or with the bottom discharge spreader in an upright position. Always place the bottom discharge spreader in the forward position on a firm, level surface which is large enough to safely accommodate the bottom discharge spreader after use.



EG-DECLARATION OF CONFORMITY  
according to annex II A of EC Machinery Directive 2006/42/EC

Manufacturer: Flingk Machinebouw B.V.  
Located: Retselseweg 11A  
5473 HC Heeswijk-Dinther  
The Netherlands

hereby declares that the following machinery

**Flingk bottom discharge spreader type: OL**

with the serial number effective from

**Serial No. 87-19-3627**

fulfils all of the relevant requirements of the EC Machinery Directive 2006/42/EG.

's-Hertogenbosch, 6 December 2016

Flingk Machinebouw B.V.,

Dhr. Ing. N.C.W van den Berselaar

A handwritten signature in blue ink, appearing to be 'N.C.W. van den Berselaar', written over a faint circular stamp or watermark.

Indien er wezenlijke veranderingen aan deze machine aangebracht worden, die van invloed kunnen zijn op de veiligheid of de naleving van de verordening, dient de conformiteit opnieuw te worden beoordeeld en bevestigd voordat de machine opnieuw in gebruik wordt genomen.

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## 1 SAFETY INSTRUCTIONS

Read all safety decals and safety statements in all manuals prior to operating or working with this equipment.



### **DANGER!**

**This symbol by itself or with a warning word throughout this manual is used to call your attention to instructions involving your personal safety or the safety of others. Failure to follow these instructions can result in injury or death.**

The machine has been marked with safety decals without text. For a safe use of the bottom discharge spreader make sure you understand and follow up the instructions on these decals. What is the danger, in which place does the danger occur and, very important, which safety instructions must be taken.

Be careful and be aware of the risks that are associated with the use of the bottom discharge spreader! The meaning of the decals are shown below.

- Carefully read operator's manual before handling the machine. Observe instructions and safety rules when operating.



- Stop engine and ensure it cannot be re-started during performance of work on the machine.



- High pressure fluid hazard!  
Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Always work warily and make sure all hoses and pipes are depressurized during maintenance and repair.



- Use the bottom discharge spreader only for the purposes for which it was designed! Nobody, no persons, animals or other goods shall ride on/in the bottom discharge spreader or be transported by the bottom discharge spreader in any case.



- Attention moving parts!  
Stay clear of rotating and moving parts. Maintain a safe distance and make sure nobody is able to come in contact with the moving parts while operating. Never attempt to work on or repair the bottom discharge spreader while it is connected to the power source.



- Danger for crushing!  
When connecting the bottom discharge spreader, make sure nobody is between the bottom discharge spreader and the machine.



- Pay attention to rotating roller!  
Rotating roller on the underside of the machine. Watch out for feet and other limbs. Stay away from the rotating parts.



2 NAME PLATE DETAILS

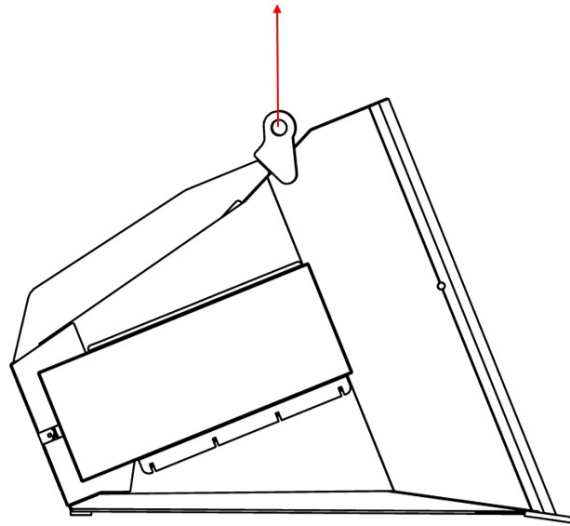
The nameplate of the Flingk bottom discharge spreader is located in the front of the machine, in the upper right. In case of correspondence, kindly state the type- and serial number of your machine. Complete the text below with the corresponding numbers on the nameplate.



- A. Machine : .....
- B. Type : .....
- C. Serial number : .....
- D. Year of build : .....
- E. Weight [kg] : .....
- F. F1 Max. flow ( $Q_{max}$ ) [l/min] : .....
- G. F1 Max. pressure ( $P_{max}$ ) [bar] : .....
- H. F2 Max. flow ( $Q_{max}$ ) [l/min] : .....
- I. F2 Max. pressure ( $P_{max}$ ) [bar] : .....
- J. Voltage [V] : .....
- K. Current [A] : .....

### 3 LIFTING INSTRUCTIONS

For the movement and transport of the Flingk bottom discharge spreader without a suitable machine make sure you use the mounting points as indicated within the picture below. Check before lifting whether the lifting capacity of the equipment used is able to hold the total weight of the bottom discharge spreader. The total weight of the bottom discharge spreader is indicated on the type/serial plate as well as under the technical specifications within chapter 5 of this operator's manual.



### 4 PRODUCT DESCRIPTION

The Flingk bottom discharge spreader is designed for different bedding materials. Check within the technical specifications, before using the spreader, for which bedding material your type of bottom discharge spreader is built. The bottom discharge spreader is carried out in different volumes, which you can find in chapter 5 of this manual. The dosing is done by means of a hydraulically driven roller with carriers. The speed is adjustable so that the dosage can be regulated very accurately. Two rollers at the top of the bin prevent bridging and ensure that there is a constant supply of bedding material over the entire width of the bucket. By means of a slider on the left side of the machine, it is also possible to spread a row of bedding material along the side of the wall.

## 5 TECHNICAL SPECIFICATIONS

The Flingk bottom discharge spreader is designed for different bedding materials. The table below provides an overview of the different types with their according technical specifications as well as the types of bedding materials. The bedding materials are abbreviated as follows:

Z	Sawdust
GS	Crushed straw
HS	Chopped straw
T	Peat
C	Compost
HK	Wood shavings
SP	Straw pellets

Volume	OL 2000	OL 3000
Bedding material <sup>1</sup>	Z,GS,HS,T,C,HK,SP	Z,GS,HS,T,C,HK,SP
Width (mm)	2350	2550
Content (l)	2000	3000
Weight <sup>2</sup> (kg)	690	795
Max. loading capacity	1000	1200
Max. system pressure (bar)	175	175
Max. peak pressure (bar)	225	225
Min. required oil flow	30 L/min	35 L/min

<sup>1</sup> The meaning of the abbreviations are described in the beginning of chapter 5 of this manual.

<sup>2</sup> Weight exclusive linkage, weight may vary depending on the version of the machine and linkage.

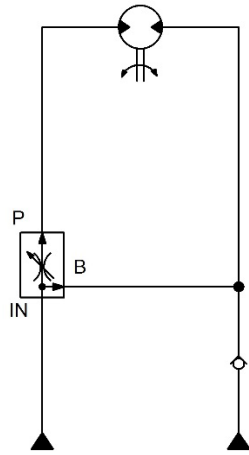
Shovel-linkage +30-100 kg

Three-point linkage single cylinder +30-100 kg

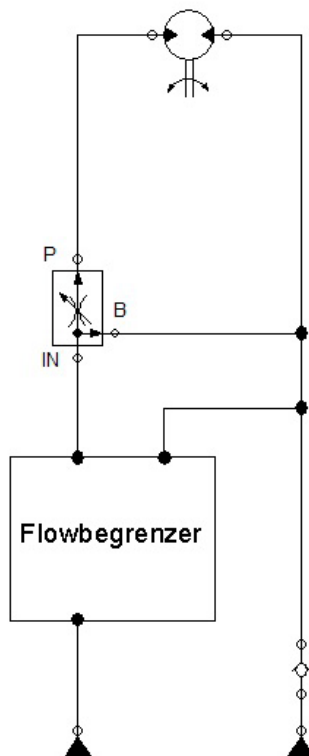
Three-point linkage double cylinder +150 kg

## 6 HYDRAULIC FLOW CHART

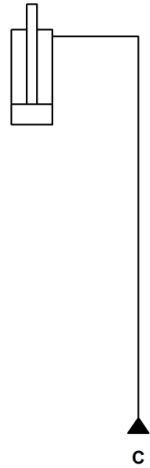
Depending on the type and options, different hydraulic flow charts are applicable. Below the standard available flow charts.



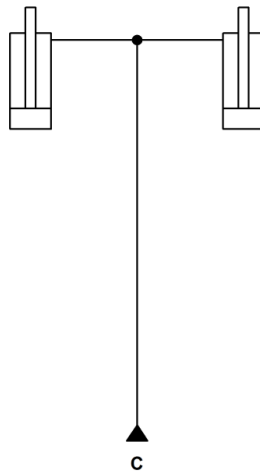
*Hydraulic flow chart type OL  
Standard version*



*Hydraulic flow chart type OL  
With flow limiter*



*Hydraulic flow chart three-point linkage<sup>3</sup>  
Single cylinder*



*Hydraulic flow chart three-point linkage<sup>3</sup>  
Double cylinder*



**Before maintenance of the hydraulic system disconnect the hoses of the connected machine and make sure that the hoses are depressurized!**

<sup>3</sup> In case of an 'additional valve' both; the tractor linkage and the bottom discharge spreader hydraulics are connected after the manifold. In this case only 1 double regulating valve is required.

## 7 COMMISSIONING



**The bottom discharge spreader may only be used by those which have read and understand the within this operator's manual specified and operating instructions. Only completely competent operators which know how to use the controls, the bottom discharge spreader's capabilities, dimensions and all safety requirements may operate the bottom discharge spreader.**

Before using the bottom discharge spreader, check whether the combination of the bottom discharge spreader and connected machine is safe. Pay special attention towards the maximum lifting capacity and hydraulic power of the connected machine. The technical details of the bottom discharge spreader are indicated on the type/serial number plate or in the technical specifications (chapter 5) within this operators manual.

For more information whether the combination of bottom discharge spreader and connected machine is safe check also the operator's manual of the connected machine.

### 7.1 MOUNTING THE LINKAGE



**Use only the linkage made and delivered by Flingk Machinebouw to connect the bottom discharge spreader and the machine.**



**Mount the linkage with the original fasteners delivered by Flingk Machinebouw.**

The linkage should be mounted on the two square tubes that are welded on the bottom discharge spreader. The fasteners are delivered with the linkage.

1. Turn the fasteners hand-tight, with the linkage at about the right place.
2. Measure, when needed, the size of the linkage.
3. Also measure the width to the outside of the mounting sleeves and make sure the size is the same on both sides so that the coupling is centred.
4. Tighten all fasteners, ensure that locknuts are used.
5. Eventual adjust the stop to the driving machine.
6. Before taking the machine in use, try to fit the linkage to the driving machine to ensure the connection fits properly.

## 7.2 COUPLE THE MACHINE

The Flingk bottom discharge spreader can be connected by means of the three-point linkage of a tractor or the quick coupler system. Follow depending on the type of connection the following instructions:

1. connection by means of a quick coupler system
2. connection by means of a three-point linkage

### 7.2.1 Connection by means of a quick coupler



**Before using the bottom discharge spreader, check whether the combination of the bottom discharge spreader and the connected machine is safe. Pay special attention towards the maximum lifting capacity and hydraulic power of the connected machine.**



**Make sure you never connect the drain line (red dust cap) at a pressure outlet!**

Always check before connecting the bottom discharge spreader whether the connection on the bottom discharge spreader is appropriate for the connection on the machine.

Pay special attention towards the distance between the holes and pins both, horizontally and vertically as well as the diameters of the different holes and pins. Before connecting the bottom discharge spreader always check the operator's manual of the machine and/or of the quick coupler system.

1. The bottom discharge spreader should be placed in the forward position, with the mounting points facing upwards, on a firm and level surface.
2. Follow strictly the instructions as described within the operators manual of the quick coupler system to attach the bottom discharge spreader towards the machine.
3. Check whether all connections are connected and secured properly.
4. Connect the hydraulic hoses. Connectors A and B (yellow/blue) should be coupled to the pressure ports on the connected machine (see hydraulic flow chart). Make sure the drain line is also connected well, it must not be pressurized during operation. Be aware and prevent unforeseen oil spills, think about the natural environment.
5. Check the movement and clearance of all hydraulic hoses, make sure they are of sufficient length and will not be wedged during operation.

### 7.2.2 Connection by means of a three-point linkage



**Before using the bottom discharge spreader, check whether the combination of the bottom discharge spreader and the connected machine is safe. Pay special attention towards the maximum lifting capacity and hydraulic power of the connected machine.**



**Make sure you never connect the drain line (red dust cap) at a pressure outlet!**

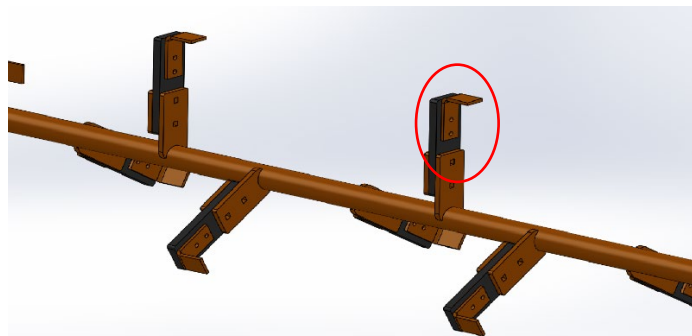
Always check before connecting the bottom discharge spreader whether the connection on the bottom discharge spreader is appropriate for the connection on the machine.

For connecting the Flingk bottom discharge spreader by means of a three-point linkage follow the next instructions:

1. The bottom discharge spreader should be placed in the upright position, with the mounting points facing forward, on a firm and level surface.
2. Make sure all connections are greased sufficiently before connecting the bottom discharge spreader.
3. To connect the bottom discharge spreader follow all instructions as provided within the operator's manual of the three-point linkage and/or the connected machine. Make sure you use the proper implements, these should fit accurately on the bottom discharge spreader.
4. Make sure all connections are secured properly
5. Connect the hydraulic hoses. Connectors A and B (yellow/blue) should be coupled to the pressure ports on the connected machine (see hydraulic flow chart). Make sure the drain line is also connected well, it must not be pressurized during operation. Be aware and prevent unforeseen oil spills, think about the natural environment.
6. Check the movement and clearance of all hydraulic hoses, make sure they are of sufficient length and will not be wedged during operation.

### 7.3 FIXED ARMS TYPE OL

The upper rollers of the bottom discharge spreader are provided with screw-on carriers. When bridging appears you can screw on the supplied carriers on the rubber strips.



*Type OL*



**Before the arms are (dis)mounted ensure the bottom discharge spreader is empty and positioned on a stable and flat surface. Always make sure the machine used to operate the bottom discharge spreader is safely switched off (please check its own manual for this).**

### 7.4 SIDE SPREADER-OPENING

All bottom discharge spreaders are equipped as standard with a slider on the left side. This can be used to spread a little line along the side of the bucket. Due to this you can spread all the way against the wall. By opening or closing this slider you can choose whether or not to spread to the side.

Adjusting the slider can be done by loosening the two wing nuts a few turns and sliding the slider backwards, the opening will become larger this way. Tighten the wing nuts again so the slider will stay in position.

Spreading only to underneath the bucket is done by loosening the wing nuts a few turns and sliding the slider forward. Fully close the opening. Tighten the wing nuts again so the slider will stay in position.



**Only adjust the slider when the driving machine is turned off and the hydraulic drive is pressureless! There should also be no more bedding material in the bucket.**



*Side spreader opening*

## 8 OPERATING INSTRUCTIONS



**The Flingk bottom discharge spreader is designed for different bedding materials. Check, before using the bottom discharge spreader, within the technical specifications for which bedding material your type of bottom discharge spreader is build. Do not use the bottom discharge spreader for materials it was not designed for!**

Before and while operating take the following instructions into account:

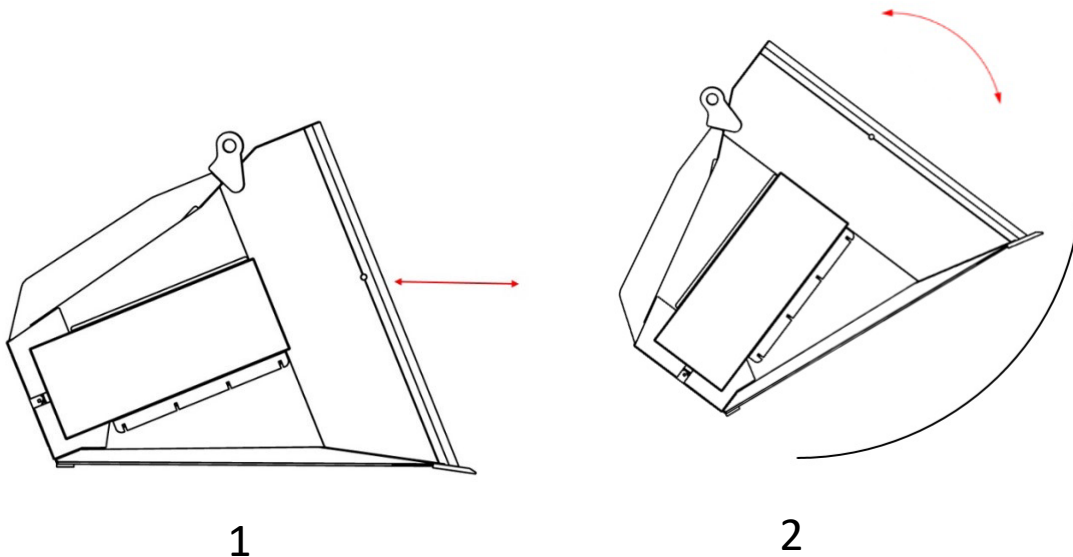
- Check prior to commencing work whether the safety decals are clean and can be read at all times, possible wear and tear of the entire bottom discharge spreader as well as the hydraulic hoses and presence of the yellow, blue and red dust caps on the connectors.
- Do not start working with an incomplete, damaged or dirty bottom discharge spreader!
- Check prior to commencing work the direction in which the conveyer belt rotates. This is depending on the manner in which the hydraulic hoses A and B (yellow/blue) are connected to the pressure ports.
- The bottom discharge spreader may solely be operated from the correct operators position within the cabin of the attached machine.
- In case of stuck bedding material within the bottom discharge spreader, place the bottom discharge spreader in the upright position on a firm and level surface, turn of the engine of the attached machine and make sure all hoses are depressurized before you attempt to loosen up the material. Be aware for the sharp edges and blades of the bottom discharge spreader and make use of appropriate tooling to loosen material.
- In case obstruction of the rollers or conveyer belt occurs, place the bottom discharge spreader in the forward position, with the mounting points facing upwards, on a firm and level surface, turn of the engine of the attached machine and make sure all hoses are depressurized before you attempt to clear the movement. Be aware for the sharp edges and blades of the bottom discharge spreader and make use of appropriate tooling to loosen material.
- Always consult the dealer or Flingk Machinebouw to check the bottom discharge spreader after a foreign object has caused the obstruction before starting operation again. Wear and use protective clothing and/or equipment while cleaning the bottom discharge spreader.

### 8.1 LOADING THE BOTTOM DISCHARGE SPREADER

In order to fill the bucket place the bottom discharge spreader in forward position, with the blade touching the ground (figure 1). Drive forward into the bedding material and turn the bottom discharge spreader towards the upright position (figure 2) after enough material is collected.



**Make sure nobody stays between the bottom discharge spreader and the bedding material while filling the bottom discharge spreader.**

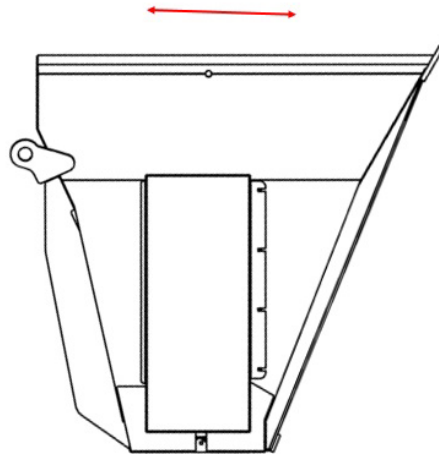


### 8.2 DRIVING WITH THE BOTTOM DISCHARGE SPREADER

Ensure that while driving the bottom discharge spreader is always in upright position and close to the ground. This prevents possible imbalance and increases the sight depending on the type of connection; in front or behind the bottom discharge spreader.



**The bottom discharge spreader is solely designed for use on private terrain, do not use or drive with it on the public road. In case you want to transport the bottom discharge spreader always adhere to the traffic, safety and environmental regulations and transport the machine in a responsible and safe manner.**



### 8.3 SPREADING



**Take care that nobody will be within the dangerous zone while operating, transporting or riding with the bottom discharge spreader. As an operator always ensure that nobody is within the reach of moving parts, within the operating area, or within close proximity of the machine while working.**

When spreading take follow the next instructions:

- Always keep the bottom discharge spreader in upright position while discharging the material.
- Ensure that no human being, animals or other materials are within the operating zone before starting to discharge the material.
- Hold the bottom discharge spreader briefly to the ground during spreading (bottom max. 70 cm from the ground). This ensures a better spreading pattern.
- During spreading, drive at a constant speed for the best result.

## 9 MAINTENANCE



**Maintenance and repair practices may only be performed by skilled specialists and by using proper tooling.**



**Never attempt to work on or repair the bottom discharge spreader while it is running! All power sources must be completely disengaged and the bottom discharge spreader should be placed in the forward position on a firm, level surface that is large enough to safely accommodate the bottom discharge spreader while repairing, cleaning or maintenance.**



**Any work done on the hydraulic system should be done by Flingk Machinebouw or authorized dealers.**



**Make sure the Flingk bottom discharge spreader is not subjected to extreme weather conditions and always store the bottom discharge spreader in a sheltered area which prevents exposure to persistent rain, snow and ice.**

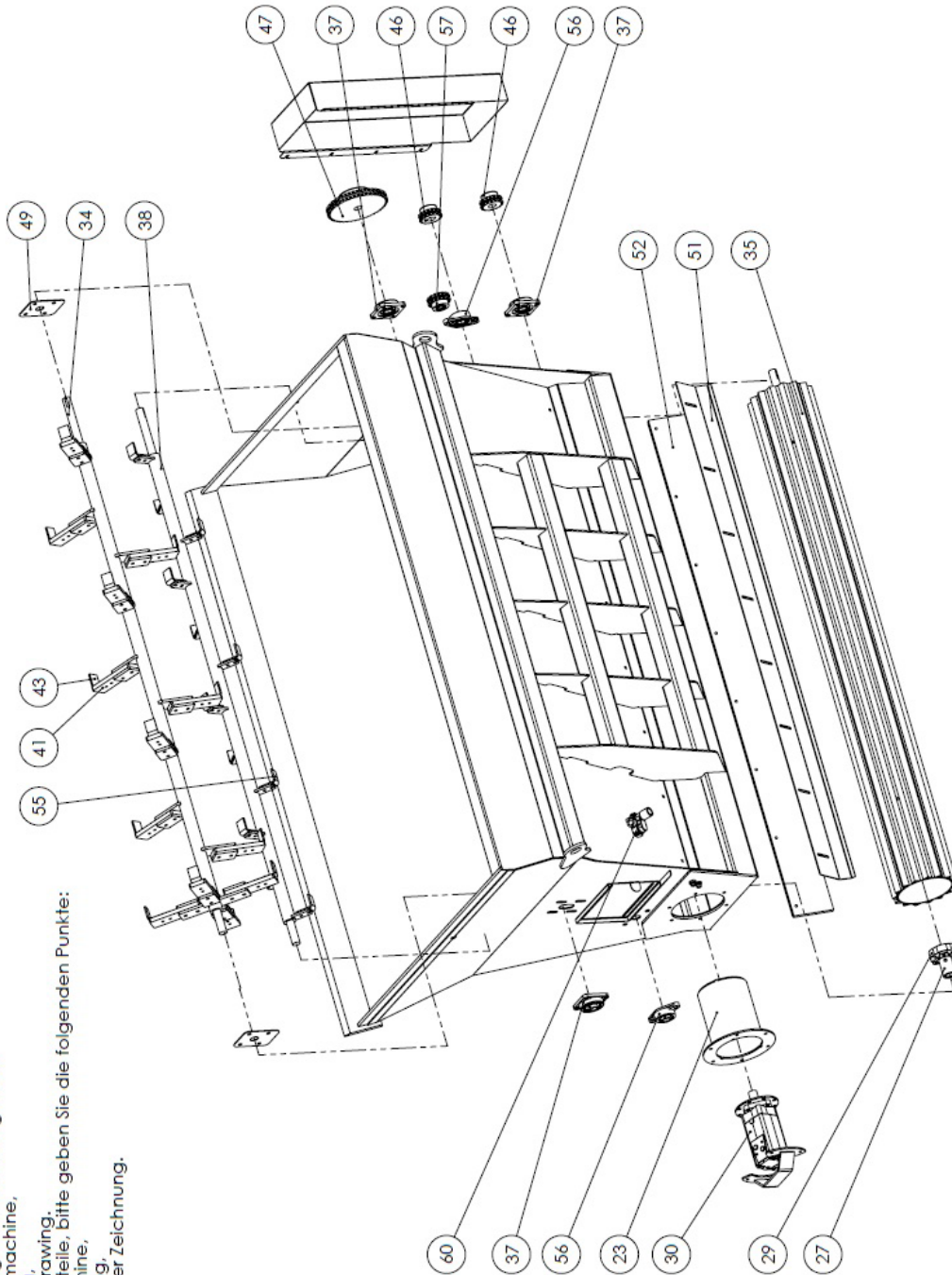
General maintenance instructions:

- Regularly check the front blade and the fixed arms on the rollers for possible damages, wear or flaws.
- Regularly check the roller for possible damages, wear or flaws. The roller may not collide anything.
- Grease all bearings every 3 months or every 30 operating hours. The bearings are located at the side of the bucket underneath the protective cover and above the hydraulic motor.
- Grease the chain every 3 months or 30 operating hours.
- Regularly check the tension of the chain of the rollers. If necessary, tighten the chain.
- Regularly check the hydraulic system for damage and wear. The protective cover of the hydraulic hoses may not be damaged under any circumstances.

10 PARTS LIST

10.1 TYPE OL

- Bij het bestellen van onderdelen graag de volgende dingen doorgeven:  
Het serienummer van de machine,  
De naam van de tekening,  
Het positienummer in de tekening.
- When ordering parts, please give the following items:  
The serial number of the machine,  
The name of the drawing,  
The item number in the drawing.
- Bei der Bestellung von Ersatzteile, bitte geben Sie die folgenden Punkte:  
Seriennummer der Maschine,  
Der Name der Zeichnung,  
Die Positionsnummer in der Zeichnung.



Drawing: OL01

## 11 WARRANTY CONDITIONS

Unless mentioned otherwise, the guarantee conditions as indicated within the METAALUNIE CONDITIONS, formerly referred to as the SMECOMA CONDITIONS, as published by the Koninklijke Metaalunie will be applied.

The clauses below are taken from this METAALUNIE CONDITION as issued by the Koninklijke Metaalunie in 2014.

### **Article 14: Warranty and other claims**

- 14.1 Unless otherwise agreed in writing, the Contractor warrants the proper execution of the agreed performance for a period of six months after delivery/completion. In the event that a different warranty period is agreed, the other paragraphs of this article are also applicable.
- 14.2. If the agreed performance was not properly executed, the Contractor will decide whether to properly execute it as yet or to credit the Client for a proportionate part of the invoice amount. If the Contractor chooses to properly execute the performance as yet, it will determine the manner and time of execution itself. If the agreed performance consisted (entirely or partially) of the processing of material provided by the Client, the Client must provide new material at its own risk and expense.
- 14.3. Parts or materials that are repaired or replaced by the Contractor must be sent to the Contractor by the Client.
- 14.4. The Client bears the expense of:
- a. all costs of transport or dispatch;
  - b. costs of disassembly and assembly;
  - c. travel and accommodation expenses.
- 14.5. The Client must in all cases offer the Contractor the opportunity to remedy any defect or to perform the processing again.
- 14.6. The Client may only invoke the warranty once it has satisfied all its obligations to the Contractor.
- 14.7. a. No warranty is given if the defects result from:
- normal wear and tear;
  - improper use;
  - lack of maintenance or improper maintenance;
  - installation, fitting, modification or repair by the Client or third parties;
  - defects in or unsuitability of goods originating from, or prescribed by, the Client;
  - defects in or unsuitability of materials or auxiliary materials used by the Client.

b. No warranty is given in respect of:

- goods supplied that were not new at the time of de-livery;
- the inspection and repair of goods of the Client;
- parts for which a manufacturer's warranty has been provided.

14.8 The provisions of paragraphs 2 to 7 of this article apply mutatis mutandis to any claims by the Client based on breach of contract, non-conformity or on any other basis whatsoever.

14.9 The Client cannot assign any rights under this article.







**FLINGK**

Machinebouw

