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# 1. FOREWORD

All technical and technological information as well as any drawings and technical specifications laid down in this manual, remain our property and shall not be used (other than for the operation of this product), copied, reproduced, transmitted or notified to third parties without our prior written consent.

**LIABILITY**

The data published in this manual is based on the latest information. It is provided subject to subsequent instructions.

We reserve the right to modify the construction and/or implementation of our products at any time without any obligation to modify any previously supplied products accordingly.

This manual should be read by all persons working on and with the machine.

Moreover, they should only use the machine for the intended purpose. This includes the following:

1. Work must be done according to the directions and within the functional limits, as laid down in the regulations. Only sound and proper tools are to be used.
2. Electrical/electronic equipment including accessories (e.g. cables) must be handled in accordance to the general rules of use for non-waterproof portable electric and electronic equipment. This entails the following:

a) Save and store in a clean and dry environment and away from rodents, etc.

b) Protect the equipment against strong, undamped shocks and moisture (rain).

3. Only original parts or equivalent replacement parts may be used and these should be assembled according to the regulations. A part shall be considered equivalent when it is explicitly approved by Kloppenburg Machinebouw or if you can prove that it has the required properties for the respective function(s).
4. Local accident prevention and safety regulations must be followed at all times.
5. Only people who are aware of the possible hazards are allowed to work with/on the machine.
6. Changes to the machine that are not expressly approved by Kloppenburg Machinebouw in writing, rule out any liability Kloppenburg Machinebouw has in respect of possible damage.

**Failure to follow the rules and instructions in this manual is considered gross negligence, and excludes Kloppenburg Machinebouw of liability for any resulting consequences. The risk lies fully and exclusively with the user.**

## WARRANTY

The warranty terms of the Metaalunie Terms of Delivery apply to the product. The warranty on electrical components is 1 year with a maximum of 150,000 bags.

The warranty on your equipment will void if:

- Service and maintenance is not carried out strictly according to regulations, repairs are not carried out by the manufacturer or dealer or are carried out without our prior written consent.
- Changes or modifications are made without our prior written consent.
- Non-original parts or other lubricants than the specified lubricants are used.
- The equipment is used improperly, incorrectly, negligently or not in accordance with its nature and/or purpose.

All wear parts are excluded from the warranty.

## MANUAL

**Note: Read this manual carefully before the machine is put into service, and follow all instructions. This is to ensure safe operation without malfunctions.**

Store these instructions carefully for future use!

This manual concerns the Kloppenburg Machinebouw Palletisers WiBo 6, WiBo 7, and WiBo 8 TPV.
It contains important instructions for avoiding potential accidents and damage before commissioning and during the operation of the machine, allowing the safest, most trouble-free operation possible. Read this manual carefully BEFORE the machine is put into service, familiarise yourself with the operation and controls, and follow the instructions to the letter.

If you have any questions or require further information about specific topics related to the machine, please do not hesitate to contact your dealer:

| **Dealer:** |
| --- |
| |

# 2. REGULATIONS, SAFETY FEATURES

Kloppenburg Machinebouw has made every possible effort to be as accurate and complete as possible about potential dangers in handling the machine.

Know what the icons on the machine mean.

It is important to be careful when performing operations on the machine. Warning icons indicate potential hazards.

## 2.1 SAFETY REGULATIONS

***Work safely!***

- You are responsible for (the monitoring of) compliance with these rules of conduct.
- The purchaser/user is required to make sure that operating, cleaning and maintenance personnel familiarise themselves with these instructions.
- Regularly check that all warning labels are still present in the right location on the machine.
- If warning labels are missing or damaged, apply new labels.
- Device deactivated?
  If the machine is deactivated for a long time, or if the machine will be demolished, remove all potentially dangerous parts.
- Make sure there are no persons within the working area of the palletiser from the moment it is started until the moment it is switched off.
- **Never enter the machine without the emergency stop switch having been activated.**

## 2.2. SAFETY FEATURES

Given the fact that the machine has a stationary position, it is fitted with shielding plating/mesh and thus does not pose a danger to persons in the vicinity of the machine.
Nevertheless, we are aware that it will certainly be possible to enter the machine wilfully, despite all the warnings. It is clear that entering the machine endangers that person.

The machine is equipped with the following safety features:

- Shielding around the machine by means of mesh fencing and metal sheeting
- Emergency stop switch on the worksite
- Walk-in protection
- Combined phase sequence/overcurrent protection C1 in the main circuit
- Circuit breaker F1 (10 Amps) in the main circuit
- The electric motors are protected against overloading
- Pressure regulator for the correct air pressure

You can find the following icons on the palletiser:

**Personal Danger!**

**Risk of Electric Shock!**

**Moving Parts!**

# 3. INTRODUCTION

## SCOPE

The palletiser is intended for stacking bags of 2.5 kg up to and including 50 kg as described in this manual. Optionally, crates and boxes can be stacked.
In operational order, the machine consists of the following main parts:
1. Supply belt(s) with optional collection flap and/or stitched belt with pusher
2. Lift
3. Gripper with rotation system
4. Lift frame (Z-axis with X-axis and Y-axis movements)
5. Pallet platform in main frame/pallet output track
6. Optional wrapper
7. Operation with PLC (Programmable Logic Controller)

## 3.1 SUPPLY CONVEYOR WITH COLLECTION FLAP AND/OR STITCHED CONVEYOR WITH PUSHER

Depending on the set-up and implementation, the palletiser can be equipped with one or more conveyors with collecting flap, a roller track and/or a stitched conveyor.
The conveyors/roller tracks ensure that the bags are transported to the lift and are designed in such a way that there are no rotating and moving parts outside the conveyor/track.
Depending on the stacking pattern, the collection flap can collect several bags, which the machine can move in one go. This can be done with bags up to 10 kg.
The pusher, which is mounted at the end of the stitched conveyor, can be a top-mounted, bottom-mounted or rotating version, and it moves the potato sack sideways or in longitudinal direction off the conveyor. The bag will fall flat on the lift or on a conveyor.
The movement is driven by a pneumatic cylinder that moves the pusher plate back and forth along an axis. The movement is protected by protective plating mounted around the machine.

## 3.2 LIFT

The bag is now flat on the lift. The lift moves the bag up into the waiting gripper in a vertical position. The lift platform is raised by an electric motor. The platform moves though U-shaped guides which are closed on the outside.
The movement is protected by protective plating mounted around the machine.

## 3.3. GRIPPER WITH ROTATION SYSTEM

Once in the gripper, the gripper closes so the bag cannot fall down. The lift now lowers again. Two pneumatic cylinders cause the gripper to close. The whole is attached to a central shaft, making it possible for the gripper to rotate 270 degrees. The rotation is generated by an electric motor with a brake and is detected by inductive sensors. The movements take place within the surrounding shielded area.

### 3.4 LIFT FRAME

Final positioning takes place within the lift frame. The gripper follows an X-axis and a Y-axis to a position determined by the programme. When it arrives at that position, the gripper opens and the bag falls into the desired location within the adjustable filling mould. The "X-axis" is a trolley which is moved to the left and to the right on a guide rail by a chain. This movement is driven by an electric motor with a brake and is detected by inductive sensors. The drive units are integrated into the guide rail.
The Y-axis is the movement of the gripper to the pallet or to the lift. This movement is generated by moving the guide rail back and forth on both sides with toothed belts. The toothed belts are driven by an electric motor with a brake and detected by inductive sensors.
Drive units are shielded by sheet metal and the mounted shielding around the machine.
If a layer is full, the complete lifting frame with the gripper moves up one position.
If the set number of layers is stacked, the lifting frame automatic moves up fully and the machine stops.
In order to achieve this, the lifting frame is suspended by 4 fibre bands, one band at each corner, which wind up along or unroll from a pipe.
An electric motor with a brake drives the pipe.
Mechanical sensors both at the top and the bottom define the end stops. The fibre bands have a load capacity that is at least ten times the load. The lifting frame rests on fixed mechanical stops in its lowest position.

### 3.5 PALLET PLATFORM IN FRAME/PALLET ROLLER CONVEYOR

The pallet is placed on the intended platform or pallet roller conveyor in the main frame. The pallet will remain there during the stacking process. The full pallet is removed from the palletiser with a forklift or automatically rolls from the machine via the roller conveyor. On this side, the machine is open. During palletising, it is not possible to walk in from this side. The open side, where the pallet is placed into the machine and where the pallet rolls out of the machine, is equipped with walk-in protection.

### 3.6 OPTIONAL WRAPPER

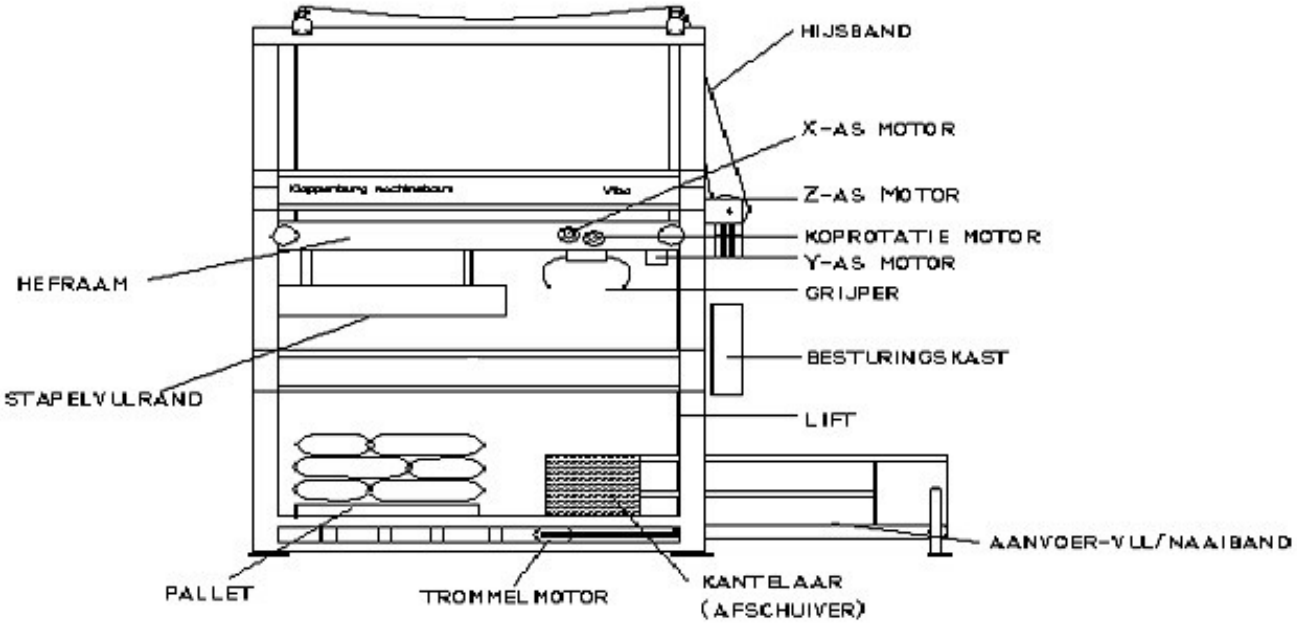
When the machine is equipped with a pallet conveyor, a wrapper can be attached to the machine. The full pallet then automatically rolls onto the wrapper. After the wrapping net/foil is tied and the wrapper is started, the pallet is wrapped automatically. When the wrapping is complete, the wrapper stops in a random programmed position. If the pallet does not need to be wrapped, the wrapper rotates to the programmed stop position when the start button is pressed. After the pallet is removed, the wrapper automatically turns to the starting position.
The wrapper is equipped with its own start and stop button and an emergency stop.
To reset the wrapper plateau, press the stop button 3 seconds and then push start.

### 3.7 OPTIONAL AUTO PALLET DISPENSER

When the machine is equipped with a pallet roller conveyor, an auto pallet dispenser can be attached to the palletizer. The dispenser can be filled with +/- 12 pallets of almost every size. When you fill the dispenser make sure that the **pallets are in a strait** pile. The pallet dispenser has his own start and stop buttons and works on his own. Every time when roller conveyor removes the full pallet it will put in a new pallet in to the palletizer. For unloading the dispenser press the stop button 3 seconds. The hoist will  put the pallets pile down and go up in top so you can fill or refill the dispenser.

### 3.8 OPERATION WITH PLC

The machine is controlled by a PLC. The programme is developed in such a way that all movements of the machine follow in a logical order. If the emergency stop or walk-in protection is activated, the machine stops and pauses the programme. In this case, it can no longer be put in motion. After deactivation of the emergency stop and walk-in protection, the machine must be restarted. The programme will then continue where it left off when the emergency stop was used.
The selection and installation of the control cables almost excludes interference by cable breakage.



## 4. TECHNICAL SPECIFICATIONS TYPE TPV

Dimensions (l x w x h):

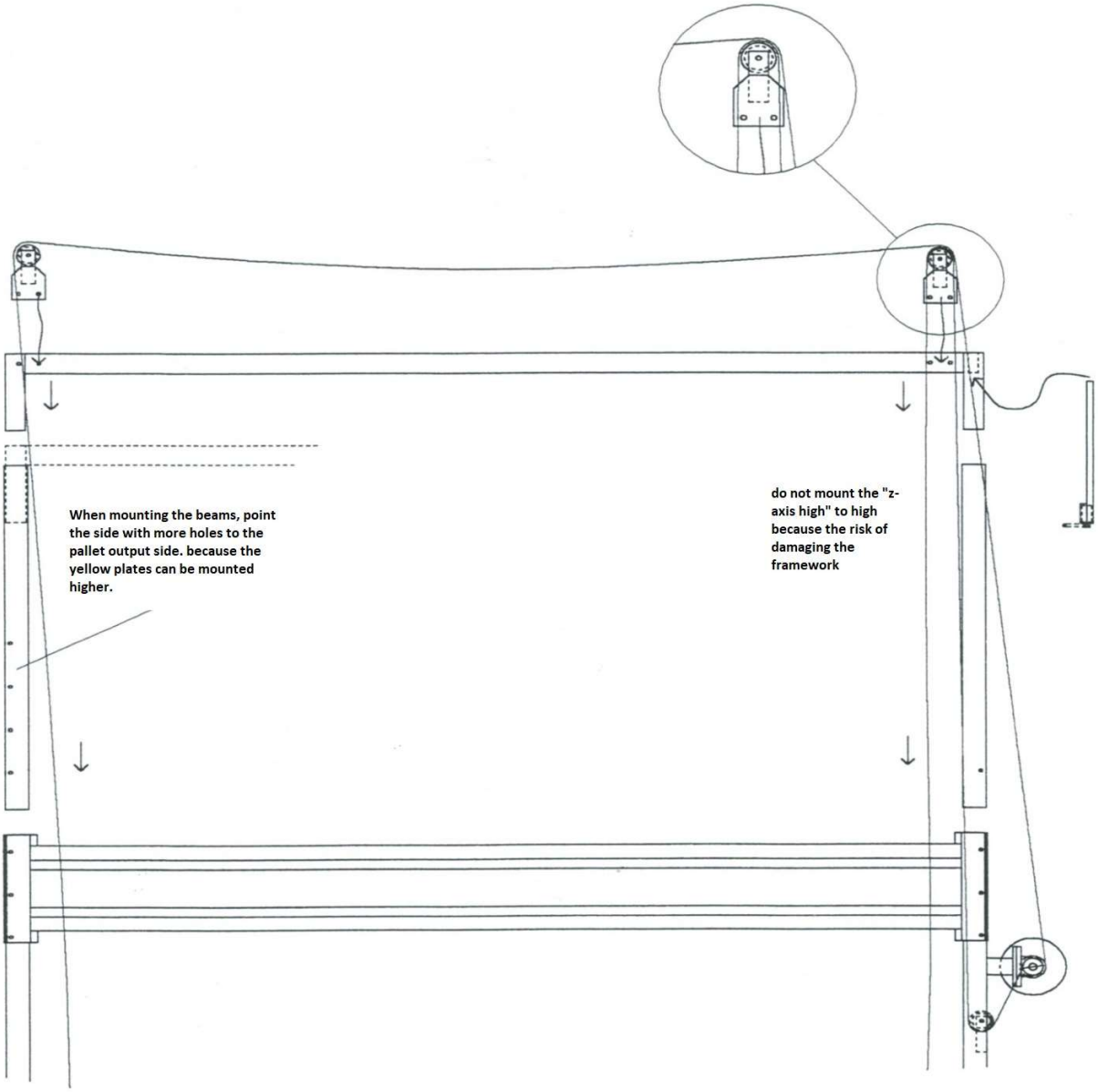
| | |
|---|---|
| WiBo 6: | 2.95 x 2.35 x 3.80 m |
| WiBo 7: | 3.25 x 2.00 x 3.80 m |
| WiBo 8: | 2.95 x 2.00 x 3.80 m |
| Weight with conveyor: | 1600 kg |
| Bags to stack: | 2.5 to 50 kg. Max. 24 bags per layer and 30 layers max. |
| Capacity: | 650 bags/hour |
| Capacity with collection flap up to 10 kg: | up to 950 bags/hour |
| Max. pallet size WiBo 6 and 7: | 1.20 x 1.60 m |
| Max. pallet size WiBo 8: | 1.10 x 1.30 m |
| Number of stacking programmes: | 100 freely programmable |
| Control: | Siemens PLC |
| Power supply: | 400 VAC; 3-phase, neutral + earth |
| Main fuse: | 10 Amps. |
| Air pressure: | min. 8 bar, 150 l/min |
| Implementations (based on position): | WiBo 6.1; 6.2<br>WiBo 7.1; 7.2; 7.3; 7.4<br>WiBo 8.1; 8.2; 8.3; 8.4; 8.5; 8.6 |

**Wrapper:**

| | |
|---|---|
| Weight: | 420 kg |
| Control: | Siemens PLC |
| Power supply: | 400 VAC; 3-phase, neutral + earth |
| Payload: | 2000 kg |
| Rotational speed: | 8 RPM |
| Roller type: | 3500 / 0.5 m |

In addition to these standard designs, variations in specifications and implementations are possible/negotiable.

## INSTALLTION INSTRUCTIONS UPPER FRAME  WiBo 6, 7 and 8



# 5. INSTALLATION, SETTINGS

## 5.1 INSTALLATION

Upon arrival immediately inspect the shipment on:

a) Any damage and/or defects caused by transport. Make sure the carrier draws up a transport damage protocol on the spot.
b) The accuracy of the delivery(s), the absence of (additional) ordered products.

In all cases of damage, contact Kloppenburg Machinebouw.

For transport, the machine is delivered in parts. The palletiser should be assembled by trained personnel.

**Short assembly sequence:**

- Mount the superstructure
-  Mount the end sensor
- Place the machine in the right location with a forklift
- Place and connect the supply belt(s)
- Install the optional wrapper
- Connect the compressed air line
- Plug the power cord into the power socket and check the phase sequence on the phase sequence/overcurrent relay C1 (2 LEDs should be lit). When one LED is lit, the phase sequence is incorrect. If that is the case, disconnect the power cord from the power socket and switch two phases in the plug.

Generally, the electrical installation should be carried out by qualified personnel.

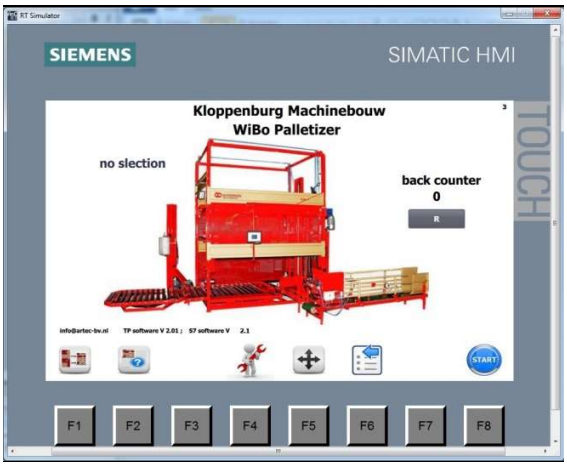
## 5.2 SETTINGS

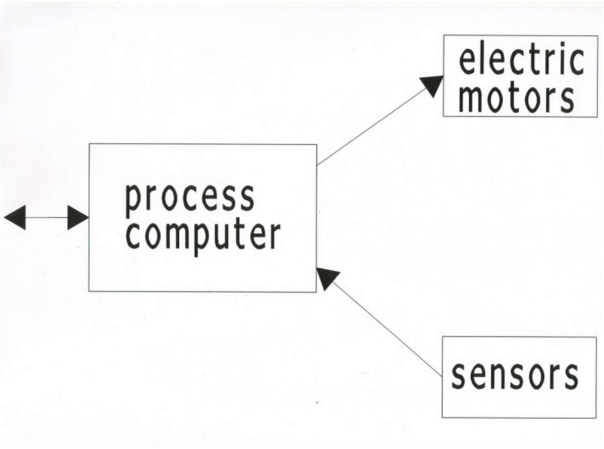
- Check sensors for correct input on PLC
- Set air pressure, pressure regulator to 8 bar
- Various programmes

# 6. CONTROLS

## 6.1 GENERAL

The control unit is equipped with a main switch. The remote control contains an emergency stop and a TP control panel.
With the TP (touch panel) in the remote control the user can carry out all the necessary functions and compile stacking programmes.
The TP serves as an interface between the user and the process computer (PLC). The process computer controls the palletiser.




The above shows that all the controls and monitoring of the palletiser are realised by the process computer.
**This means that all the settings, layer patterns, and the stacking programmes need to be stored in the memory of the process computer.**
With the aid of the connected TP, the user can adjust these settings and/or stacking programmes as needed.

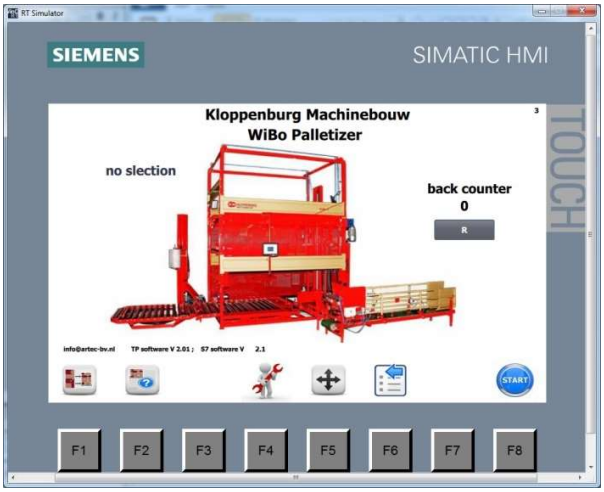
**Note!:**

- After pressing a button on the control panel display a new screen will appear
- With F8 you return to the previous screen or to the main menu
- Each screen has a screen number in the upper right-hand corner. This allows you to easily look up the relevant menu from this book on the TP

**Emergency alarms such as EMERGENCY STOP ACTIVATED and MOTOR MONITORING ….. TIME TRIGGERED should be accepted in the main menu by pressing F6 twice.**

## 6.2 THE MAIN MENU “KLOPPENBURG MACHINEBOUW WIBO PALLETIZER”

When you activate the main power switch on the control unit, the main menu of the TP will be displayed.

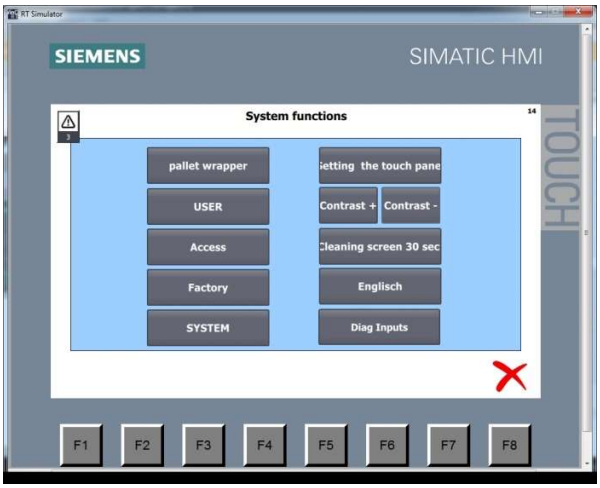



In this menu:

- The user can read the number of stacked bags and reset the counter
- In F1 stacking programmes can be created and edited, **see 6.5**
- F2 gives an overview of the existing stacking programmes in the machine, **see 6.6**
- F4 can be used for all the basic settings, **see 6.3 and 6.8**
- Via F5 the various motors or air cylinders can be operated. In addition, the current positions of the X-axis, Y-axis and the head are indicated, **see 6.4**
- With F6 you can read and reset (error)messages
- With F8 you can start or stop the machine, **see 6.7**

## 6.3 MENU “SYSTEM FUNCTIONS”

Pressing F4 (System functions*)* in the main menu, opens screen 14.

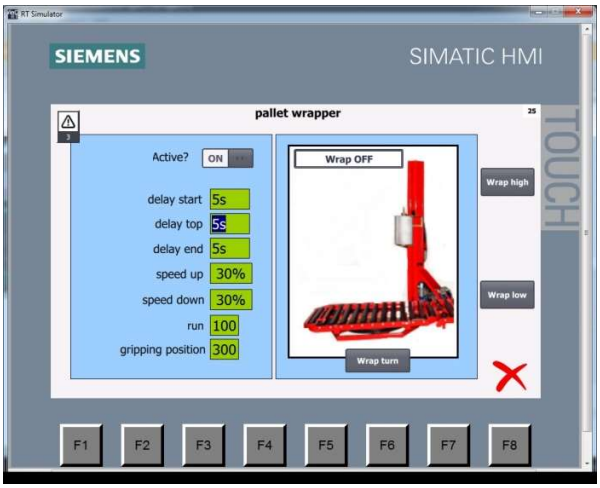



In this menu:

- "pallet wrapper" can be used to program the optional wrapper, **see 6.3.1**
- The user can change some basic settings in “USER”, **see 6.8**
- "Access" opens screen 29 -> Code retrieval. With this code, a password can be obtained from the manufacturer to enter "Factory" and "System".
- "Factory" opens screen 2 with the menu Factory Settings
- "SYSTEM" allows the manufacturer and/or dealer to view and adjust parameters, **see 6.8**
- "setting the touch panel" can be used to calibrate the screen by pressing the cross in the middle and in each corner. If you want to save the calibration you must press anywhere on the screen within 30 seconds.
- "Contrast -" and "Contrast +" can be used to set the contrast of the display
- "Cleaning screen 30 sec" gives the user 30 seconds to clean the screen without a function being activated
- Pressing the "Englisch" button changes the language
- "Diag Inputs" allows checking the operation of the sensors and switches
  With F8 you return to the main menu.

### 6.3.1 MENU “PALLET WRAPPER”

By pressing "pallet wrapper" in the "System Functions" menu, the following screen is displayed:




In this menu:

- You can activate and deactivate the pallet wrapper. When the wrapper is "OFF", and the start button on the wrapper is pressed, the wrapper rotates the pallet to the set grabbing position. This is the position for grabbing the pallet from the wrapper. When the pallet has been moved from the wrapper, the wrapper turns automatically to the set starting position. When the wrapper is "On", and the start button on the wrapper is pressed, the wrapper will wrap the pallet. After wrapping the pallet, the pallet can be moved from the wrapper and the wrapper automatically turns to the starting position.

- "delay start" is the time that the wrapping carriage waits to go up after it started (number of windings at the bottom while going up).

- "delay top" is the time that the wrapping carriage waits at the top before it goes down again (number of windings at the top).

- "delay end" is the time that the wrapper is still running after the carriage is down (number of windings at the bottom while going down).

- The speed can be reduced or increased. This determines the number of windings around the pallet.

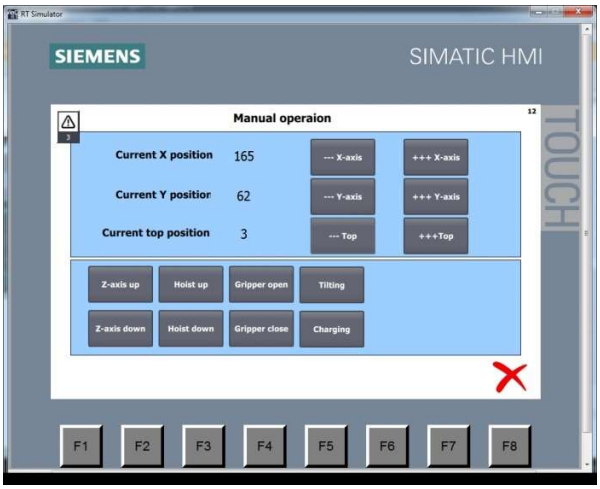
- The starting position can be set. This is the straight position relative to the position of the palletiser.

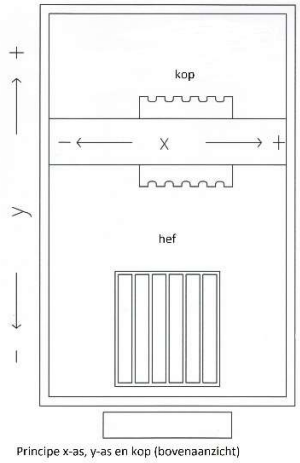
- The gripping position can be set. This is the position for grabbing the pallet from the wrapper.
- The wrapper can be controlled manually.

With F8 you return to the main menu.

## 6.4 MENU “MANUAL OPERATION”

Pressing F5 (Manual operation) in the main menu, opens screen 12:



Principe x-as, y-as en kop (bovenaanzicht)

In this menu:

- Various functions can be operated and tested manually. In addition, it indicates the current position of the X-axis, the Y-axis and the top (head).

With F8 you return to the main menu.

## 6.5 MENU “COMPILING STACKING PROGRAMME”

### 6.5.1 GENERAL (IMPORTANT TO KNOW!)

When a button on the display is touched, the following screen is displayed:


The relevant value can be entered here and confirmed by pressing enter 

The most common stacking programmes are programmed by default. It is possible to change or add a stacking programme as follows:

With F5 (Manual Controls) you can place a bag in the gripper in the way it would normally be placed in de gripper:

Supply → raise lift → close gripper.

Leave the bag in the gripper while programming!

Use "Manual Controls" to navigate to the correct position and register that position.

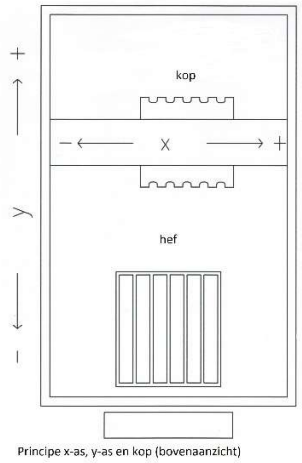
Compile the desired layer patterns by entering the coordinates in the process computer and the attached list (see chapter 6.5.2).

A layer pattern is one layer consisting of a number of bags.

Compile and enter stacking patterns in the attached list and enter the stacking patterns in the process computer (see chapter 6.5.3).

A stacking pattern is a complete pallet consisting of a number of layer patterns.

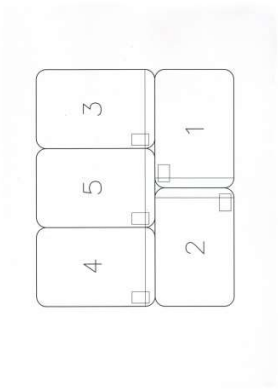
In order to correctly position a bag on a pallet, this bag requires coordinates. Each bag has an x, y and head coordinate. You can find these coordinates with the aid of the manual controls. All coordinates can be entered in the attached list.



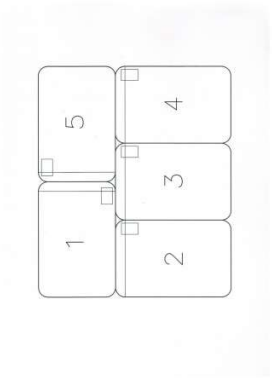
Principe x-as, y-as en kop (bovenaanzicht)

With the aid of these bag coordinates, it is possible to compose 100 layer patterns of up to 24 bags in the TP.
With these 100 layer patterns, it is possible to compile 100 stack patterns of up to 30 layers.

Layerpattern 23




Layerpattern 24




Example: pallet consisting of two layer patterns with 5 bags each (e.g., layer pattern 23 and layer pattern 24). The numbers indicate the bag sequence, see the attached list of layer patterns. They can be modified or more can be added at your own discretion.

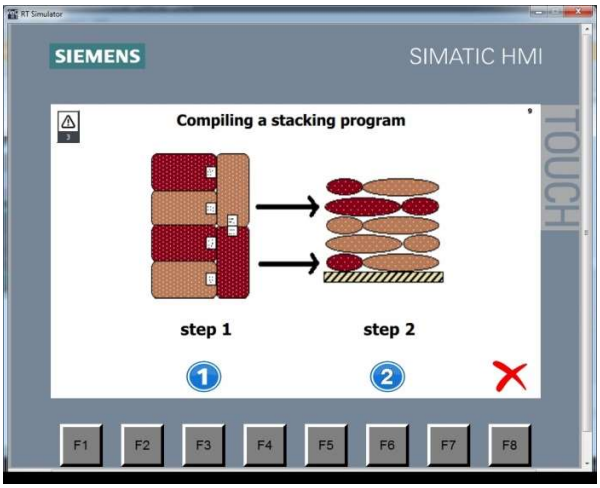
This way, the TP can be used to create and save 100 different stacking patterns of up to 30 layers. See the attached list of layer patterns and stacking patterns (programmes). More can be modified or added at your own discretion.

**Summary:** *First, the layer patterns are composed. With these layer patterns, the stacking patterns (programmes) are composed.*

When programming, take into account on which side the pallet will be removed from the machine for the correct positioning of the coordinates!

Remember to mount the provided inserts in the filling mould when programming on a pallet of 1000 x 1200 or 800 x 1200!

Pressing F1 (Compiling a stacking program) in the main menu, opens screen 9:



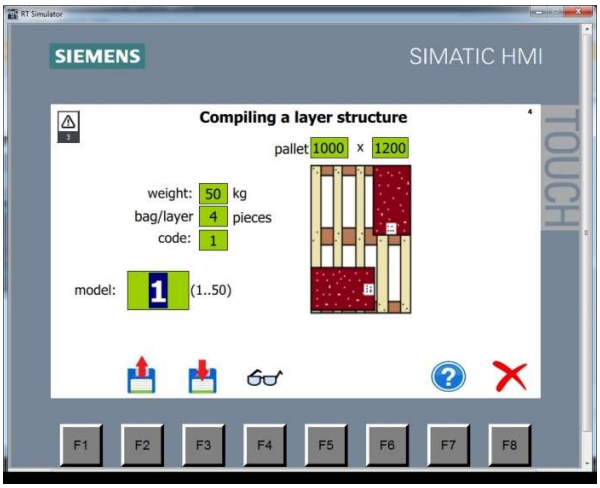

In this menu:

- Step 1 is F3: compiling and adjusting layer patterns, **see 6.5.2**
- Step 2 is F6: compiling and adjusting stacking programmes, **see 6.5.3**

With F8 you return to the main menu.

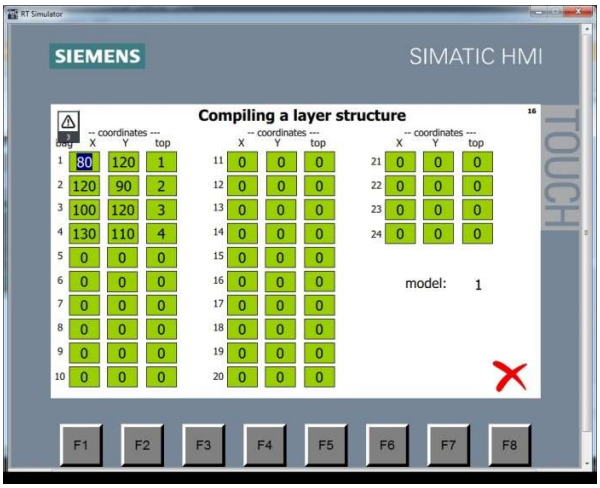
### 6.5.2 MENU “COMPILING A LAYER STRUCTURE”

Pressing F3 (Compiling a layer structure) in the previous screen 9, opens screen 4:




In this menu:

- Pressing F7 displays a list of all layer patterns that have been entered or still have to be entered.
- The pallet size, the desired pattern number, the weight and the number of bags can be entered per layer. It is also possible to add a code.
- F2 retrieves the desired pattern number from the process computer.
- F4 makes the pattern visible:



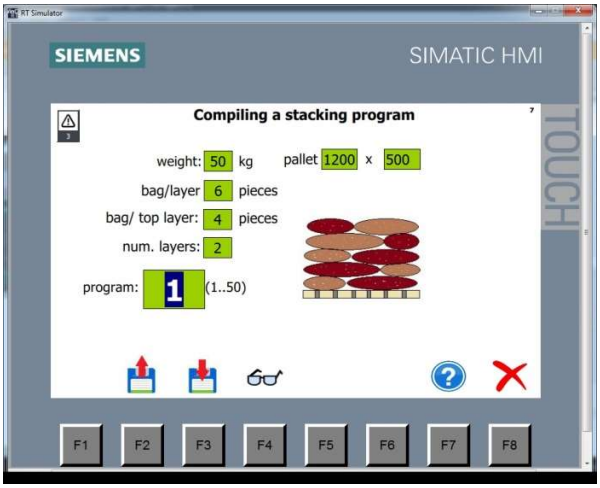
In this menu:

- The bag coordinates can be entered/modified.
- In addition, the number of bags that are discarded each time should be indicated for a machine with a collection flap.
- With F8 you return to screen 1. When you want to save the entered coordinates, press F3. If the pattern already exists the query "**Overwrite?**" is displayed. If you want to overwrite an existing pattern, press F3 again.

You can often reuse many coordinates from an existing layer patter for a new layer pattern. In this case you can retrieve the concerning pattern from the process computer and save it as a new pattern number. You can now adjust this pattern.

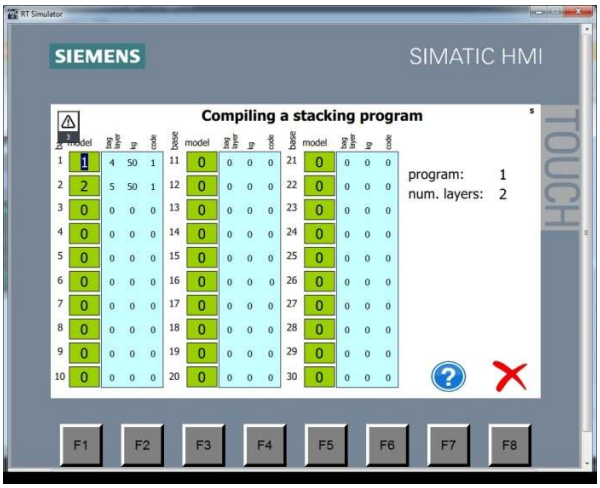
### 6.5.3 MENU "COMPILING A STACKING PROGRAMS"

Pressing F6 (Compiling a stacking program) in screen 9, opens screen 7:




In this menu:

- Pressing F7 displays a list of all stacking programmes that have been entered or still have to be entered
- The pallet size, the programme number, the weight and number of bags per layer, the number of bags for the top layer and the total number of layers can be entered.
- F2 retrieves the desired programme number from the process computer.
- F4 makes the programme visible:



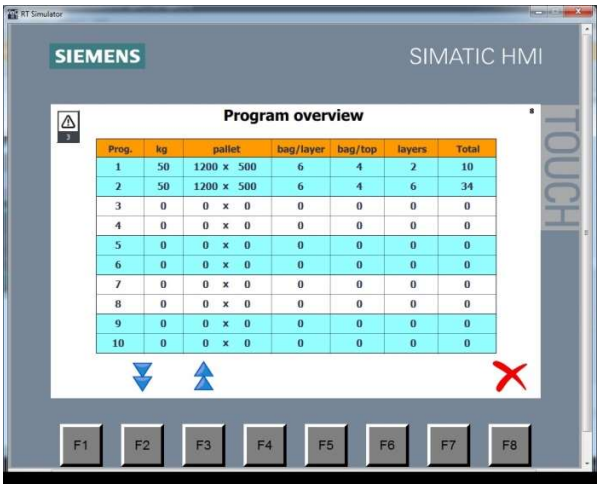

In this menu:

- The user programs the desired layer patterns for the respective layers.
- “bag/layer", “kg” and “code” are filled in automatically.
- With F8 you return to screen 7. When you want to save the compiled stacking programme, press F3. If the programme already exists, the query “**Overwrite?**” is displayed. If you want to overwrite an existing programme, press F3 again.

You can often use an existing programme to create a new one, e.g. you have a programme of 25 kg and 8 layers and want a programme for 10 layers. In this case you can retrieve the concerning programme from the process computer and save it as a new programme number. You can now adjust this programme.

### 6.6 MENU “PROGRAM OVERVIEW”

Pressing F2 (Program overview) in the main menu, opens screen 8:



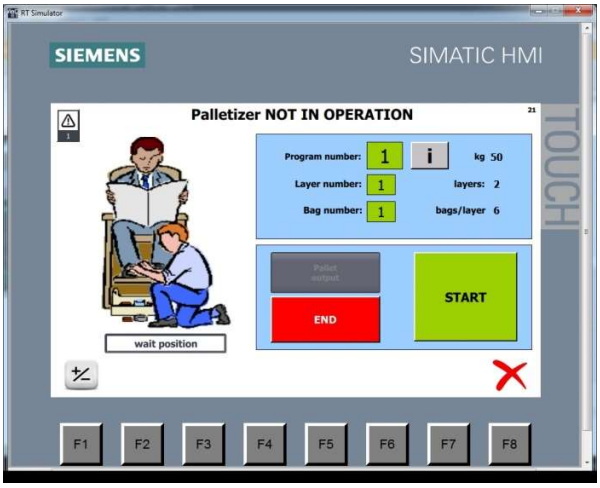
In this menu:

- An overview of all entered programmes is displayed
- If nothing has been entered, the overview is empty.
- With F2 you go to the next screen.
- With F3 you go to the previous screen.

With F8 you return to the main menu.

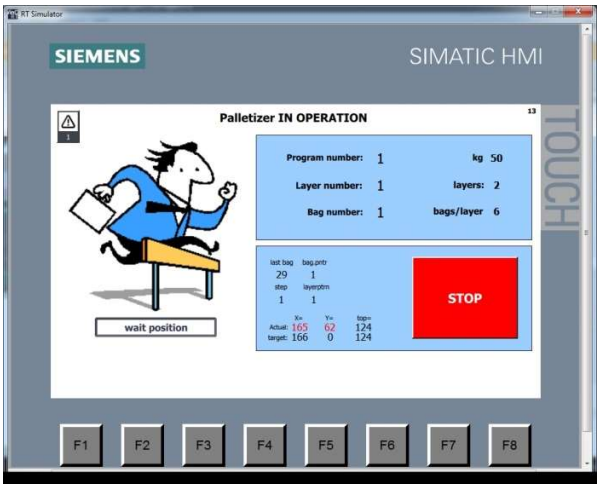
### 6.7 MENU “PALLETIZER NOT IN OPERATION”

Pressing F8 (Palletizer NOT IN OPERATION) in the main menu, opens screen 21:



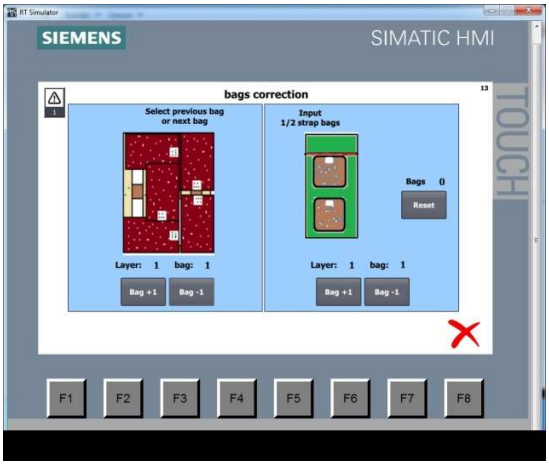

In this menu:

- The user can indicate which programme to use. Optionally, the layer and bag numbers can be entered for ½ pallet (**this is only possible when the lifting frame is in the highest position**).
- The user can stop the programme when it is halfway through by pressing "END". The lifting frame will go up.
- The pallet discharge can be operated (if present).
- By pressing "START", the lifting frame goes down, the machine is now in operation. The following screen is displayed:




In this menu:

- The user can read the active layer and bag during palletizing. In addition, the coordinates of the active bag are listed.
- The user can stop the programme when it is halfway through by pressing "STOP". When the machine has completed the entire programme, the lifting frame automatically rises. After placing a new pallet, the machine can be started again.
- **When you press "STOP", screen 21 is displayed. Pressing F1 (Bag Correction) will open screen 6:**

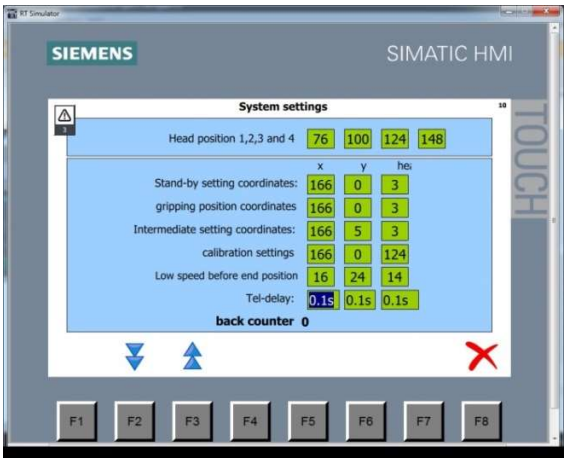


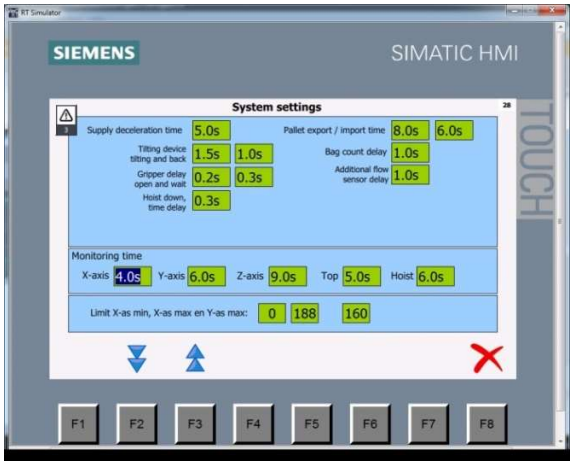

In this menu:

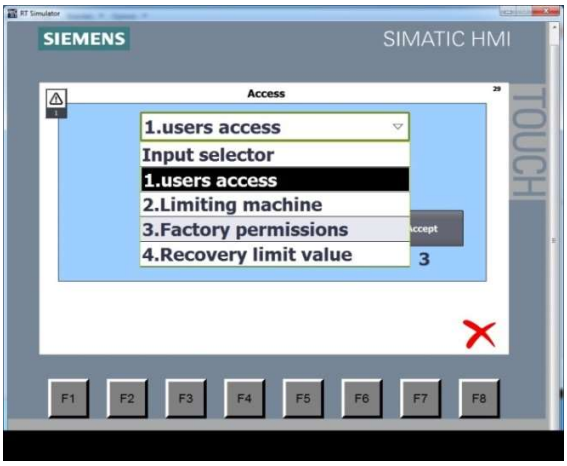
- By using the keys "bag + 1" and "bag - 1" the user can place a bag again or skip a bag during palletizing (only for machines without a collection flap).
- By using the key ½ strap bags you can reset the difference between bag pointer and charge pointer (screen 13) while doing that there are no bags on the way between collection conveyor and hoist.

- **6.8 EXTRA MENU “SYSTEM SETTINGS” (EXPERT)**

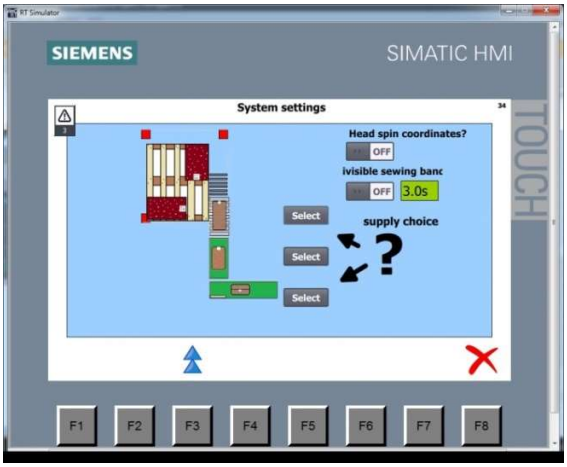
  From screen 14 (System functions) and after entering the password (only known to the manufacturer and dealer), the following screens are displayed. Basic settings can be viewed and modified here. The settings depend on the type and implementation:

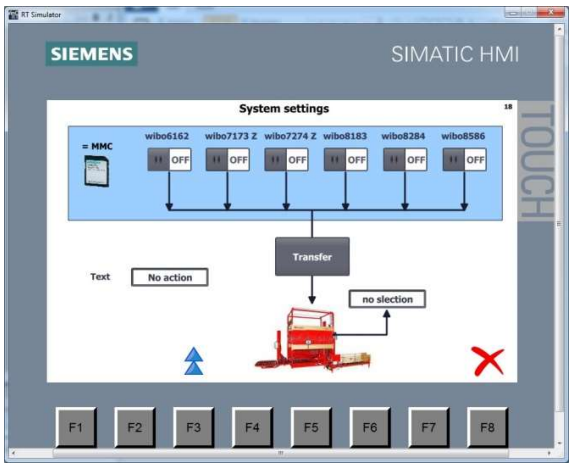


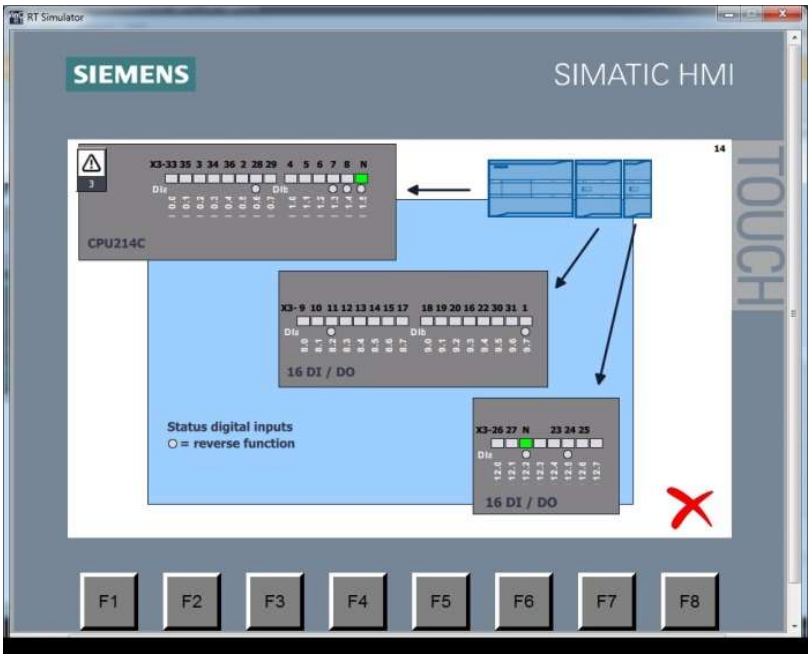




- **6.8 EXTRA MENU “SYSTEM SETTINGS” (USER)**

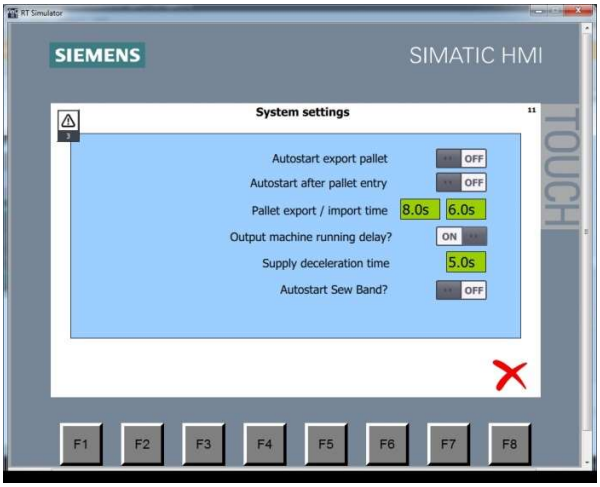
Pressing the button "Diag Inputs" on screen 14 displays the following screen.




In this screen the manufacturer or dealer can check existing switches/sensors for malfunctions. The picture below is of a machine equipped with a pallet roller track, wrapper and collection flap. If these options are not present on the machine, the corresponding switches/sensors are also not present.

When a switch/sensor is operated, the status on the screen will change from "on" to "off" or from "off" to "on". If this is not the case, the switch/sensor may be defective or there is a cable break.

Pressing the button "User" in screen 14, displays screen 11.




In this screen the user can change some basic settings.

- Auto start pallet output ON / OFF. In the case of "ON", the full pallet will be automatically transported out. At "OFF" you have to press "pallet output" in screen 21.
- Auto starts after pallet input ON / OFF. With "ON", the machine will start automatically when new pallet is loaded (pallet magazine). At "OFF" you have to press "start" in screen 21.
- Pallet output / input time 8.0s / 6.0s. At the first button you can enter the number of seconds for how long the pallet output will run. At the second button you can participate after how many seconds the entry may start.
- Output machine active delay ON / OFF. At "ON" the feed belts will run for one-shot time. At "OFF" the feed belts stop with program.
- Supply exit time 5.0s. In this button you can indicate in seconds how long the conveyor belts may continue to run after the end of the program.
- Auto start sewing band ON / OFF. In "ON", the sewing belt starts turning automatically again after shifting a bag. At "OFF", the belt will rotate again when you operate the start button yourself

# 7. MAINTENANCE

**Stop the machine and disconnect the power cord from the power socket before cleaning and/or maintenance of the machine.**

**When cleaning the machine, you should be careful with the high-pressure cleaner and/or compressed air. Avoid spraying bearings, seals and electrical components directly.**

## 7.1 MECHANICAL MAINTENANCE

- Check the various roller chains every 25,000 bags (the first time after 10,000 bags), if necessary tighten and grease lightly with chain spray.
- Check the fibre bands for fraying every 50,000 bags. **If damaged, replace immediately.**
- Check the carriage gripper X-axis bearings every 50,000 bags.
- Check carriage X-axis for excessive play that could cause it to tilt. The bottom roller can be adjusted to eliminate play, every 50,000 bags.
- Visual inspection of the bolts after every 50,000 bags.

## 7.2 PNEUMATIC MAINTENANCE

- Drain the moisture trap of the pressure regulator on a weekly basis.
- Regularly drain your own compressor tank.
- Clean or replace the mufflers/sound filters on the regulators after each 100,000 bags.

## 7.3 ELECTRIC MAINTENANCE

- Clean photocells regularly
- Visual inspection of inductive and mechanical sensors after every 50,000 bags.
- Check the distance between sensors and counting wheels. This can be maximally 1 mm.
- Visual inspection of the control cables after every 50,000 bags.
- Check the motor braking function after every 150,000 bags and adjust if necessary.

## 7.4 GENERAL

- After every 25,000 bags, check if the warning labels are still present. Replace them if necessary.
- Check that the mesh and protective covers are present and undamaged every day.
- Check the operation of the walk-in protection and emergency stop every day.

## 8. MALFUNCTION, REPAIR

The following table lists a number of malfunctions with a possible solution:
**For every malfunction you always first check whether the power supply and grounding of the machine and the air pressure are 100% in order.**

| ***Malfunction*** | ***Possible cause*** | ***Possible solution*** |
|---|---|---|
| Machine does not work | • Emergency stop or walk-in protection activated<br>• Incorrect phase sequence<br>• Circuit breaker F1 is set to 0<br>• No voltage | • Unlock emergency stop, test walk-in protection<br>• Switch 2 phases<br>• Switch on circuit breaker<br>• Plug the power cord into the power socket |
| Bag does not flip (if present) | • No air pressure<br>• Flip sensor is malfunctioning<br>• Lift not in lowest position<br>• Buffer photocell is dirty or not aligned with reflector (only for roller tracks) | • Connect air pressure<br>• Mount new sensor<br>• Move lift to lowest position<br>• Clean buffer photocell or align with reflector |
| Gripper does not open or close | • No air pressure | • Connect air pressure |
| Bag lift does not go up | • Photocell on lift does not detect the bag<br>• Gripper is not in the correct grip position | • Activate emergency stop, correct placing of the bag or adjust photocell, resume programme<br>• Adjust position of gripper with “Hand” or turn it away |
| No other stacker programme possible | • Lifting frame not in the highest position | • Place the lifting frame in the upper position (end of programme) |
| After every layer, the lifting frame goes upwards completely | • Photocell in filling mould is dirty or not aligned with reflector | • Clean photocell or align with reflector |
| Lifting frame does not come down | • Photocell in or below filling mould is dirty or not aligned with reflector | • Clean photocell or align with reflector |

| *Malfunction* | *Possible cause* | *Possible solution* |
|---|---|---|
| Supply belt does not run | • Belt is not tight enough<br>• Belt runs askew<br>• Start/stop switch is malfunctioning | • Tighten the belt<br>• Align the belt<br>• Replace the switch (test in “Hand”) |
| Machine stalls | • Motor monitoring time triggered (see display)<br>• Thermal protection triggered | • Cancel by restarting<br>• Reset thermal protection |
| Pallet does not roll out of the machine (roller track) | • Wrapper (if present) is not in the correct position | • Reset and start the wrapper (it returns to the starting position) |

If the type of malfunction is not in the table, please contact your dealer or manufacturer.

## 9. ENVIRONMENT

After the end of life, the machine must be disposed of according to local regulations.

# APPENDICES

## APPENDIX A. DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY FOR MACHINES
(Regulation 89/392/EEC, Appendix II A)

| | |
|---|---|
| Manufacturer: | **Kloppenburg Machinebouw** |
| Address: | **Louten 9** |
| Postal code, Town: | **9971 BC Ulrum** |
| Country: | **The Netherlands** |

Hereby declares that

Palletiser type WiBo 6 / 7 / 8 TPV, with serial number: _____

- Meets the requirements of the Machinery Directive (89/392/EEC, as last amended), the EMC Directive (89/336/EEC) and the Low Voltage Directive (2014/35/EU, as last amended)

- The following standards are applied as appropriate:

| | |
|---|---|
| EN 50081-1 | Emission |
| EN 50082-2 | Immunity |
| EN 60204 | Safety of machinery, electrical equipment |
| EN 294 | Safety distances upper limbs |
| EN 811 | Safety distances lower limbs |

Drawn up in: Ulrum, November 2016

Signature:

Bart Kloppenburg
Director

## APPENDIX B. SETTTINGS

The settings below are default settings, these can be changed for e.g. special implementations. All these settings are indicative and can vary slightly for each machine.

### WiBo 6.1/6.2

Grabbing position X-axis large grippers (viewed from side with the control unit):

| | | |
|---|---|---|
| lift right | = 200 | |
| lift centre | = 160 | |
| lift left | = 120 | |

Grabbing position X-axis small grippers (viewed from side with the control unit):

| | | |
|---|---|---|
| lift right | = 206 | (head of bag to the right of the hoist) |
| | = 194 | (head of bag to the left of the hoist) |
| lift centre | = 166 | (head of bag to the right of the hoist) |
| | = 154 | (head of bag to the left of the hoist) |
| lift left | = 126 | (head of bag to the right of the hoist) |
| | = 114 | (head of bag to the left of the hoist) |

Y max= 161  X min= 28  X max= 292  Y calibrate= 0

### WiBo 7.1/7.2/7.3/7.4 and WiBo 8.1/8.2/8.3/8.4 with pallet roller track:

Grabbing position X-axis large grippers (viewed from side with the control unit):

| | | |
|---|---|---|
| lift right | = 160 | |
| lift centre | = 120 | |
| lift left | = 80 | |

Grabbing position X-axis small grippers (viewed from side with the control unit):

| | | |
|---|---|---|
| lift right | = 166 | (head of bag to the right of the hoist) |
| | = 154 | (head of bag to the left of the hoist) |
| lift centre | = 126 | (head of bag to the right of the hoist) |
| | = 114 | (head of bag to the left of the hoist) |
| lift left | = 86 | (head of bag to the right of the hoist) |
| | = 74 | (head of bag to the left of the hoist) |

Y max= 188 (WiBo7)  Y max= 161 (WiBo8)  X min= 22  X max= 218  Y calibrate= 0

**WiBo 7 and WiBo 8 without pallet roller track:**

When the pallets should be placed to the left (viewed from side with the control unit) **= 7.2/7.4/8.2/8.4**

Grabbing position X-axis large grippers (viewed from side with the control unit):
lift right = 180
lift centre = 140
lift left = 100

Grabbing position X-axis small grippers (viewed from side with the control unit):
lift right = 186 (head of bag to the right of the hoist)
= 174 (head of bag to the left of the hoist)

lift centre = 146 (head of bag to the right of the hoist)
= 134 (head of bag to the left of the hoist)

lift left = 106 (head of bag to the right of the hoist)
= 94 (head of bag to the left of the hoist)

Y max= 188 (WiBo7) Y max= 161 (WiBo8) X min= 42 X max= 238 Y calibrate= 0

When the pallets should be placed to the right (viewed from side with the control unit) **= 7.1/7.3/8.1/8.3**

Grabbing position X-axis large grippers (viewed from side with the control unit):
lift right = 140
lift centre = 100
lift left = 60

Grabbing position X-axis small grippers (viewed from side with the control unit):
lift right = 146 (head of bag to the right of the hoist)
= 134 (head of bag to the left of the hoist)

lift centre = 106 (head of bag to the right of the hoist)
= 94 (head of bag to the left of the hoist)

lift left = 66 (head of bag to the right of the hoist)
= 54 (head of bag to the left of the hoist)

Y max= 188 (WiBo7) Y max= 161 (WiBo8) X min= 2 X max= 198 Y calibrate= 0

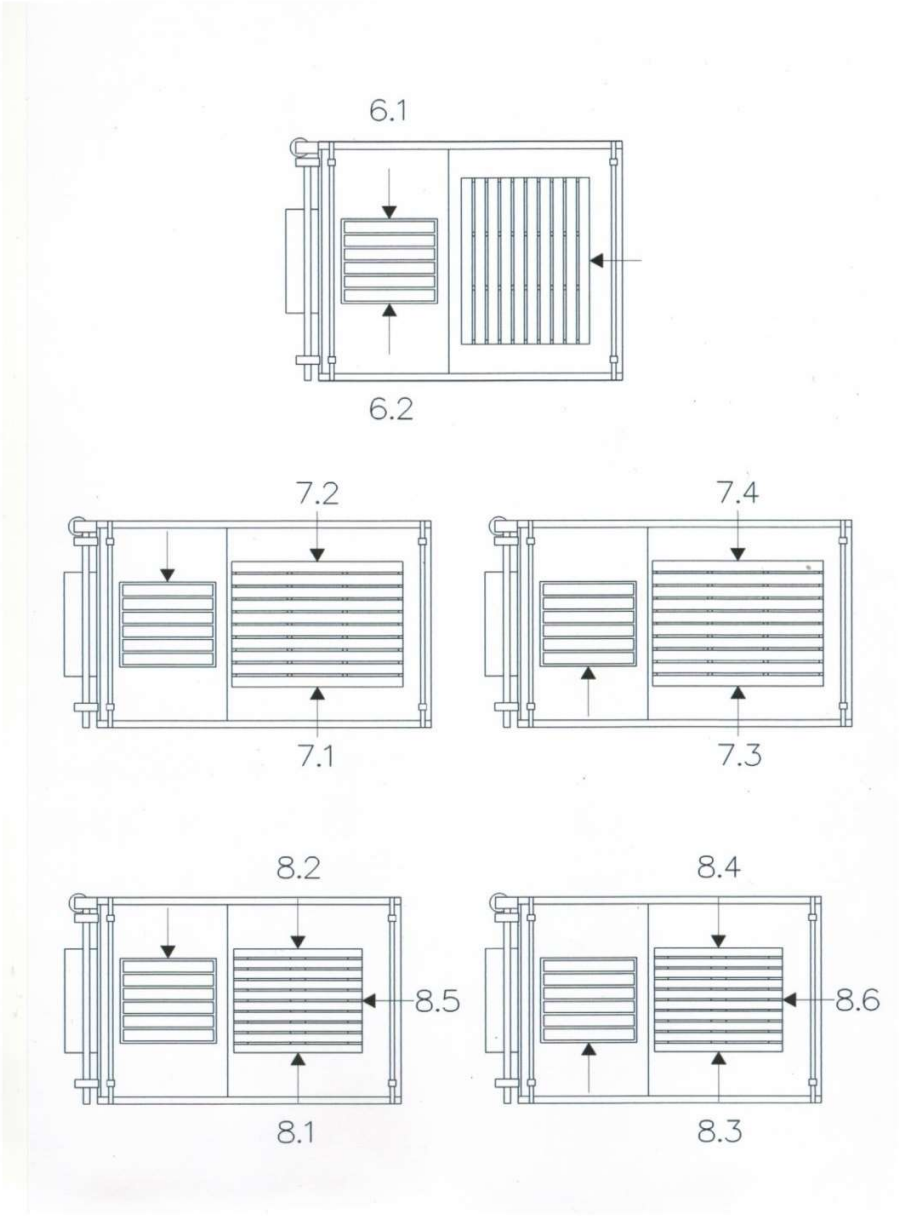
**WiBo 8.5/8.6**

Grabbing position X-axis large grippers (viewed from side with the control unit):
lift right = 160
lift centre = 120
lift left = 80

Grabbing position X-axis small grippers (viewed from the side with the control unit):

| | | |
|---|---|---|
| lift right | = 166 | (head of bag to the right of the hoist) |
| | = 154 | (head of bag to the left of the hoist) |
| lift centre | = 126 | (head of bag to the right of the hoist) |
| | = 114 | (head of bag to the left of the hoist) |
| lift left | = 86 | (head of bag to the right of the hoist) |
| | = 74 | (head of bag to the left of the hoist) |

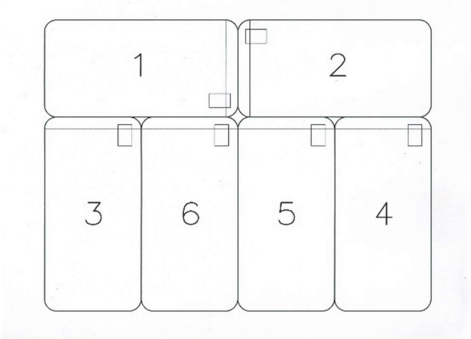
Y max= 168  X min= 22  X max= 218  Y calibrate= 7



## APPENDIX C. PROGRAMMES

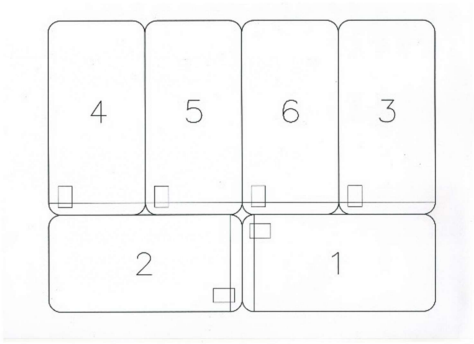
The layer patterns below are standard patterns. These can be changed, e.g. in case of special implementations.

**Layer pattern 1** **50 kg** **pallet 1200 x 1600**



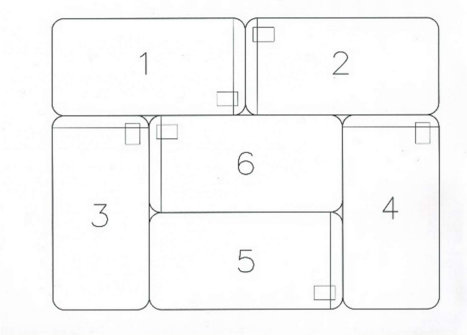

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | **202** | | **43** | | **222** | | **23** | | **223** | | **160** | | **103** | | **80** | | **3** | | | | **4** | | |
| **2** | **202** | | **43** | | **222** | | **23** | | **103** | | **103** | | **160** | | **80** | | **1** | | | | **2** | | |
| **3** | **93** | | **148** | | **113** | | **128** | | **272** | | **183** | | **74** | | **132** | | **2** | | | | **3** | | |
| **4** | **93** | | **148** | | **113** | | **128** | | **42** | | **74** | | **183** | | **132** | | **2** | | | | **3** | | |
| **5** | **93** | | **148** | | **113** | | **128** | | **118** | | **110** | | **152** | | **132** | | **2** | | | | **3** | | |
| **6** | **93** | | **148** | | **113** | | **128** | | **207** | | **152** | | **110** | | **132** | | **2** | | | | **3** | | |

**Layer pattern 2** **50 kg** **pallet 1200 x 1600**



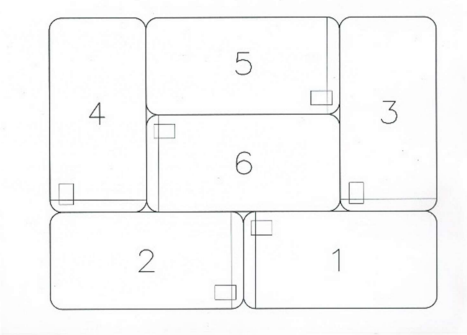

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | **43** | | **202** | | **63** | | **182** | | **103** | | **103** | | **160** | | **155** | | **1** | | | | | | |
| **2** | **43** | | **202** | | **63** | | **182** | | **223** | | **160** | | **103** | | **155** | | **3** | | | | | | |
| **3** | **148** | | **93** | | **168** | | **73** | | **42** | | **74** | | **183** | | **106** | | **4** | | | | | | |
| **4** | **148** | | **93** | | **168** | | **73** | | **272** | | **183** | | **74** | | **106** | | **4** | | | | | | |
| **5** | **148** | | **93** | | **168** | | **73** | | **207** | | **152** | | **110** | | **106** | | **4** | | | | | | |
| **6** | **148** | | **93** | | **168** | | **73** | | **118** | | **110** | | **152** | | **106** | | **4** | | | | | | |

**Layer pattern 3** **50 kg** **pallet 1200 x 1600**



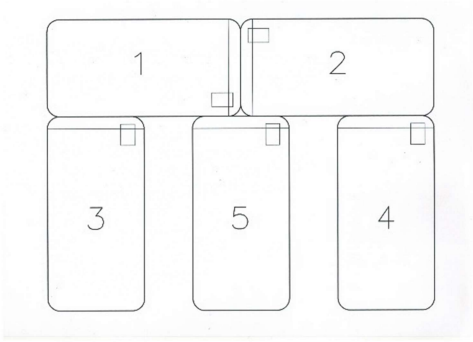

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | **202** | | **43** | | **222** | | **23** | | **223** | | **160** | | **103** | | **80** | | **3** | | | | **4** | | |
| **2** | **202** | | **43** | | **222** | | **23** | | **103** | | **103** | | **160** | | **80** | | **1** | | | | **2** | | |
| **3** | **93** | | **148** | | **113** | | **128** | | **272** | | **183** | | **74** | | **132** | | **2** | | | | **3** | | |
| **4** | **93** | | **148** | | **113** | | **128** | | **42** | | **74** | | **183** | | **132** | | **2** | | | | **3** | | |
| **5** | **43** | | **205** | | **63** | | **185** | | **158** | | **129** | | **132** | | **155** | | **1** | | | | **2** | | |
| **6** | **122** | | **122** | | **142** | | **102** | | **164** | | **132** | | **129** | | **118** | | **3** | | | | **4** | | |

**Layer pattern 4** **50 kg** **pallet 1200 x 1600**



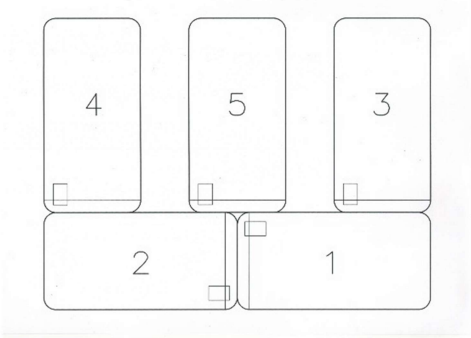

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | **43** | | **202** | | **63** | | **182** | | **103** | | **103** | | **160** | | **155** | | **1** | | | | **2** | | |
| **2** | **43** | | **202** | | **63** | | **182** | | **223** | | **160** | | **103** | | **155** | | **3** | | | | **4** | | |
| **3** | **148** | | **93** | | **168** | | **73** | | **42** | | **74** | | **183** | | **106** | | **4** | | | | **1** | | |
| **4** | **148** | | **93** | | **168** | | **73** | | **272** | | **183** | | **74** | | **106** | | **4** | | | | **1** | | |
| **5** | **205** | | **43** | | **225** | | **23** | | **158** | | **129** | | **132** | | **79** | | **1** | | | | **2** | | |
| **6** | **122** | | **122** | | **142** | | **102** | | **164** | | **132** | | **129** | | **118** | | **3** | | | | **4** | | |

**Layer pattern 5** **50 kg** **pallet 1200 x 1600**



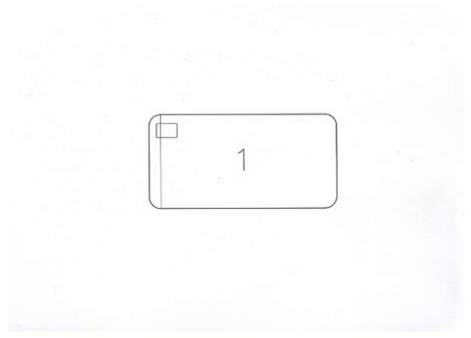

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | **200** | | **45** | | **220** | | **25** | | **223** | | **160** | | **103** | | **81** | | **3** | | | | **4** | | |
| **2** | **200** | | **45** | | **220** | | **25** | | **103** | | **103** | | **160** | | **81** | | **1** | | | | **2** | | |
| **3** | **95** | | **150** | | **115** | | **130** | | **270** | | **182** | | **80** | | **131** | | **2** | | | | **3** | | |
| **4** | **95** | | **150** | | **115** | | **130** | | **54** | | **80** | | **182** | | **131** | | **2** | | | | **3** | | |
| **5** | **95** | | **150** | | **115** | | **130** | | **162** | | **131** | | **131** | | **131** | | **2** | | | | **3** | | |

**Layer pattern 6** **50 kg** **pallet 1200 x 1600**



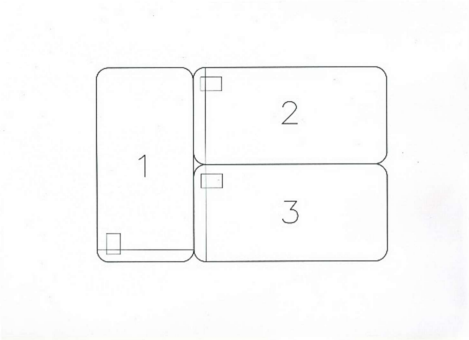

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 45 | | 200 | | 65 | | 180 | | 103 | | 103 | | 160 | | 154 | | 1 | | | | 2 | | |
| 2 | 45 | | 200 | | 65 | | 180 | | 223 | | 160 | | 103 | | 154 | | 3 | | | | 4 | | |
| 3 | 150 | | 95 | | 170 | | 75 | | 54 | | 80 | | 182 | | 105 | | 4 | | | | 1 | | |
| 4 | 150 | | 95 | | 170 | | 75 | | 270 | | 182 | | 80 | | 105 | | 4 | | | | 1 | | |
| 5 | 150 | | 95 | | 170 | | 75 | | 162 | | 131 | | 131 | | 105 | | 4 | | | | 1 | | |

**Layer pattern 11** **50 kg** **pallet 1000 x 1200**



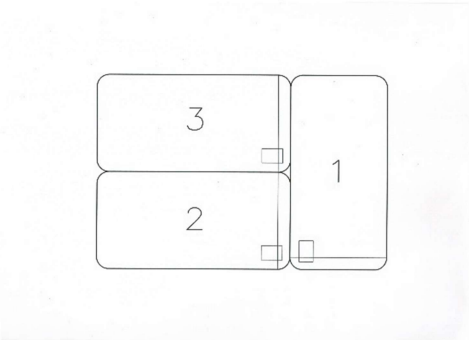

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | | 108 | | 108 | | 139 | | 120 | | 120 | | 134 | | 1 | | | | 2 | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | |

**Layer pattern 12** **50 kg** **pallet 1000 x 1200**



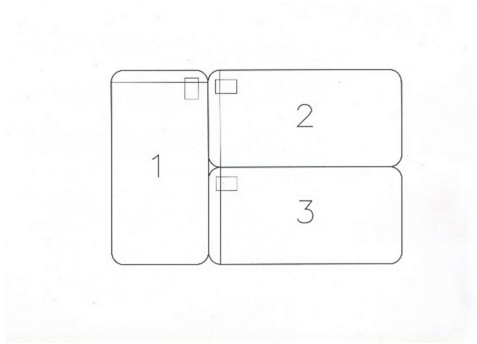

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **110** | | **136** | | **202** | | **150** | | **74** | | **133** | | **4** | | | | **1** | | |
| **2** | | | | | **168** | | **70** | | **103** | | **103** | | **127** | | **105** | | **1** | | | | **2** | | |
| **3** | | | | | **70** | | **168** | | **103** | | **103** | | **127** | | **152** | | **1** | | | | **2** | | |

**Layer pattern 13** **50 kg** **pallet 1000 x 1200**



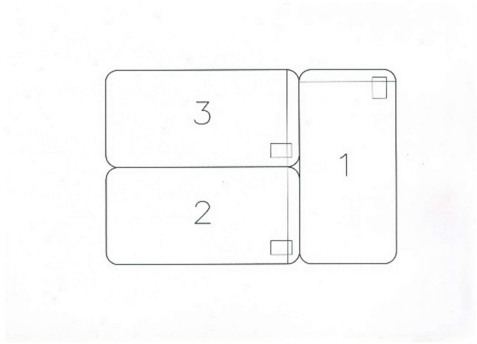

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **110** | | **136** | | **42** | | **74** | | **150** | | **133** | | **4** | | | | **1** | | |
| **2** | | | | | **70** | | **168** | | **154** | | **127** | | **102** | | **152** | | **3** | | | | **4** | | |
| **3** | | | | | **168** | | **70** | | **154** | | **127** | | **102** | | **105** | | **3** | | | | **4** | | |

**Layer pattern 14** **50 kg** **pallet 1000 x 1200**



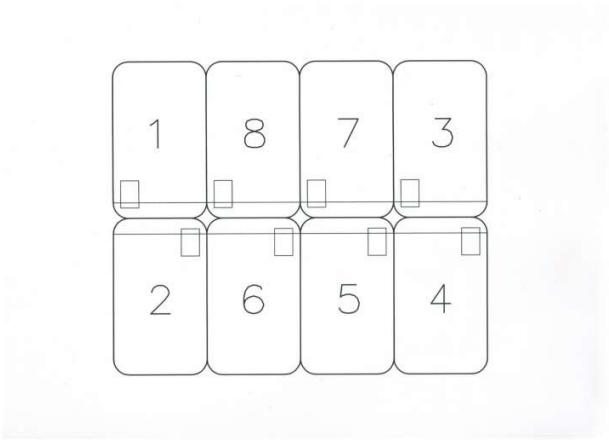

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | **136** | | **110** | | **202** | | **150** | | **74** | | **120** | | **2** | | | | **3** | | | |
| **2** | | | | **168** | | **70** | | **101** | | **102** | | **127** | | **105** | | **1** | | | | **2** | | | |
| **3** | | | | **70** | | **168** | | **101** | | **102** | | **127** | | **152** | | **1** | | | | **2** | | | |

**Layer pattern 15** **50 kg** **pallet 1000 x 1200**



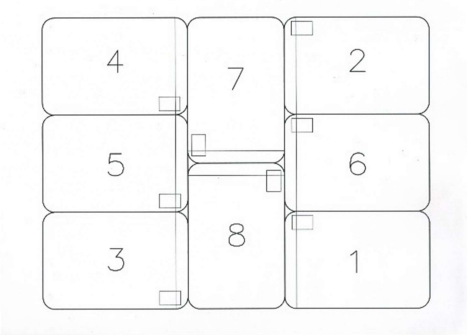

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | **136** | | **110** | | **42** | | **74** | | **150** | | **120** | | **2** | | | | **3** | | | |
| **2** | | | | **70** | | **168** | | **154** | | **127** | | **102** | | **152** | | **3** | | | | **4** | | | |
| **3** | | | | **168** | | **70** | | **154** | | **127** | | **102** | | **105** | | **3** | | | | **4** | | | |

**Layer pattern 21** **25 kg** **pallet 1200 x 1600**



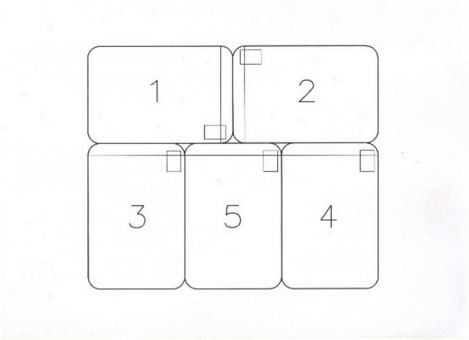

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | **154** | | **89** | | **174** | | **69** | | **280** | | **187** | | **73** | | **103** | | **4** | | | | **1** | | |
| **2** | **89** | | **154** | | **109** | | **134** | | **280** | | **187** | | **73** | | **134** | | **2** | | | | **3** | | |
| **3** | **154** | | **89** | | **174** | | **69** | | **40** | | **73** | | **187** | | **103** | | **4** | | | | **1** | | |
| **4** | **89** | | **154** | | **109** | | **134** | | **40** | | **73** | | **187** | | **134** | | **2** | | | | **3** | | |
| **5** | **89** | | **154** | | **109** | | **134** | | **120** | | **111** | | **150** | | **134** | | **2** | | | | **3** | | |
| **6** | **89** | | **154** | | **109** | | **134** | | **202** | | **150** | | **111** | | **134** | | **2** | | | | **3** | | |
| **7** | **154** | | **89** | | **174** | | **69** | | **120** | | **111** | | **150** | | **103** | | **4** | | | | **1** | | |
| **8** | **154** | | **89** | | **174** | | **69** | | **202** | | **150** | | **111** | | **103** | | **4** | | | | **1** | | |

**Layer pattern 22** **25 kg** **pallet 1200 x 1600**



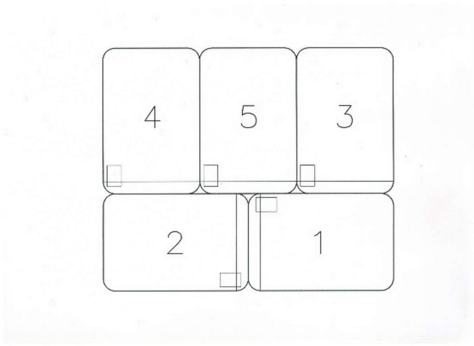

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | **46** | | **207** | | **66** | | **187** | | **92** | | **98** | | **162** | | **154** | | **1** | | | | **2** | | |
| **2** | **207** | | **46** | | **227** | | **26** | | **92** | | **98** | | **162** | | **78** | | **1** | | | | **2** | | |
| **3** | **46** | | **207** | | **66** | | **187** | | **228** | | **162** | | **98** | | **154** | | **3** | | | | **4** | | |
| **4** | **207** | | **46** | | **227** | | **26** | | **228** | | **162** | | **98** | | **78** | | **3** | | | | **4** | | |
| **5** | **127** | | **126** | | **147** | | **106** | | **228** | | **162** | | **98** | | **116** | | **3** | | | | **4** | | |
| **6** | **126** | | **127** | | **146** | | **107** | | **92** | | **98** | | **162** | | **116** | | **1** | | | | **2** | | |
| **7** | **154** | | **89** | | **174** | | **69** | | **164** | | **132** | | **132** | | **103** | | **4** | | | | **1** | | |
| **8** | **89** | | **154** | | **109** | | **134** | | **164** | | **132** | | **132** | | **134** | | **2** | | | | **3** | | |

**Layer pattern 23** **25 kg** **pallet 1000 x 1200**



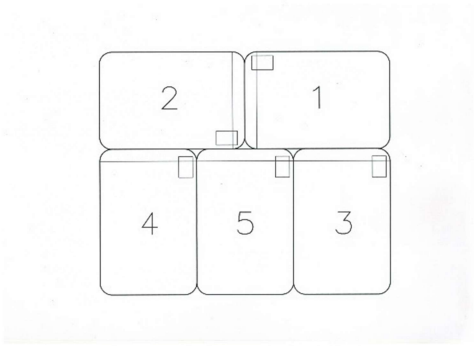

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **184** | | **63** | | **152** | | **126** | | **99** | | **98** | | **3** | | | | **4** | | |
| **2** | | | | | **184** | | **63** | | **94** | | **99** | | **126** | | **98** | | **1** | | | | **2** | | |
| **3** | | | | | **115** | | **131** | | **204** | | **151** | | **73** | | **130** | | **2** | | | | **3** | | |
| **4** | | | | | **115** | | **131** | | **40** | | **73** | | **151** | | **130** | | **2** | | | | **3** | | |
| **5** | | | | | **115** | | **131** | | **122** | | **112** | | **112** | | **130** | | **2** | | | | **3** | | |

**Layer pattern 24** **25 kg** **pallet 1000 x 1200**



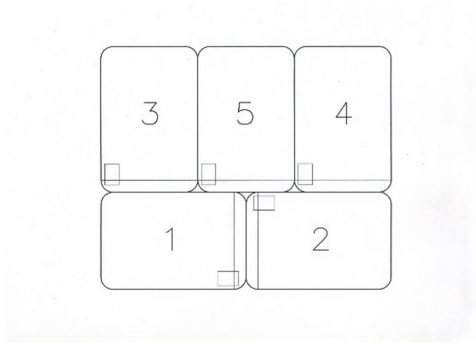

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **63** | | **184** | | **94** | | **99** | | **126** | | **155** | | **1** | | | | **2** | | |
| **2** | | | | | **63** | | **184** | | **152** | | **126** | | **99** | | **155** | | **3** | | | | **4** | | |
| **3** | | | | | **131** | | **115** | | **40** | | **73** | | **151** | | **123** | | **4** | | | | **1** | | |
| **4** | | | | | **131** | | **115** | | **204** | | **151** | | **73** | | **123** | | **4** | | | | **1** | | |
| **5** | | | | | **131** | | **115** | | **122** | | **112** | | **112** | | **123** | | **4** | | | | **1** | | |

**Layer pattern 25** **25 kg** **pallet 1000 x 1200**



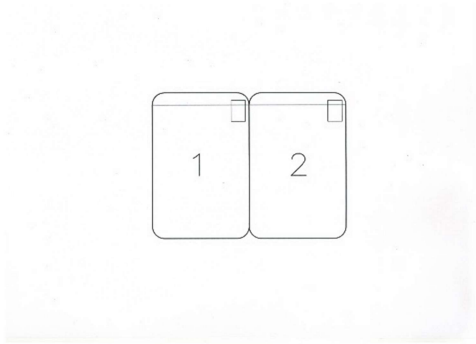

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **184** | | **63** | | **94** | | **99** | | **126** | | **98** | | **1** | | | | **2** | | |
| **2** | | | | | **184** | | **63** | | **152** | | **126** | | **99** | | **98** | | **3** | | | | **4** | | |
| **3** | | | | | **115** | | **131** | | **40** | | **73** | | **151** | | **130** | | **2** | | | | **3** | | |
| **4** | | | | | **115** | | **131** | | **204** | | **151** | | **73** | | **130** | | **2** | | | | **3** | | |
| **5** | | | | | **115** | | **131** | | **122** | | **112** | | **112** | | **130** | | **2** | | | | **3** | | |

**Layer pattern 26** **25 kg** **pallet 1000 x 1200**



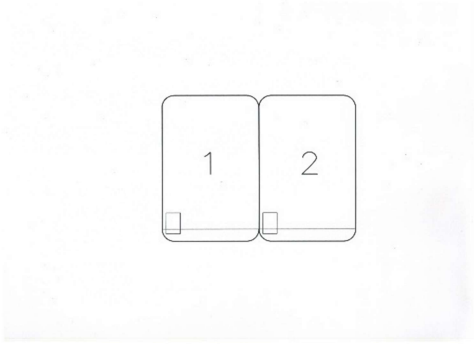

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | **63** | | **184** | | **152** | | **126** | | **99** | | **155** | | **3** | | | | **4** | | | |
| **2** | | | | **63** | | **184** | | **94** | | **99** | | **126** | | **155** | | **1** | | | | **2** | | | |
| **3** | | | | **131** | | **115** | | **204** | | **151** | | **73** | | **123** | | **4** | | | | **1** | | | |
| **4** | | | | **131** | | **115** | | **40** | | **73** | | **151** | | **123** | | **4** | | | | **1** | | | |
| **5** | | | | **131** | | **115** | | **122** | | **112** | | **112** | | **123** | | **4** | | | | **1** | | | |

**Layer pattern 27** **25 kg** **pallet 1000 x 1200**



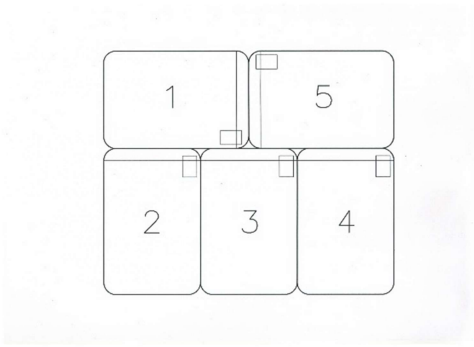

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | **123** | | **123** | | **164** | | **132** | | **94** | | **127** | | **2** | | | | **3** | | | |
| **2** | | | | **123** | | **123** | | **84** | | **94** | | **132** | | **127** | | **2** | | | | **3** | | | |

**Layer pattern 28** **25 kg** **pallet 1000 x 1200**



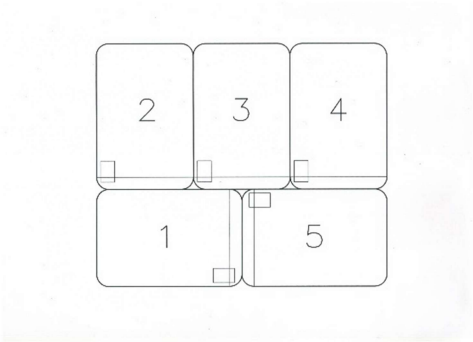

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **123** | | **123** | | **164** | | **132** | | **94** | | **127** | | **4** | | | | **1** | | |
| **2** | | | | | **123** | | **123** | | **84** | | **94** | | **132** | | **127** | | **4** | | | | **1** | | |

**Layer pattern 29** **25 kg** **pallet 1000 x 1200**



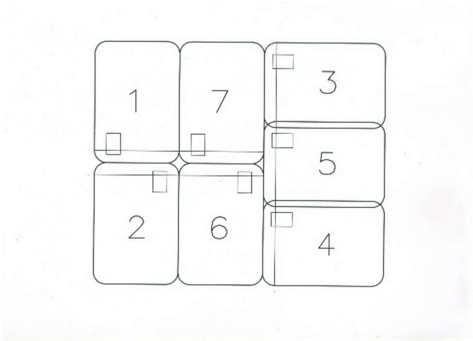

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **184** | | **63** | | **152** | | **126** | | **99** | | **98** | | **3** | | | | **4** | | |
| **2** | | | | | **115** | | **131** | | **204** | | **151** | | **73** | | **130** | | **2** | | | | **3** | | |
| **3** | | | | | **115** | | **131** | | **122** | | **112** | | **112** | | **130** | | **2** | | | | **3** | | |
| **4** | | | | | **115** | | **131** | | **40** | | **73** | | **151** | | **130** | | **2** | | | | **3** | | |
| **5** | | | | | **184** | | **63** | | **94** | | **99** | | **126** | | **98** | | **1** | | | | **2** | | |

**Layer pattern 30** **25 kg** **pallet 1000 x 1200**



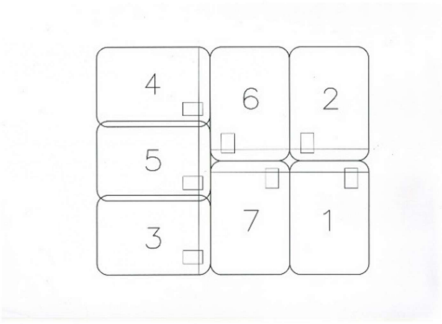

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **63** | | **184** | | **152** | | **126** | | **99** | | **155** | | **3** | | | | **4** | | |
| **2** | | | | | **131** | | **115** | | **204** | | **151** | | **73** | | **123** | | **4** | | | | **1** | | |
| **3** | | | | | **131** | | **115** | | **122** | | **112** | | **112** | | **123** | | **4** | | | | **1** | | |
| **4** | | | | | **131** | | **115** | | **40** | | **73** | | **151** | | **123** | | **4** | | | | **1** | | |
| **5** | | | | | **63** | | **184** | | **94** | | **99** | | **126** | | **155** | | **1** | | | | **2** | | |

**Layer pattern 31** **15 kg** **pallet 1000 x 1200**



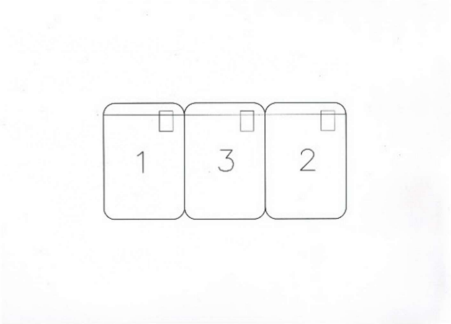

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **130** | | **117** | | **202** | | **151** | | **73** | | **123** | | **4** | | | | **1** | | |
| **2** | | | | | **117** | | **130** | | **204** | | **151** | | **73** | | **129** | | **2** | | | | **3** | | |
| **3** | | | | | **182** | | **63** | | **94** | | **99** | | **126** | | **99** | | **1** | | | | **2** | | |
| **4** | | | | | **63** | | **182** | | **94** | | **99** | | **125** | | **155** | | **1** | | | | **2** | | |
| **5** | | | | | **122** | | **122** | | **94** | | **99** | | **126** | | **127** | | **1** | | | | **2** | | |
| **6** | | | | | **117** | | **131** | | **128** | | **115** | | **107** | | **129** | | **2** | | | | **3** | | |
| **7** | | | | | **131** | | **117** | | **128** | | **115** | | **107** | | **123** | | **4** | | | | **1** | | |

**Layer pattern 32** **15 kg** **pallet 1000 x 1200**



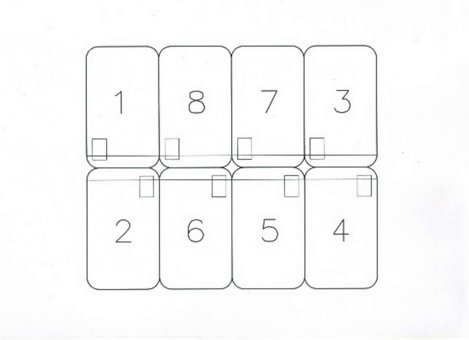

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **117** | | **131** | | **40** | | **73** | | **150** | | **129** | | **2** | | | | **3** | | |
| **2** | | | | | **131** | | **117** | | **40** | | **73** | | **151** | | **123** | | **4** | | | | **1** | | |
| **3** | | | | | **63** | | **181** | | **152** | | **126** | | **99** | | **155** | | **3** | | | | **4** | | |
| **4** | | | | | **181** | | **63** | | **149** | | **125** | | **99** | | **99** | | **3** | | | | **4** | | |
| **5** | | | | | **122** | | **122** | | **152** | | **126** | | **99** | | **127** | | **3** | | | | **4** | | |
| **6** | | | | | **131** | | **117** | | **111** | | **107** | | **115** | | **123** | | **4** | | | | **1** | | |
| **7** | | | | | **117** | | **131** | | **111** | | **107** | | **115** | | **129** | | **2** | | | | **3** | | |

**Layer pattern 33** **15 kg** **pallet 1000 x 1200**



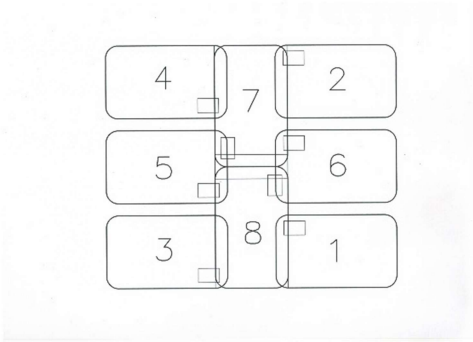

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **152** | | **92** | | **171** | | **135** | | **110** | | **113** | | **2** | | | | **3** | | |
| **2** | | | | | **152** | | **92** | | **65** | | **85** | | **85** | | **113** | | **2** | | | | **3** | | |
| **3** | | | | | **152** | | **92** | | **118** | | **110** | | **135** | | **113** | | **2** | | | | **3** | | |

**Layer pattern 41** **10 kg** **pallet 1000 x 1200**



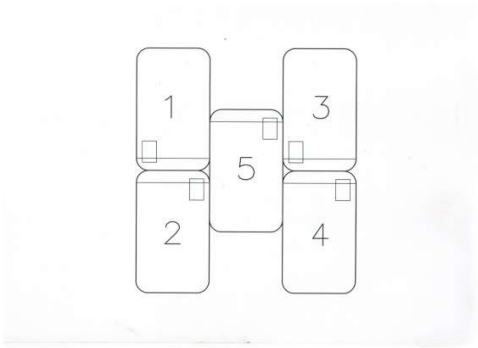

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **131** | | **115** | | **211** | | **154** | | **68** | | **123** | | **4** | | | | **1** | | |
| **2** | | | | | **115** | | **131** | | **211** | | **154** | | **68** | | **130** | | **2** | | | | **3** | | |
| **3** | | | | | **131** | | **115** | | **29** | | **68** | | **154** | | **123** | | **4** | | | | **1** | | |
| **4** | | | | | **115** | | **131** | | **29** | | **68** | | **154** | | **130** | | **2** | | | | **3** | | |
| **5** | | | | | **115** | | **131** | | **88** | | **96** | | **125** | | **130** | | **2** | | | | **3** | | |
| **6** | | | | | **115** | | **131** | | **149** | | **125** | | **96** | | **130** | | **2** | | | | **3** | | |
| **7** | | | | | **131** | | **115** | | **88** | | **96** | | **125** | | **123** | | **4** | | | | **1** | | |
| **8** | | | | | **131** | | **115** | | **149** | | **125** | | **96** | | **123** | | **4** | | | | **1** | | |

**Layer pattern 42** **10 kg** **pallet 1000 x 1200**



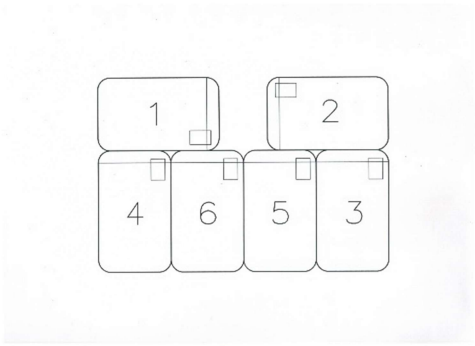

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **55** | | **183** | | **103** | | **103** | | **127** | | **159** | | **1** | | | | **2** | | |
| **2** | | | | | **183** | | **55** | | **103** | | **103** | | **127** | | **98** | | **1** | | | | **2** | | |
| **3** | | | | | **55** | | **183** | | **154** | | **127** | | **103** | | **159** | | **3** | | | | **4** | | |
| **4** | | | | | **183** | | **55** | | **154** | | **127** | | **103** | | **98** | | **3** | | | | **4** | | |
| **5** | | | | | **123** | | **123** | | **154** | | **127** | | **103** | | **127** | | **3** | | | | **4** | | |
| **6** | | | | | **123** | | **123** | | **103** | | **103** | | **127** | | **127** | | **1** | | | | **2** | | |
| **7** | | | | | **131** | | **115** | | **126** | | **114** | | **115** | | **123** | | **4** | | | | **1** | | |
| **8** | | | | | **115** | | **131** | | **128** | | **115** | | **114** | | **130** | | **2** | | | | **3** | | |

**Layer pattern 43** **10 kg** **pallet 1000 x 1200**



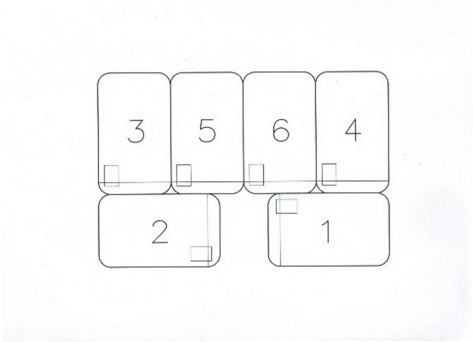

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **121** | | **115** | | **181** | | **140** | | **84** | | **128** | | **4** | | | | **1** | | |
| **2** | | | | | **115** | | **121** | | **181** | | **140** | | **84** | | **130** | | **2** | | | | **3** | | |
| **3** | | | | | **121** | | **115** | | **63** | | **84** | | **140** | | **128** | | **4** | | | | **1** | | |
| **4** | | | | | **115** | | **121** | | **63** | | **84** | | **140** | | **130** | | **2** | | | | **3** | | |
| **5** | | | | | **163** | | **77** | | **122** | | **112** | | **112** | | **108** | | **2** | | | | **3** | | |

**Layer pattern 45** **10 kg** **pallet 800 x 1200**



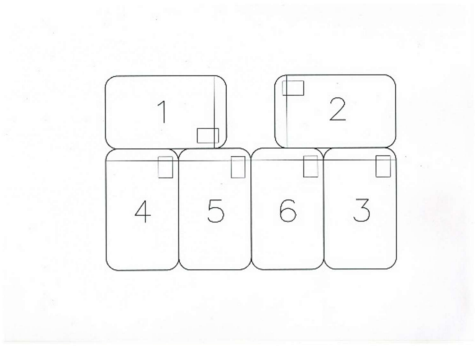

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **170** | | **70** | | **143** | | **122** | | **98** | | **104** | | **3** | | | | **4** | | |
| **2** | | | | | **170** | | **70** | | **92** | | **98** | | **122** | | **104** | | **1** | | | | **2** | | |
| **3** | | | | | **133** | | **113** | | **29** | | **68** | | **148** | | **122** | | **2** | | | | **3** | | |
| **4** | | | | | **133** | | **113** | | **198** | | **148** | | **68** | | **122** | | **2** | | | | **3** | | |
| **5** | | | | | **133** | | **113** | | **90** | | **97** | | **122** | | **122** | | **2** | | | | **3** | | |
| **6** | | | | | **133** | | **113** | | **143** | | **122** | | **97** | | **122** | | **2** | | | | **3** | | |

**Layer pattern 46** **10 kg** **pallet 800 x 1200**



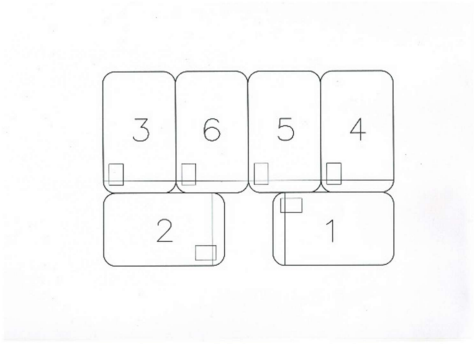

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **70** | | **170** | | **88** | | **96** | | **122** | | **152** | | **1** | | | | **2** | | |
| **2** | | | | | **70** | | **170** | | **143** | | **122** | | **96** | | **152** | | **3** | | | | **4** | | |
| **3** | | | | | **113** | | **133** | | **198** | | **148** | | **68** | | **131** | | **4** | | | | **1** | | |
| **4** | | | | | **113** | | **133** | | **29** | | **68** | | **148** | | **131** | | **4** | | | | **1** | | |
| **5** | | | | | **113** | | **133** | | **143** | | **122** | | **94** | | **131** | | **4** | | | | **1** | | |
| **6** | | | | | **113** | | **133** | | **84** | | **94** | | **122** | | **131** | | **4** | | | | **1** | | |

**Layer pattern 47** **10 kg** **pallet 800 x 1200**



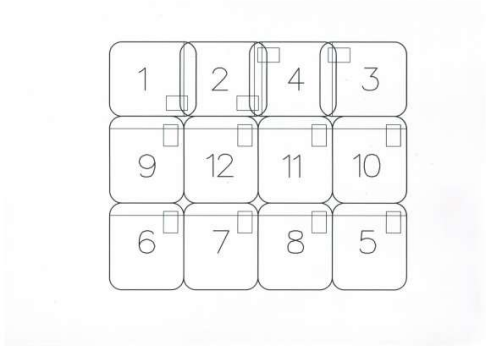

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **170** | | **70** | | **143** | | **122** | | **98** | | **104** | | **3** | | | | **4** | | |
| **2** | | | | | **170** | | **70** | | **92** | | **98** | | **122** | | **104** | | **1** | | | | **2** | | |
| **3** | | | | | **133** | | **113** | | **29** | | **68** | | **146** | | **122** | | **2** | | | | **3** | | |
| **4** | | | | | **133** | | **113** | | **194** | | **146** | | **68** | | **122** | | **2** | | | | **3** | | |
| **5** | | | | | **133** | | **113** | | **143** | | **122** | | **122** | | **122** | | **2** | | | | **3** | | |
| **6** | | | | | **133** | | **113** | | **84** | | **94** | | **94** | | **122** | | **2** | | | | **3** | | |

**Layer pattern 48** **10 kg** **pallet 800 x 1200**



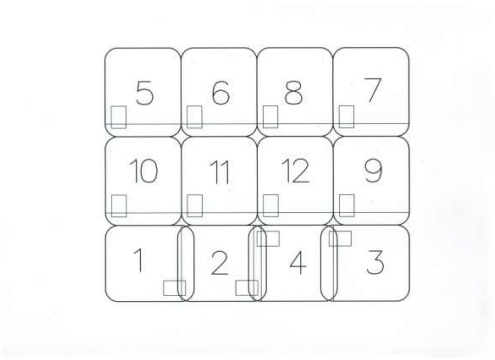

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **70** | | **170** | | **88** | | **96** | | **122** | | **152** | | **1** | | | | **2** | | |
| **2** | | | | | **70** | | **170** | | **143** | | **122** | | **96** | | **152** | | **3** | | | | **4** | | |
| **3** | | | | | **113** | | **133** | | **194** | | **146** | | **68** | | **131** | | **4** | | | | **1** | | |
| **4** | | | | | **113** | | **133** | | **29** | | **68** | | **146** | | **131** | | **4** | | | | **1** | | |
| **5** | | | | | **113** | | **133** | | **84** | | **94** | | **94** | | **131** | | **4** | | | | **1** | | |
| **6** | | | | | **113** | | **133** | | **143** | | **122** | | **122** | | **131** | | **4** | | | | **1** | | |

**Layer pattern 51** **5 kg** **pallet 1000 x 1200**



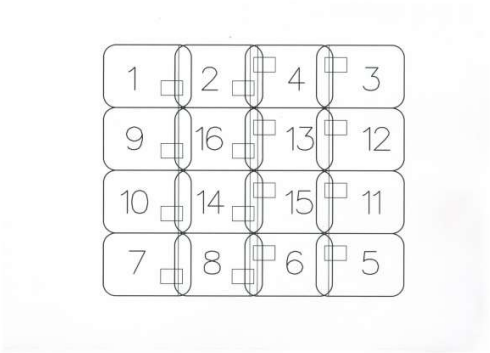

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **183** | | **62** | | **152** | | **126** | | **101** | | **98** | | **3** | | | | **4** | | |
| **2** | | | | | **183** | | **62** | | **90** | | **97** | | **130** | | **98** | | **3** | | | | **4** | | |
| **3** | | | | | **183** | | **62** | | **99** | | **101** | | **126** | | **98** | | **1** | | | | **2** | | |
| **4** | | | | | **183** | | **62** | | **160** | | **130** | | **97** | | **98** | | **1** | | | | **2** | | |
| **5** | | | | | **115** | | **121** | | **29** | | **68** | | **154** | | **130** | | **2** | | | | **3** | | |
| **6** | | | | | **115** | | **121** | | **211** | | **154** | | **68** | | **130** | | **2** | | | | **3** | | |
| **7** | | | | | **115** | | **121** | | **149** | | **125** | | **97** | | **130** | | **2** | | | | **3** | | |
| **8** | | | | | **115** | | **121** | | **90** | | **97** | | **125** | | **130** | | **2** | | | | **3** | | |
| **9** | | | | | **149** | | **97** | | **211** | | **154** | | **68** | | **114** | | **2** | | | | **3** | | |
| **10** | | | | | **149** | | **97** | | **29** | | **68** | | **154** | | **114** | | **2** | | | | **3** | | |
| **11** | | | | | **149** | | **97** | | **90** | | **97** | | **125** | | **114** | | **2** | | | | **3** | | |
| **12** | | | | | **149** | | **97** | | **149** | | **125** | | **97** | | **114** | | **2** | | | | **3** | | |

**Layer pattern 52** **5 kg** **pallet 1000 x 1200**



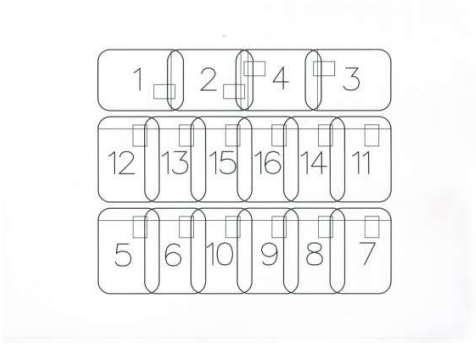

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **62** | | **183** | | **152** | | **126** | | **101** | | **155** | | **3** | | | | **4** | | |
| **2** | | | | | **62** | | **183** | | **90** | | **97** | | **130** | | **155** | | **3** | | | | **4** | | |
| **3** | | | | | **62** | | **183** | | **99** | | **101** | | **126** | | **155** | | **1** | | | | **2** | | |
| **4** | | | | | **62** | | **183** | | **160** | | **130** | | **97** | | **155** | | **1** | | | | **2** | | |
| **5** | | | | | **121** | | **115** | | **211** | | **154** | | **68** | | **128** | | **4** | | | | **1** | | |
| **6** | | | | | **121** | | **115** | | **149** | | **125** | | **97** | | **128** | | **4** | | | | **1** | | |
| **7** | | | | | **121** | | **115** | | **29** | | **68** | | **154** | | **128** | | **4** | | | | **1** | | |
| **8** | | | | | **121** | | **115** | | **90** | | **97** | | **125** | | **128** | | **4** | | | | **1** | | |
| **9** | | | | | **97** | | **149** | | **29** | | **68** | | **154** | | **139** | | **4** | | | | **1** | | |
| **10** | | | | | **97** | | **149** | | **211** | | **154** | | **68** | | **139** | | **4** | | | | **1** | | |
| **11** | | | | | **97** | | **149** | | **149** | | **125** | | **97** | | **139** | | **4** | | | | **1** | | |
| **12** | | | | | **97** | | **149** | | **90** | | **97** | | **125** | | **139** | | **4** | | | | **1** | | |

**Layer pattern 61** **2,5 kg** **pallet 1000 x 1200**



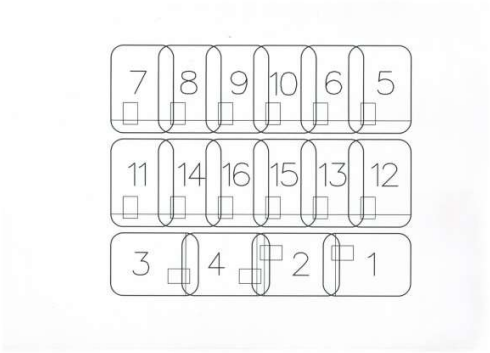

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | | 183 | | 62 | | 152 | | 126 | | 101 | | 98 | | 3 | | | | 4 | | |
| 2 | | | | | 183 | | 62 | | 90 | | 97 | | 130 | | 98 | | 3 | | | | 4 | | |
| 3 | | | | | 183 | | 62 | | 99 | | 101 | | 126 | | 98 | | 1 | | | | 2 | | |
| 4 | | | | | 183 | | 62 | | 160 | | 130 | | 97 | | 98 | | 1 | | | | 2 | | |
| 5 | | | | | 62 | | 183 | | 99 | | 101 | | 126 | | 155 | | 1 | | | | 2 | | |
| 6 | | | | | 62 | | 183 | | 160 | | 130 | | 97 | | 155 | | 1 | | | | 2 | | |
| 7 | | | | | 62 | | 183 | | 152 | | 126 | | 101 | | 155 | | 3 | | | | 4 | | |
| 8 | | | | | 62 | | 183 | | 90 | | 97 | | 130 | | 155 | | 3 | | | | 4 | | |
| 9 | | | | | 142 | | 102 | | 152 | | 126 | | 101 | | 118 | | 3 | | | | 4 | | |
| 10 | | | | | 102 | | 142 | | 152 | | 126 | | 101 | | 137 | | 3 | | | | 4 | | |
| 11 | | | | | 102 | | 142 | | 99 | | 101 | | 126 | | 137 | | 1 | | | | 2 | | |
| 12 | | | | | 142 | | 102 | | 99 | | 101 | | 126 | | 118 | | 1 | | | | 2 | | |
| 13 | | | | | 142 | | 102 | | 160 | | 130 | | 97 | | 118 | | 1 | | | | 2 | | |
| 14 | | | | | 102 | | 142 | | 90 | | 97 | | 130 | | 137 | | 3 | | | | 4 | | |
| 15 | | | | | 102 | | 142 | | 160 | | 130 | | 97 | | 137 | | 1 | | | | 2 | | |
| 16 | | | | | 142 | | 102 | | 90 | | 97 | | 130 | | 118 | | 3 | | | | 4 | | |

**Layer pattern 62** **2,5 kg** **pallet 1000 x 1200**



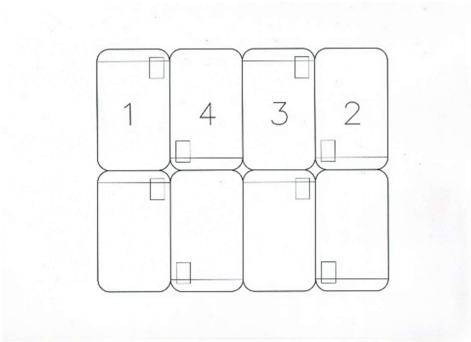

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **183** | | **62** | | **152** | | **126** | | **101** | | **98** | | **3** | | | | **4** | | |
| **2** | | | | | **183** | | **62** | | **90** | | **97** | | **130** | | **98** | | **3** | | | | **4** | | |
| **3** | | | | | **183** | | **62** | | **99** | | **101** | | **126** | | **98** | | **1** | | | | **2** | | |
| **4** | | | | | **183** | | **62** | | **160** | | **130** | | **97** | | **98** | | **1** | | | | **2** | | |
| **5** | | | | | **115** | | **121** | | **215** | | **156** | | **66** | | **130** | | **2** | | | | **3** | | |
| **6** | | | | | **115** | | **121** | | **177** | | **138** | | **84** | | **130** | | **2** | | | | **3** | | |
| **7** | | | | | **115** | | **121** | | **25** | | **66** | | **156** | | **130** | | **2** | | | | **3** | | |
| **8** | | | | | **115** | | **121** | | **63** | | **84** | | **138** | | **130** | | **2** | | | | **3** | | |
| **9** | | | | | **115** | | **121** | | **101** | | **102** | | **120** | | **130** | | **2** | | | | **3** | | |
| **10** | | | | | **115** | | **121** | | **139** | | **120** | | **102** | | **130** | | **2** | | | | **3** | | |
| **11** | | | | | **170** | | **75** | | **25** | | **66** | | **156** | | **104** | | **2** | | | | **3** | | |
| **12** | | | | | **170** | | **75** | | **215** | | **156** | | **66** | | **104** | | **2** | | | | **3** | | |
| **13** | | | | | **170** | | **75** | | **177** | | **138** | | **84** | | **104** | | **2** | | | | **3** | | |
| **14** | | | | | **170** | | **75** | | **63** | | **84** | | **138** | | **104** | | **2** | | | | **3** | | |
| **15** | | | | | **170** | | **75** | | **139** | | **120** | | **102** | | **104** | | **2** | | | | **3** | | |
| **16** | | | | | **170** | | **75** | | **101** | | **102** | | **120** | | **104** | | **2** | | | | **3** | | |

**Layer pattern 63** **2,5 kg** **pallet 1000 x 1200**



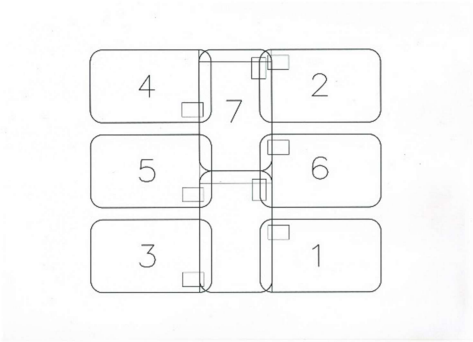

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | | 62 | | 183 | | 99 | | 101 | | 126 | | 155 | | 1 | | | | 2 | | |
| 2 | | | | | 62 | | 183 | | 160 | | 130 | | 97 | | 155 | | 1 | | | | 2 | | |
| 3 | | | | | 62 | | 183 | | 152 | | 126 | | 101 | | 155 | | 3 | | | | 4 | | |
| 4 | | | | | 62 | | 183 | | 90 | | 97 | | 130 | | 155 | | 3 | | | | 4 | | |
| 5 | | | | | 121 | | 115 | | 25 | | 66 | | 156 | | 128 | | 4 | | | | 1 | | |
| 6 | | | | | 121 | | 115 | | 63 | | 84 | | 138 | | 128 | | 4 | | | | 1 | | |
| 7 | | | | | 121 | | 115 | | 215 | | 156 | | 66 | | 128 | | 4 | | | | 1 | | |
| 8 | | | | | 121 | | 115 | | 177 | | 138 | | 84 | | 128 | | 4 | | | | 1 | | |
| 9 | | | | | 121 | | 115 | | 139 | | 120 | | 102 | | 128 | | 4 | | | | 1 | | |
| 10 | | | | | 121 | | 115 | | 101 | | 102 | | 120 | | 128 | | 4 | | | | 1 | | |
| 11 | | | | | 75 | | 170 | | 215 | | 156 | | 66 | | 149 | | 4 | | | | 1 | | |
| 12 | | | | | 75 | | 170 | | 25 | | 66 | | 156 | | 149 | | 4 | | | | 1 | | |
| 13 | | | | | 75 | | 170 | | 63 | | 84 | | 138 | | 149 | | 4 | | | | 1 | | |
| 14 | | | | | 75 | | 170 | | 177 | | 138 | | 84 | | 149 | | 4 | | | | 1 | | |
| 15 | | | | | 75 | | 170 | | 101 | | 102 | | 120 | | 149 | | 4 | | | | 1 | | |
| 16 | | | | | 75 | | 170 | | 139 | | 120 | | 102 | | 149 | | 4 | | | | 1 | | |

**Layer pattern 71** **10 kg with collection flap** **pallet 1000 x 1200**



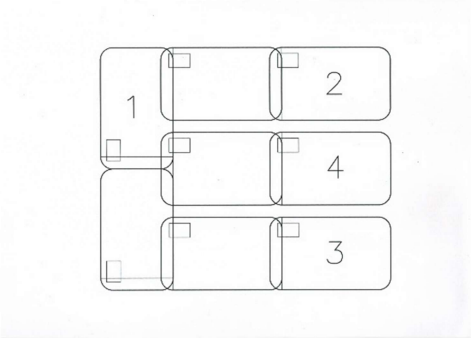

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | **123** | | **123** | | **215** | | **156** | | **68** | | **127** | | **2** | | | **3** | | **2** | | |
| **2** | | | | **123** | | **123** | | **29** | | **68** | | **156** | | **127** | | **4** | | | **1** | | **2** | | |
| **3** | | | | **123** | | **123** | | **88** | | **96** | | **124** | | **127** | | **2** | | | **3** | | **2** | | |
| **4** | | | | **123** | | **123** | | **147** | | **124** | | **96** | | **127** | | **4** | | | **1** | | **2** | | |

**Layer pattern 72** **10 kg with collection flap** **pallet 1000 x 1200**



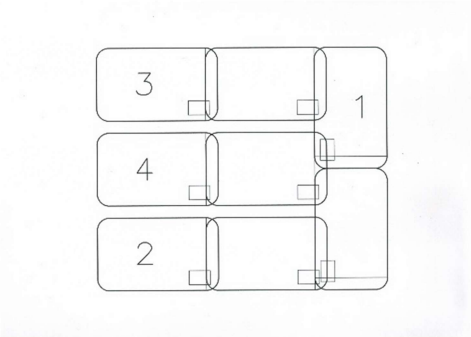

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | 55 | 183 | 103 | 103 | 127 | 159 | 1 | | | | 2 | | 1 | | | | | | | |
| 2 | | | | 183 | 55 | 103 | 103 | 127 | 98 | 1 | | | | 2 | | 1 | | | | | | | |
| 3 | | | | 55 | 183 | 154 | 127 | 103 | 159 | 3 | | | | 4 | | 1 | | | | | | | |
| 4 | | | | 183 | 55 | 154 | 127 | 103 | 98 | 3 | | | | 4 | | 1 | | | | | | | |
| 5 | | | | 123 | 123 | 154 | 127 | 103 | 127 | 3 | | | | 4 | | 1 | | | | | | | |
| 6 | | | | 123 | 123 | 103 | 103 | 127 | 127 | 1 | | | | 2 | | 1 | | | | | | | |
| 7 | | | | 123 | 123 | 126 | 114 | 114 | 127 | 2 | | | | 3 | | 2 | | | | | | | |

**Layer pattern 73** **10 kg with collection flap** **pallet 1000 x 1200**



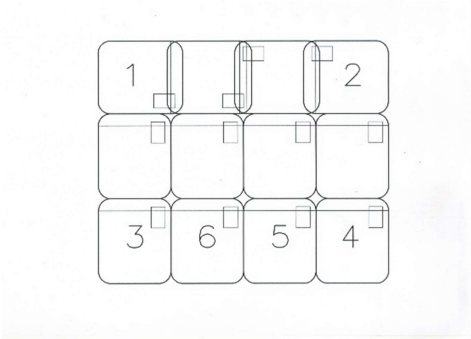

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | 123 | | 123 | | 211 | | 154 | | 68 | | 127 | | 4 | | | | 1 | | 2 | |
| 2 | | | | 183 | | 62 | | 101 | | 102 | | 126 | | 98 | | 1 | | | | 2 | | 2 | |
| 3 | | | | 62 | | 183 | | 101 | | 102 | | 126 | | 155 | | 1 | | | | 2 | | 2 | |
| 4 | | | | 123 | | 123 | | 101 | | 102 | | 126 | | 127 | | 1 | | | | 2 | | 2 | |

**Layer pattern 74** **10 kg with collection flap** **pallet 1000 x 1200**



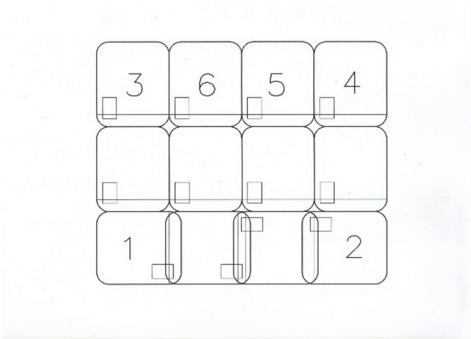

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | 123 | | 123 | | 29 | | 68 | | 154 | | 127 | | 2 | | | | 3 | | 2 | |
| 2 | | | | 62 | | 183 | | 152 | | 126 | | 102 | | 155 | | 3 | | | | 4 | | 2 | |
| 3 | | | | 183 | | 62 | | 152 | | 126 | | 102 | | 97 | | 3 | | | | 4 | | 2 | |
| 4 | | | | 123 | | 123 | | 152 | | 126 | | 102 | | 127 | | 3 | | | | 4 | | 2 | |

**Layer pattern 81** **5 kg with collection flap** **pallet 1000 x 1200**



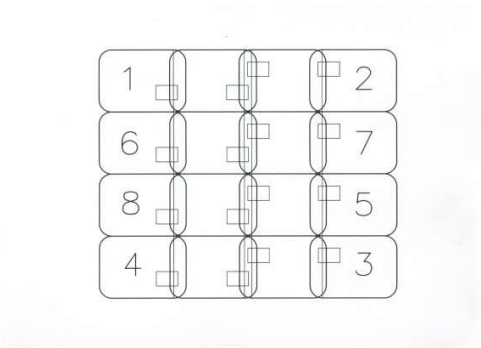

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **183** | | **62** | | **152** | | **126** | | **102** | | **98** | | **3** | | | | **4** | | **2** |
| **2** | | | | | **183** | | **62** | | **101** | | **102** | | **126** | | **98** | | **1** | | | | **2** | | **2** |
| **3** | | | | | **123** | | **123** | | **211** | | **154** | | **68** | | **127** | | **2** | | | | **3** | | **2** |
| **4** | | | | | **123** | | **123** | | **29** | | **68** | | **154** | | **127** | | **2** | | | | **3** | | **2** |
| **5** | | | | | **123** | | **123** | | **86** | | **95** | | **126** | | **127** | | **2** | | | | **3** | | **2** |
| **6** | | | | | **123** | | **123** | | **152** | | **126** | | **95** | | **127** | | **2** | | | | **3** | | **2** |

**Layer pattern 82** **5 kg with collection flap** **pallet 1000 x 1200**



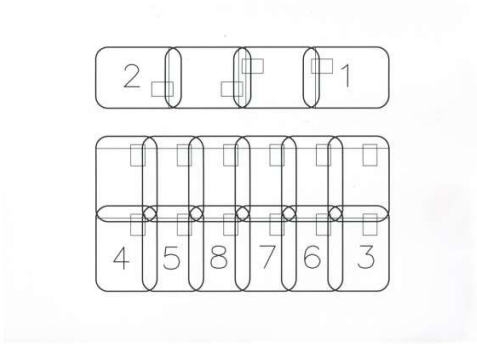

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **62** | | **183** | | **152** | | **126** | | **102** | | **155** | | **3** | | | | **4** | | **2** |
| **2** | | | | | **62** | | **183** | | **101** | | **102** | | **126** | | **155** | | **1** | | | | **2** | | **2** |
| **3** | | | | | **123** | | **123** | | **211** | | **154** | | **68** | | **127** | | **4** | | | | **1** | | **2** |
| **4** | | | | | **123** | | **123** | | **29** | | **68** | | **154** | | **127** | | **4** | | | | **1** | | **2** |
| **5** | | | | | **123** | | **123** | | **86** | | **95** | | **126** | | **127** | | **4** | | | | **1** | | **2** |
| **6** | | | | | **123** | | **123** | | **152** | | **126** | | **95** | | **127** | | **4** | | | | **1** | | **2** |

**Layer pattern 91** **2,5 kg with collection flap** **pallet 1000 x 1200**



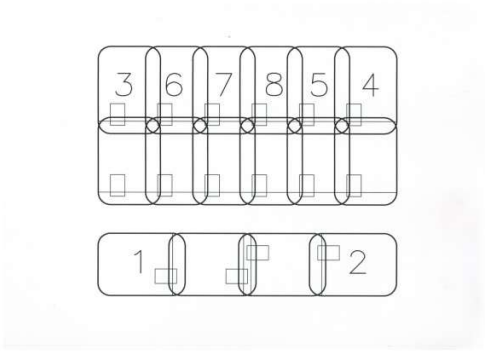

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **183** | | **62** | | **152** | | **126** | | **101** | | **98** | | **3** | | | | **4** | | **2** |
| **2** | | | | | **183** | | **62** | | **99** | | **101** | | **126** | | **98** | | **1** | | | | **2** | | **2** |
| **3** | | | | | **62** | | **183** | | **99** | | **101** | | **126** | | **155** | | **1** | | | | **2** | | **2** |
| **4** | | | | | **62** | | **183** | | **152** | | **126** | | **101** | | **155** | | **3** | | | | **4** | | **2** |
| **5** | | | | | **102** | | **142** | | **99** | | **101** | | **126** | | **137** | | **1** | | | | **2** | | **2** |
| **6** | | | | | **142** | | **102** | | **152** | | **126** | | **101** | | **118** | | **3** | | | | **4** | | **2** |
| **7** | | | | | **142** | | **102** | | **99** | | **101** | | **126** | | **118** | | **1** | | | | **2** | | **2** |
| **8** | | | | | **102** | | **142** | | **152** | | **126** | | **101** | | **137** | | **3** | | | | **4** | | **2** |

**Layer pattern 92** **2,5 kg with collection flap** **pallet 1000 x 1200**




| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **183** | | **62** | | **99** | | **101** | | **126** | | **98** | | **1** | | | | **2** | | **2** |
| **2** | | | | | **183** | | **62** | | **152** | | **126** | | **101** | | **98** | | **3** | | | | **4** | | **2** |
| **3** | | | | | **115** | | **121** | | **215** | | **156** | | **66** | | **130** | | **2** | | | | **3** | | **2** |
| **4** | | | | | **115** | | **121** | | **25** | | **66** | | **156** | | **130** | | **2** | | | | **3** | | **2** |
| **5** | | | | | **115** | | **121** | | **177** | | **138** | | **84** | | **130** | | **2** | | | | **3** | | **2** |
| **6** | | | | | **115** | | **121** | | **63** | | **84** | | **138** | | **130** | | **2** | | | | **3** | | **2** |
| **7** | | | | | **115** | | **121** | | **101** | | **102** | | **120** | | **130** | | **2** | | | | **3** | | **2** |
| **8** | | | | | **115** | | **121** | | **139** | | **120** | | **102** | | **130** | | **2** | | | | **3** | | **2** |

**Layer pattern 93** **2,5 kg with collection flap** **pallet 1000 x 1200**

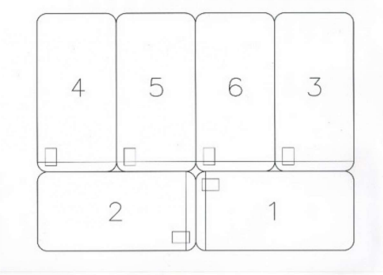



| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| **1** | | | | | **62** | | **183** | | **152** | | **126** | | **101** | | **155** | | **3** | | | | **4** | | **2** |
| **2** | | | | | **62** | | **183** | | **99** | | **101** | | **126** | | **155** | | **1** | | | | **2** | | **2** |
| **3** | | | | | **121** | | **115** | | **215** | | **156** | | **66** | | **128** | | **4** | | | | **1** | | **2** |
| **4** | | | | | **121** | | **115** | | **25** | | **66** | | **156** | | **128** | | **4** | | | | **1** | | **2** |
| **5** | | | | | **121** | | **115** | | **63** | | **84** | | **138** | | **128** | | **4** | | | | **1** | | **2** |
| **6** | | | | | **121** | | **115** | | **177** | | **138** | | **84** | | **128** | | **4** | | | | **1** | | **2** |
| **7** | | | | | **121** | | **115** | | **139** | | **120** | | **102** | | **128** | | **4** | | | | **1** | | **2** |
| **8** | | | | | **121** | | **115** | | **101** | | **102** | | **120** | | **128** | | **4** | | | | **1** | | **2** |

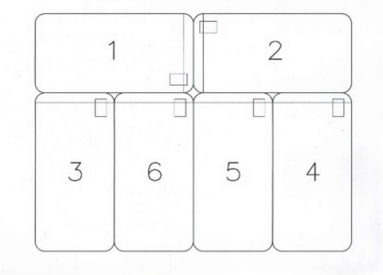
**Layer pattern ….** **zak …. kg** **pallet …… x ……..**

| bag | X | | | | | | | | | | Y | | | | | | HEAD | | | | | | Number of bags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | With pallet roller conveyor | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 7.4 | 7.1 | 7.3 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.2 | 7.4 | 7.1 | 7.3 | 6.1 | 6.2 | 7.1 | 7.2 | 7.3 | 7.4 | 6.1 | 6.2 | |
| | | | | | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.2 | 8.4 | 8.1 | 8.3 | 8.5 | 8.6 | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | |

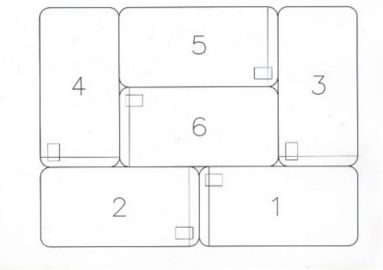
**Example of programme 3 set-up :**



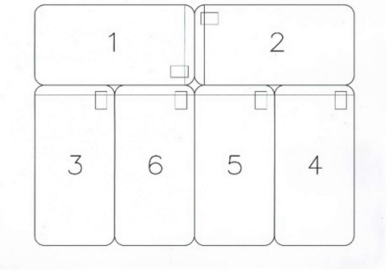

LAYER 1 / PATTERN 2




LAYER 2 / PATTERN 1

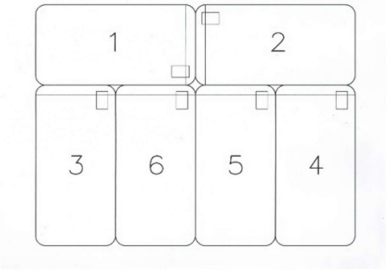



LAYER 3 / PATTERN 4




LAYER 4 / PATTERN 1


LAYER 5 / PATTERN 4




LAYER 6 / PATTERN 1

| | |
|---|---|
| **Programme** | **: 3** |
| **Bags** | **: 50 kg** |
| **Pallet** | **: 1200 x 1600** |
| **Numb. of layers** | **: 6** |

**Stacking programme 1**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 6 bags |
| Numb. of layers | : | 4 |
| Total | : | 24 bags |
| Weight | : | 1200 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **2** | |
| 2 | **1** | |
| 3 | **4** | |
| 4 | **1** | |
| 5 | | |
| 6 | | |

**Stacking programme 2**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 6 bags |
| Numb. of layers | : | 5 |
| Total | : | 30 bags |
| Weight | : | 1500 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **1** | |
| 2 | **2** | |
| 3 | **3** | |
| 4 | **2** | |
| 5 | **1** | |
| 6 | | |

**Stacking programme 3**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 6 bags |
| Numb. of layers | : | 6 |
| Total | : | 36 bags |
| Weight | : | 1800 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **2** | |
| 2 | **1** | |
| 3 | **4** | |
| 4 | **1** | |
| 5 | **4** | |
| 6 | **1** | |

**Stacking programme 4**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 6 bags |
| Numb. of layers | : | 9 |
| Total | : | 54 bags |
| Weight | : | 2700 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **1** | |
| 2 | **2** | |
| 3 | **3** | |
| 4 | **2** | |
| 5 | **1** | |
| 6 | **2** | |
| 7 | **3** | |
| 8 | **2** | |
| 9 | **1** | |

**Stacking programme 8**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 6 |
| Total | : | 30 bags |
| Weight | : | 1500 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | 6 | |
| 2 | 5 | |
| 3 | 6 | |
| 4 | 5 | |
| 5 | 6 | |
| 6 | 5 | |

**Stacking programme 9**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 5 + 6 bags |
| Total | : | 31 bags |
| Weight | : | 1550 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | 6 | |
| 2 | 5 | |
| 3 | 6 | |
| 4 | 5 | |
| 5 | 6 | |
| 6 | 1 | |

**Stacking programme 11**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 3 bags |
| Numb. of layers | : | 7 |
| Total | : | 21 bags |
| Weight | : | 1050 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | 14 | |
| 2 | 13 | |
| 3 | 12 | |
| 4 | 15 | |
| 5 | 14 | |
| 6 | 13 | |
| 7 | 12 | |

**Stacking programme 12**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 3 bags |
| Numb. of layers | : | 8 |
| Total | : | 24 bags |
| Weight | : | 1200 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | 14 | |
| 2 | 13 | |
| 3 | 12 | |
| 4 | 15 | |
| 5 | 14 | |
| 6 | 13 | |
| 7 | 12 | |
| 8 | 15 | |

**Stacking programme 13**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 3 bags |
| Numb. of layers | : | 8 + 1 bag |
| Total | : | 25 bags |
| weight | : | 1250 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **14** | |
| 2 | **13** | |
| 3 | **12** | |
| 4 | **15** | |
| 5 | **14** | |
| 6 | **13** | |
| 7 | **12** | |
| 8 | **15** | |
| 9 | **11** | |

**Stacking programme 14**

| | | |
|---|---|---|
| Bags | : | 50 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 3 bags |
| Numb. of layers | : | 9 |
| Total | : | 27 bags |
| Weight | : | 1350 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **14** | |
| 2 | **13** | |
| 3 | **12** | |
| 4 | **15** | |
| 5 | **14** | |
| 6 | **13** | |
| 7 | **12** | |
| 8 | **15** | |
| 9 | **14** | |

**Stacking programme 21**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1200 x 1600 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 8 |
| Total | : | 64 bags |
| Weight | : | 1600 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **21** | |
| 2 | **22** | |
| 3 | **21** | |
| 4 | **22** | |
| 5 | **21** | |
| 6 | **22** | |
| 7 | **21** | |
| 8 | **22** | |

**Stacking programme 22**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| of layers | : | 8 |
| Total | : | 40 bags |
| Weight | : | 1000 kg |

Numb.

| Layer | Layerpattern | |
|---|---|---|
| 1 | **30** | |
| 2 | **25** | |
| 3 | **26** | |
| 4 | **23** | |
| 5 | **24** | |
| 6 | **25** | |
| 7 | **26** | |
| 8 | **23** | |

**Stacking programme 23**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 9 |
| Total | : | 45 bags |
| Weight | : | 1125 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **29** | |
| 2 | **24** | |
| 3 | **23** | |
| 4 | **26** | |
| 5 | **25** | |
| 6 | **24** | |
| 7 | **23** | |
| 8 | **26** | |
| 9 | **25** | |

**Stacking programme 24**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 10 |
| Total | : | 50 bags |
| Weight | : | 1250 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **30** | |
| 2 | **25** | |
| 3 | **24** | |
| 4 | **23** | |
| 5 | **26** | |
| 6 | **25** | |
| 7 | **24** | |
| 8 | **23** | |
| 9 | **26** | |
| 10 | **25** | |

**Stacking programme 25**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 10 + 2 bags |
| Total | : | 52 bags |
| Weight | : | 1300 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **30** | |
| 2 | **25** | |
| 3 | **24** | |
| 4 | **23** | |
| 5 | **26** | |
| 6 | **25** | |
| 7 | **24** | |
| 8 | **23** | |
| 9 | **26** | |
| 10 | **25** | |
| 11 | **27** | |

**Stacking programme 26**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 11 |
| Total | : | 55 bags |
| Weight | : | 1375 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **29** | |
| 2 | **26** | |
| 3 | **25** | |
| 4 | **24** | |
| 5 | **23** | |
| 6 | **26** | |
| 7 | **25** | |
| 8 | **24** | |
| 9 | **23** | |
| 10 | **26** | |
| 11 | **25** | |

Stacking programme **27**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 11 + 2 bags |
| Total | : | 57 bags |
| Weight | : | 1425 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **29** | |
| 2 | **26** | |
| 3 | **25** | |
| 4 | **24** | |
| 5 | **23** | |
| 6 | **26** | |
| 7 | **25** | |
| 8 | **24** | |
| 9 | **23** | |
| 10 | **26** | |
| 11 | **25** | |
| 12 | **27** | |

**Stacking programme 28**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 12 |
| Total | : | 60 bags |
| Weight | : | 1500 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **30** | |
| 2 | **23** | |
| 3 | **26** | |
| 4 | **25** | |
| 5 | **24** | |
| 6 | **23** | |
| 7 | **26** | |
| 8 | **25** | |
| 9 | **24** | |
| 10 | **23** | |
| 11 | **26** | |
| 12 | **25** | |

**Stacking programme 29**

| | | |
|---|---|---|
| Bags | : | 25 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 5 bags |
| Numb. of layers | : | 13 |
| Total | : | 65 bags |
| Weight | : | 1625 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **29** | |
| 2 | **26** | |
| 3 | **25** | |
| 4 | **24** | |
| 5 | **23** | |
| 6 | **26** | |
| 7 | **25** | |
| 8 | **24** | |
| 9 | **23** | |
| 10 | **26** | |
| 11 | **25** | |
| 12 | **24** | |
| 13 | **23** | |

**Stacking programme 31**

| | | |
|---|---|---|
| Bags | : | 15 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 7 bags |
| Numb. of layers | : | 11 + 3 bags |
| Total | : | 80 bags |
| Weight | : | 1200 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **31** | |
| 2 | **32** | |
| 3 | **31** | |
| 4 | **32** | |
| 5 | **31** | |
| 6 | **32** | |
| 7 | **31** | |
| 8 | **32** | |
| 9 | **31** | |
| 10 | **32** | |
| 11 | **31** | |
| 12 | **33** | |

**Stacking programme 41**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 10 |
| Total | : | 80 bags |
| Weight | : | 800 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **42** | |
| 2 | **41** | |
| 3 | **42** | |
| 4 | **41** | |
| 5 | **42** | |
| 6 | **41** | |
| 7 | **42** | |
| 8 | **41** | |
| 9 | **42** | |
| 10 | **41** | |

**Stacking programme 42**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 15 + 5 bags |
| Total | : | 125 bags |
| Weight | : | 1250 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **41** | |
| 2 | **42** | |
| 3 | **41** | |
| 4 | **42** | |
| 5 | **41** | |
| 6 | **42** | |
| 7 | **41** | |
| 8 | **42** | |
| 9 | **41** | |
| 10 | **42** | |
| 11 | **41** | |
| 12 | **42** | |
| 13 | **41** | |
| 14 | **42** | |
| 15 | **41** | |
| 16 | **43** | |

**Stacking programme 45**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 6 bags |
| Numb. of layers | : | 14 |
| Total | : | 84 bags |
| Weight | : | 840 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **47** | |
| 2 | **48** | |
| 3 | **45** | |
| 4 | **46** | |
| 5 | **47** | |
| 6 | **48** | |
| 7 | **45** | |
| 8 | **46** | |
| 9 | **47** | |
| 10 | **48** | |
| 11 | **45** | |
| 12 | **46** | |
| 13 | **47** | |
| 14 | **48** | |

**Stacking programme 51**

| | | |
|---|---|---|
| Bags | : | 5 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 12 bags |
| Numb. of layers | : | 10 |
| Total | : | 120 bags |
| Weight | : | 600 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **52** | |
| 2 | **51** | |
| 3 | **52** | |
| 4 | **51** | |
| 5 | **52** | |
| 6 | **51** | |
| 7 | **52** | |
| 8 | **51** | |
| 9 | **52** | |
| 10 | **51** | |

**Stacking programme 61**

| | | |
|---|---|---|
| Bags | : | 2,5 kg |
| Pallet | : | 800 x 1200 |
| Per layer | : | 16 bags |
| Numb. of layers | : | 10 |
| Total | : | 160 bags |
| Weight | : | 400 kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | **62** | |
| 2 | **61** | |
| 3 | **63** | |
| 4 | **61** | |
| 5 | **62** | |
| 6 | **61** | |
| 7 | **63** | |
| 8 | **61** | |
| 9 | **62** | |
| 10 | **61** | |

**Stacking programme 71**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 10 |
| Total | : | 80 bags |
| Weight | : | 800 kg |

**WITH COLLECTION FLAP**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **72** | |
| 2 | **71** | |
| 3 | **72** | |
| 4 | **71** | |
| 5 | **72** | |
| 6 | **71** | |
| 7 | **72** | |
| 8 | **71** | |
| 9 | **72** | |
| 10 | **71** | |

**Stacking programme 72**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 15 + 5 bags |
| Total | : | 125 bags |
| Weight | : | 1250 kg |

**WITH COLLECTION FLAP**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **71** | |
| 2 | **72** | |
| 3 | **71** | |
| 4 | **72** | |
| 5 | **71** | |
| 6 | **72** | |
| 7 | **71** | |
| 8 | **72** | |
| 9 | **71** | |
| 10 | **72** | |
| 11 | **71** | |
| 12 | **72** | |
| 13 | **71** | |
| 14 | **72** | |
| 15 | **71** | |
| 16 | **43** | |

**Stacking programme 73**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 10 |
| Total | : | 80 bags |
| Weight | : | 800 kg |

**WITH COLLECTION FLAP**

**CAPACITY ENHANCING PROGRAMME**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **71** | |
| 2 | **74** | |
| 3 | **71** | |
| 4 | **73** | |
| 5 | **71** | |
| 6 | **74** | |
| 7 | **71** | |
| 8 | **73** | |
| 9 | **71** | |
| 10 | **74** | |

**Stacking programme 74**

| | | |
|---|---|---|
| Bags | : | 10 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 8 bags |
| Numb. of layers | : | 15 + 5 bags |
| Total | : | 125 bags |
| Weight | : | 1250 kg |

**WITH COLLECTION FLAP**

**CAPACITY ENHANCING PROGRAMME**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **71** | |
| 2 | **74** | |
| 3 | **71** | |
| 4 | **73** | |
| 5 | **71** | |
| 6 | **74** | |
| 7 | **71** | |
| 8 | **73** | |
| 9 | **71** | |
| 10 | **74** | |
| 11 | **71** | |
| 12 | **73** | |
| 13 | **71** | |
| 14 | **74** | |
| 15 | **71** | |
| 16 | **43** | |

**Stacking programme 81**

| | | |
|---|---|---|
| Bags | : | 5 kg |
| Pallet | : | 1000 x 1200 |
| Per layer | : | 12 bags |
| Numb. of layers | : | 10 |
| Total | : | 120 bags |
| Weight | : | 600 kg |

**WITH COLLECTION FLAP**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **82** | |
| 2 | **81** | |
| 3 | **82** | |
| 4 | **81** | |
| 5 | **82** | |
| 6 | **81** | |
| 7 | **82** | |
| 8 | **81** | |
| 9 | **82** | |
| 10 | **81** | |

**Stacking programme 91**

| | | |
|---|---|---|
| Bags | : | 2,5 kg |
| Pallet | : | 800 x 1200 |
| Per layer | : | 16 bags |
| Numb. of layers | : | 10 |
| Total | : | 160 bags |
| Weight | : | 400 kg |

**WITH COLLECTION FLAP**

| Layer | Layerpattern | |
|---|---|---|
| 1 | **92** | |
| 2 | **91** | |
| 3 | **93** | |
| 4 | **91** | |
| 5 | **92** | |
| 6 | **91** | |
| 7 | **93** | |
| 8 | **91** | |
| 9 | **92** | |
| 10 | **91** | |

**Stacking programme ….**

| | | |
|---|---|---|
| Bags | : | kg |
| Pallet | : | |
| Per layer | : | bags |
| Numb. of layers | : | |
| Total | : | bags |
| Weight | : | kg |

| Layer | Layerpattern | |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |