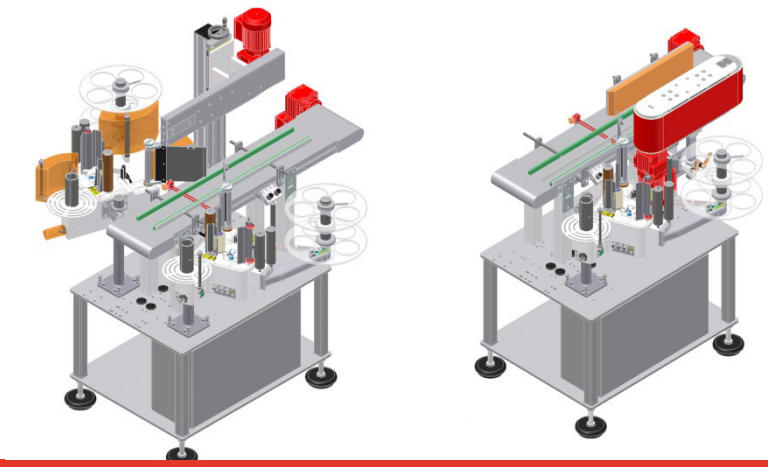
Original User's Manual

# Installation, Setup, Operation and Maintenance

# Geset 100

Article number of documentation 32708885





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# 1. General information

## Overview

Congratulations! You are now the owner of a high-quality labeling system. Our desire is for you to experience the full benefit of this system to your complete satisfaction for many years. As a prerequisite, we recommend system installation by one of our experienced specialists (for instructions, see page 32). Contact our service hotline (page 8); we are available in 24 hours a day, Monday through Friday

## Liability restrictions

All of the information and directions in these instructions were compiled with reference to applicable standards and regulations, the state-of-the-art as well as our years of accumulated experience.

The manufacturer assumes no liability for damage arising from the following:

- Nonobservance of operating instructions
- Improper use
- Use of untrained personnel
- Independent changes to the system
- The use of spare parts that have not been approved by the manufacturer

The following apply: The obligations agreed in the supply contract, general terms and conditions, the manufacturer's delivery conditions, as well as the statutory regulations applicable upon the conclusion of the contract. We retain the right to make technical changes to improve usefulness and for the sake of development:

## Warranty provisions

The warranty conditions are conform to the valid General Trading Conditions of Bluhm Systeme GmbH at the moment of purchase.

## Copyright

## Purpose and overview of the operating instructions

These operating instructions will help you get to know the system Geset 100 and use it properly.

They contain important instructions for the user on how to use the system safely and correctly. Its consideration helps to:

- Avoid hazards,
- Minimize repair costs and outages and
- increase the reliability and service life of the machine.

The operating instructions are for the system identified in the title with the stated type number.

The operating instructions must always be available wherever the system is used. They must be read and used by everyone assigned to work with the system.

Printing mistakes, errors, and changes to maintain the state-of-the-art may occur. Illustrations without protection devices may be presented for the sake of illustration.

## How to use the operating instructions

Detailed explanations are offered below of the conventions for the text and illustrations which are used in this manual.

- Buttons, switches and pushbuttons that need to be pressed are placed in brackets.

Ex.: Press the [Start] button to accept the changes...

- Menu points and links to chapters and keywords are places in "…"

Ex.: The pushbutton "Turning plate infeed/outfeed passage"…

- Procedures that need to be performed in a fixed sequence have to be numbered.

| Step | Procedure |
|---|---|
| 1 | Pull the power plug... |

- Special information is in bold and/or has a gray background

**This is an example of special information!**

- All figures (Fig.) are numbered sequentially for each chapter. This means that the reference "Fig. 2-1" corresponds to the first figure in chapter 2.

- Illustrations are frequently shown with only the essential information and may therefore deviate from the original. Illustrations are therefore shown without covers or protection device for the sake of clarity.

- Illustrations limit itself partly to the depiction of one variant (e. g. only RH, only LH, system versions with or without optional assembly groups…). It is particularly valid for example figures if the information content is transferred logically to other system versions.

## Service-Hotline

The technical service hotline is available 24 hours a day, Monday through Friday. In emergencies, parts may be shipped as late as approximately 10:00 p.m.

| | |
|---|---|
| **Tel :** | **+49 (0)2224 - 7708 - 440** |
| **Fax :** | **+49 (0)2224 - 7708 - 21** |
| **E-Mail :** | **hotline-ed@bluhmsysteme.com** |

If you want to discuss labeling system malfunctions, have the following information ready for the hotline:

- Detailed description of the problem.
- All the information from the labeling system rating plate.
- Did the problem arise for the first time after the following?
- After inserting a new role of labels or ribbon.
- After changing the system configuration.
- If the malfunction arose in the print-apply cycle, all of the information about the PLC signal status.

Before contacting our hotline, check if the operating instructions (chapter titles, troubleshooting) has information to help you deal with the problem.

We would like to keep our hotline available for our customers as much as possible. Please be aware that our hotline may also refer you to written information in the operating instructions.

## Explanation of the terms used

| Term | Explanation |
|---|---|
| **3-Roll System** | Is used for labeling around of round products. |
| **Actuator** | Drive for rotating or linear movements. Normally pneumatic (cylinder) or electromagnetic (motors). |
| **Air assist tube** | The air assist tube conducts the *supporting air* through one or more holes to the bottom of the label. It is attached next to the peeler bar and can be adjusted. |
| **Air assist** | A jet of air that, when the label is being fed, presses the label against the bottom of the tamp until it is held by the vacuum. |
| **Air Blast)** | Air that blows on the label through holes in the tamp pad at the time of labeling (through house nozzles when there is a blow box) so that the label is placed on the product without being touched. |
| **Application cycle** | Complete operating sequence of the labeling system (such as printing the label, peeling it off, transferring it to the applicator and labeling the product). |
| **Application mode** | Depending on labeler's equipment, different application modes can be applied. See explanations: Tamp on, tamp blow, blow on and wipe on. |
| **Automatic mode** | See labeling operation |
| **Base conveyor** | See also "conveying system". The base conveyor transports the products that should be labeled. |
| **Blow-on** | Contact-less application mode in which the tamp receives the printed label by a vacuum and blows it onto the product without the tamp moving. |
| **Conveying system** | The unit consisting of the conveyor belt and its control |
| **Conveyor** | Belt for conveying the product |
| **CS** | Abbreviation for conveying system (see above) |
| **Dancer arm** | The arm that holds the label liner taught by spring tension. |
| **Default** | All basis settings for the system after it is made that can differ from the status after the system is started up. The software parameters can be returned to the defaults by being reset, and any changed values are lost. |
| **Default** | See factory-setting. |
| **Gimbal adjustment** | The gimbal adjustment is used to align the longitudinal and lateral inclination of the labeling system and thus the peeler bar to product. The peeler blade has to be aligned parallel to product. |
| **HMI** | Abbreviation for Human-Machine-Interface, input unit for a labeling system or a controller of components. |
| **Home position** | Basic position of the tamp at the peeler bar |
| **Hotline** | Customer support for a fast diagnosis by phone. |

| Term | Explanation |
|---|---|
| **HPU** | The abbreviation of Height Processing Unit: A device that is driven by a motor or pneumatically to move a labeler vertically. This feature enables different labeling positions in vertical direction. |
| **Infeed** | The products are fed manually or by a conveying system provided by the customer at infeed passage of the labeling station. |
| **Label applicator** | See “labeler”. |
| **Label feed** | Feeding of a label by the labeler. The fed label is printed on within the print engine and peeled off at the peeler bar. |
| **Label gap** | Distance between two labels at the label web. The gap is detected by a (label) sensor of the applicator. |
| **Label liner** | Siliconized liner material where single labels stick onto. |
| **Label Out** | An optical sensor (reflective light sensor) for detecting the end of the labels |
| **Label sensor** | An optical sensor that determines the gap between the labels |
| **Label size** | Dictates the label format: Width x length (in the direction of feed of the label liner measured in millimeters [mm]). |
| **Labeling system** | Dispensing system for automatically applying labels |
| **Labeling operation** | This is the same as automatic mode. The labeling system is ready to print and dispense labels |
| **Labeling system** | The labeling system is used to label products automatically and consists of several components (assembly groups), e.g. conveyor belt, labeling system. |
| **LED** | Light-emitting diode |
| **Low label prewarning: Low Label warning** | An optical sensor (reflective light sensor) for detection of an (adjustable) minimum label roll diameter to provide a warning |
| **Opacity** | The transparency of a material can be measured by a light barrier and is named opacity. The measuring sets the quantity of the radiated light in proportion to the incoming light. The lower the proportion, the lower is the opacity. |
| **PLC** | Programmable logic controller. |
| **Poti/potentiometer** | Changeable resistor (controller) for the analog control of labeling system settings (such as the timing of the tamp movement in relation to the rotary position of the potentiometer) |
| **Pressure Gauge** | See service unit, displays the air pressure. |
| **Pressure rollers** | Pushes the label onto the product adhesively. |
| **Product Detector** | A sensor for detecting the product. Most frequently, optical sensors are used (photocells, light barriers, reflective sensors). |

| Term | Explanation |
|---|---|
| **PSI** | American unit of measure for compressed air. (1 PSI = 0.06895 bar). |
| **Peeler plate** | Metal plate about which the label is peeled off. |
| **Pusher roller** | Pushes the label onto the product strongly sticking. |
| **Rewinder** | Holder (generally for three-inch cardboard core) for winding the label backing strip. The rewinder winds the backing paper that is returned from the printing module. It is controlled by the dancer arm (see dancer arm). Rewinders have a motorized drive. |
| **Re- and Unwinder** | See rewinder and unwinder. |
| **RFID** | This abbreviation stands for radio frequency identification. This technology is used to identify products so that they can be tracked using smart labels (see RFID label . |
| **RFID label** | The RFID label or also called Smart label is a particular label that has a transponder onto which data can be written or read via radio. The idetification of products labeled in this way is possible contactless by an antenna. |
| **Outfeed** | The outfeed forwards the products to the customer's conveying system. Here the products are removed. |
| **Service unit (FR group)** | This unit consists of:<br>• A gauge for displaying the compression of the compressed air (in bar)<br>• Quick action stop valve<br>• Water trap for manually draining any condensate |
| **Start sensor** | See also "Product sensor". The start sensor scans the leading edge of the product. As soon as a product is detected, the labeling procedure starts. The label position on the product is adjusted by the sensor position. |
| **Stroke** | Way the tamp moves during extension in direction of product. |
| **Tamp** | Unit that grabs the label by means of a vacuum, conveys it to the product and applies it. |
| **Tamp pad (suction/blowing tamp)** | Perforated plate of the tamp to which the peeled off label is transferred. |
| **Touchscreen** | Touch-controlled screen or monitor |
| **Trigger-signal** | The signal from the sensor or PLC which is used to activate application. |
| **Unwinder** | The unwinder receives the roll of labels (generally with a 3 inch cardboard core). The unwinder allows the label roll to unwind smoothly without skipping, and a roll brake governs the feed (see also the dancer arm). Unwinders can also have a motor drive |
| **VAC** | Alternating voltage |
| **Vacuum generator (Venturi)** | An unit that uses compressed air to generate a vacuum. |

| Term | Explanation |
|---|---|
| **VDC** | Direct current voltage |
| **Water trap** | See service unit |

# 2. Safety regulations

## Behavior in an emergency

The operating personnel must know the location of and how to use safety equipment, alarms, first aid and rescue equipment.

**What to do in an emergency?**

- If individuals, body parts or objects become caught in the moving parts of the labeling system, immediately disconnect the compressed air and power supply to the labeling system.
- Immediately perform all necessary first-aid on injured persons. Observe the applicable safety regulations to prevent additional personal injury.
- Obtain medical help for injured persons.
- Eliminate all the causes of the accident.

## Basic safety guidelines

Safety guidelines offer information the form of text and symbols to warn of hazards and provide instruction for preventing any personal injury and property damage.

Safety instructions are introduced by keywords that express the extent of the danger.

Safety instructions can be affixed directly on the labeling system or in documents pertaining to the labeling system.

### Meaning of the hazard levels

| | |
|---|---|
| ⚠ DANGER | The symbol indicates a hazardous situation that will cause serious injury or death. To prevent personal injury, all safety instructions must be observed. |
| ⚠ WARNING | The symbol indicates a hazardous situation that can lead to serious injury or death. To prevent personal injury, all safety instructions must be observed. |
| ⚠ CAUTION | The symbol indicates a hazardous situation that can lead to moderate or light injury. To prevent personal injury, all safety instructions must be observed. |
| NOTICE | The symbol indicates a hazardous situation that can lead to property damage. To prevent property damage, all warnings must be observed. |

## Intended use

The operational safety of the system Geset 100 is guaranteed only if it is used as intended.

**Intended use consists of the following …**

- The labeling system may only be used for automatically labeling moving and stationary products.
- The labeling system may only be worked on manually after it stops.
- The labeling system is used for the specific products agreed with the customer with the specific, agreed labels. In every way, the products and labels must satisfy the documented* specifications agreed between the machine manufacturer and customer.

  * "Documented specifications" are normally laid down in the LSS (Labeling-Systems-Survey) and this document is handed out to the customer with the order confirmation.

- the labeling system is operating in explosion-proof environments (not intended for explosion-risk areas) !
- the labeling system does not come in direct contact with food products.
- the labeling system is not operating outdoors.
- the labeling system is used with an additional pneumatic shutter at the aperture for the tamp when operating in a wet environment.
- the labeling system has additional air conditioning features in the stainless steel cabinet for use in an aggressive air environment (e.g. salted air).
- the labeling system has additional air conditioning features in the stainless steel cabinet for use in a dusty environment with unadjusted particles.
- the labeling system is used exclusively for industrial purposes.
- all working conditions and instructions, prescribed in this manual, will be observed.
- failures at the labeling system affecting the safety have to be reported and immediately resolved by trained and briefed personnel.
- maintenance is kept and performed correctly.
- the labeling system is used exclusively under faultless conditions.
- safety equipments are not by-passed or abrogated.
- arbitrary changes at the machine are omitted.
- the labeling system is used or operated by adequate personnel, refer to "Authorized persons" (s. page **20**). These persons must have read and have to be familiar with the content of the manual.

Handling the labeling system without considering one of these points is not for the intended purpose and can cause serious damages to persons or properties.

## Reasonably foreseeable misuse

Usage different than or going beyond that specified under "Intended use" is considered unauthorized.

The operator bears sole responsibility for

- Damage arising from improper use.
- Furthermore, the manufacturer assumes no liability for such use.

Improper use can cause exposure to risk!

**Improper use includes e.g. the following:**

- Operating in an explosive atmosphere
- When the labeling system comes into contact with food…

## Modifications and alterations to the labeling station

If the machine is independently modified and altered, all of the manufacturer's liability and warranties will expire. This also holds true for modifications and changes to the programs of the programmable control system as well as changes to the parameters to control devices not described in these operating instructions.

The electromagnetic behavior of the machine can be impaired by additions or changes.

Do not change or modify the machine without first consulting the manufacturer and obtaining the written approval.

## Hazards to the labeling system

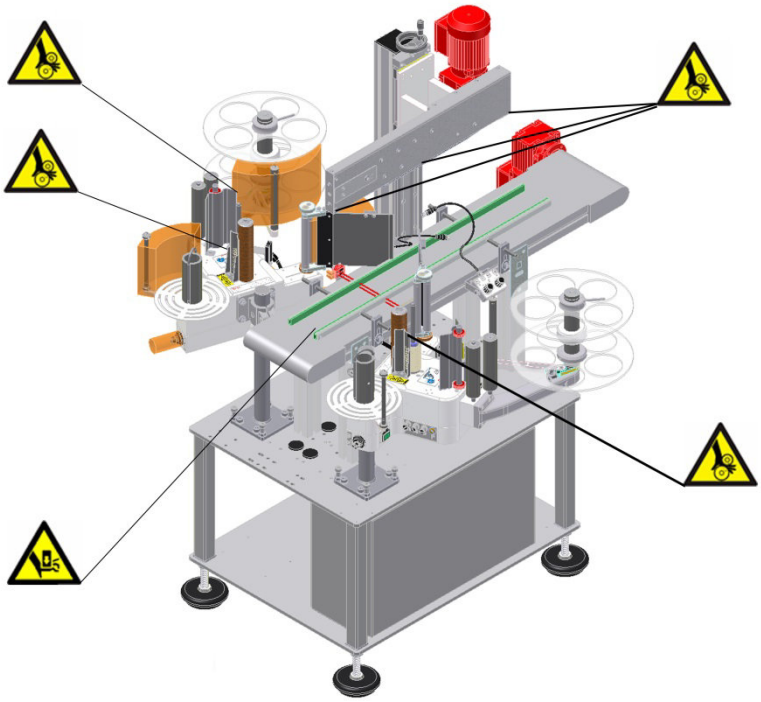


Fig. 2-1: Example for hazards to the labeling station Geset 114

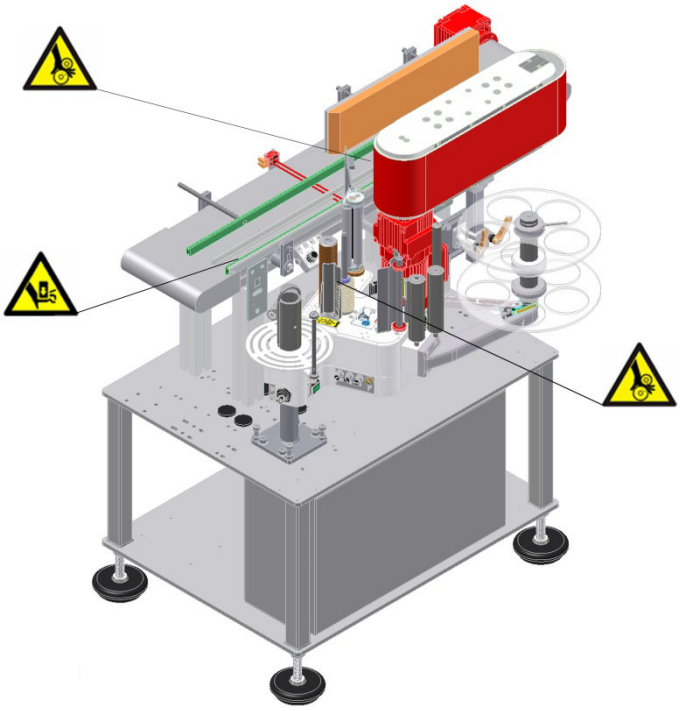


Fig. 2-2: Example for hazards to the labeling station Geset 121

Following assembly groups may point out an entanglement or a crushing hazard f.l.t.r.:

- Top conveyor,
- Wrapping unit,
- Base conveyor
- Labeler,
- Guidances.

Possible injuries that may be caused by the assembly groups of the labeler, are normally reversible.

**Safety instructions**

**⚠WARNING**

**Hazard from direct or indirect contact with voltage-conducting parts.**

 DANGER TO LIFE!

When individuals touch parts that conduct electricity arising from malfunctions.

- Only electricians may work on the switch cabinet and electrical equipment.
- Regularly check the electrical equipment of the labeling system. Immediately take care of loose connections and damaged cables.
- Always keep the switch cabinet locked.
- Before working on electrical equipment, switch the miniature circuit breaker to "0" position and secure it against being accidentally turned on. If possible, disconnect the power.

**⚠CAUTION**

**Hazard from easily flammable label material**.

 FIRE HAZARD!

The ribbon and labels are easily flammable. Potential injury from fire and smoke.

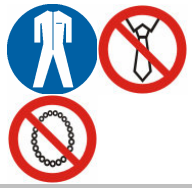
- Keep away from sources of ignition and open fire.

**⚠CAUTION**

**Hazard from actively controlled movements**.

 DANGER OF BEING PULLED IN!

Rotating elements at the labeling station, like transport- side- or top- conveyor, chain alignment, rewinder, driving- and transport rollers … are driven by a motor.



- Do not grip in, at or between the moving parts.
- Wear only work clothes that fit snugly, tear easily, have tight-fitting sleeves and no projecting parts
- Do not wear jewelry, wristlets, watches or similar.

**⚠CAUTION**

**Hazard from actively controlled movements.**

 CRUSHING HAZARD!
The movements of the labeling station are motor-driven by an automatic controller.
- Maintain a distance from moving parts.

**⚠CAUTION**

**Danger to health from the improper use of lubricants and cleaners.**

 HEALTH HAZARD!
The instructions in the manufacturer's current safety data sheets for the specific lubricants and cleaners that are used must be observed along with the applicable safety and disposal regulations.

**⚠CAUTION**

**Tripping hazard from connecting lines.**

 RISK OF INJURY!
Connecting lines for power, compressed air and computer and signal lines can pose a tripping hazard, causing serious injury.
- Release the tension of connecting lines to the system and run them so that they do not pose a hazard

**⚠CAUTION**

**Danger of injury from corners and edges.**

 RISK OF INJURY!
Scrapes and cuts can result from sharp edges and pointed corners. Always keep the work area clean. The label web forms sharp edges.
- Observe caution when working close to sharp edges and pointed corners. Remove unnecessary objects.
- In case of doubt, wear protective gloves.
- Be careful when inserting and exchanging the label web.

**⚠CAUTION**

***2 Risk of injury due to light beam.**

 RISK OF INJURY!
*2 Sensors or *2camera illumination may have a strong light intensity.
- Do not look into the source of light.

*2 Only if system has the appropriate features.

## Remaining risks

The labeler is constructed in a way that makes it safe for use. Some hazards are inherent in the design and construction but can be minimized with the corresponding safety mechanisms and equipment. A certain residual risk always exists when operating machinery. Knowledge about residual risks of the system helps you to increase your safety awareness and avoid accidents. To prevent hazards, observe the special safety instructions and each chapter. When connecting the labeler to the customer's conveying system, there may arise hazard areas at the transitions. Suitable protection measures have to be arranged in this case.

## Warnings on the labeling system

Special hazards arising from the labeling system are identified with yellow stickers. The pictograms indicate hazards:

| | |
|---|---|
|  | *2 **Danger** |
|  | **Life-threatening hazard due to electrical power** |
|  | **Crushing hazard** |
|  | **Entanglement hazard** |
|  | *2 **Danger due to strong light radiation** |
|  | **Observe manual** |

*2 Only if system has the appropriate features.

## Obligations of the operator

This manual is a part of the system and has to be available always within reach.

To guarantee a safe operation of the labeling station, the operator is obliged to …

- Ensure always the safety for the persons working at the labeling station.
- The technical data and information about the installation-, connection-, surrounding- and operational conditions have to be observed consequently.
- The safety regulations that are special for the labeling station are observed.
- The use of personal protective gear is observed.
- Signposting and marking of hazard areas have to be renewed if damaged or lost.
- Personal to be trained or instructed or apprentices work only under constant supervision of experienced persons.
- All work at the electrical equipment is only arranged by qualified Electricians.
- All failures at the labeling station are repaired by trained personel or by Technicians of the Bluhm Weber Group.
- The qualified personel is trained in handling the integrated controller before parameterizations may be arranged.

**If you do not understand parts of this manual, we kindly ask you to contact immediately your contact person at Bluhm Weber.**

## Authorized persons

Authorized persons according to this manual are following persons:

**Operators are persons who …**

- have been instructed to the use of the labeling system.
- have completed the minimum age permitted by law.
- Have read and understood this manual.

Operators are allowed …

- To start or stop the labeling operation.
- To replace label rolls.
- To arrange daily accumulating cleaning works at the labeling system according to the chaper maintenance.

**Qualified personnel are operators who …**

- Have terminated a professional technical training (Electrician, Mechanist).
- Have terminated a training at the Bluhm- Weber-Group successfully.

Qualified personnel are allowed…

- To arrange repair- and maintenance works at the labeling station and its components according to their professional qualification.

## Personal protective gear

**Wear the following protective gear when working on the machine:**

PROTECTIVE FOOTWEAR

To protect against falling parts and slipping.

PROTECTIVE WORK CLOTHES

Protective work clothes fit snugly, tear easily, have tight-fitting sleeves and no projecting parts.

- Wear a hair net if necessary.
- Do not wear jewelry, wristlets, watches or similar..

SAFETY GLASSES

Wear safety glasses to protect from splashing cleanser and flying parts.

PROTECTIVE GLOVES

Wear protective gloves to protect from sharp-edged objects and irritating detergents.

| **Wear personal protective gear for the following activities.** | **Protective work clothes** | **Protective footwear** | **Protective gloves** | **Safety goggles** |
|---|---|---|---|---|
| |  |  |  |  |
| Transport labeling station | X | X | X | |
| Put up labeling station and connect it | X | X | | |
| Put labeling station into operation | X | X | | |
| Arrange maintenance work | X | X | X | X |
| Ensure product operation | X | X | | |
| | Observe the manufacturer's documentation for the individual components of the machine! | | | |

## Protection Devices

Operate the system only if all safety- and protection devices are completely available and functional. Check the protection devices for its function:

- At first operation.
- At regular routine test.
- After exchange of security-relevant components and parts.

If deficiencies occur during operation at the protection devices, stop the system immediately and remedy the deficiencies! Do not change or remove any protection devices. Do not take the protection devices out of operation by any change.

Protection devices may only be removed when the system is stopped and safeguarded against re-starting of the system (e.g. padlock at main switch, disconnect power plug from power connection). If subcomponents are supplied, the protection devices have to be installed according to the regulations by the operator.

Connection to the customer's conveying system may evoke dangerous areas at the transitions. Suitable safety measures have to be taken in this case.

### Labeling station's cover

The fixed and screwed system covers protect the user against mechanical hazards.

### *2 Main switch

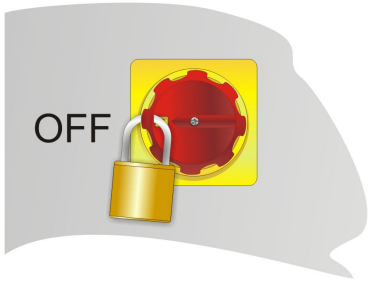



Fig. 2-3: Main switch with lock

The main switch serves for switching the system on and off. In position "0" it interrupts the power supply to the system but however the supply in front of the switch can be energized.
The main switch can be locked in position "0" as a protection against a hazard by accidentally or unauthorized switching on of the system.

Lock always the main switch:

- During maintenance- and service works.
- If switching on the system may lead to a hazard

### *2 Emergency-Stop Push Button

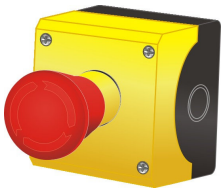


Fig. 2-4: Emergency-Stop Push Button

The emergency stop pushbutton serves for an immediate stopping of the complete labeling system. It should only be used in emergency situations.
The emergency stop pushbutton is locked after actuation and has to be locked manually before restarting (consider the information at the button).

*2Only if system has the appropriate features.

## Workplaces for the operating personnel

The labeling station is an automated system and does not require operation while labeling.

**When the labeling system is operating without any malfunction, the operator may only be in the safe area, that is, the area covered by the protective measures.**

For servicing, repairing and troubleshooting (remove the label from the applicator), etc., the labeling system can be operated from all sides.

Only one person is permitted to replace the consumable material.

All interventions are only permitted when the labeling system has stopped operation.

**After troubleshooting and/or restarting the labeling station, the operator must immediately leave the hazardous area and has to stay in the area designated by the safety measures.**

## Waste disposal


This label is in compliance with RoHS 2 EU Directive 2011/65/EU given observance of the prohibitions on use are and avoidance of pollutants.

# 3. Specifications

| | |
|---|---|
| **Dimension** (L x W x H in mm)**:**<br>**depending on version**<br>**Geset 121**<br>**Geset 114 (with two labelers)** | <br><br>appr. 1520 (1173)x 880 x 1100 mm<br>appr. 1500 (1173)x 990 x 1520 mm |
| **Weight:**<br>**depending on version** | appr. 535 kg (without label roll) |
| **Power connection:** | 115 / 230 V / 50 Hz |
| **Power consumption:**<br>**depending on version** | 1,5 kW |
| **Protection class:** | IP 40 |
| **Ambient temperature:** | 10 - 38 °C |
| **Surrounding conditions:** | 20 - 90 % relative humidity (non condensing) |

### Information on operator elements

| | |
|---|---|
| **Pushbutton unit Geset 100** | 1 illuminated pushbutton and 1 button, and 1 Emergency Stop Pushbutton |

| | |
|---|---|
| **HMI Labeler** | Operator panel or display (s. Alpha's manual) |

### Noise level

The A-evaluated equivalent permanent noise level at the working places of this system is maximum 75db (A).

# 4. Description of the labeling station

The labeling station Geset 114 is used to label square, cyclindrical, conical, oval as well as half-rounded products automatically.

The labeling station Geset 121 is used to label round products automatically.

Depending on kind and dimension of the product, different label sizes are used.

**Further function descriptions about machine components (e.g. top conveyor, wrapping unit…) can be found in the chapter Adjustment and initial operation.**

### Side labeling Geset 114

For this labeling, up to 2 (each righthand and lefthand from base conveyor) laterally installed label applicators (Alpha) are active.

The products are fed manually or separated by a conveying system provided by the customer to the labeling system. Here an exact alignment of the products is essential.

The top conveyor stabilizes the product's position for the side labeling. Thus fixed, the products are firstly transported to the labelers.

Depending on application, one or both outsides receive one label in so-called Wipe-On procedure when the product passes by.

When the label is applied, the labels are often pushed on by a pusher (pusher brush, -squeegee or -rolls).

The conveyor belt moves the completely labeled products to the outfeed area. Here the products are removed manually or be the customer-specific conveying system.

### Wrap-around labeling Geset 121

The wrap-around labeling is only possible with cylindrical products.

The products are fed manually or separated by a conveying system provided by the customer to the labeling system.

The side guidances position the products in line with the outside edge of the base conveyor.

The base conveyor feeds the products to the label applicator. There the label with the preparatory part is applied onto the product and by means of the rotation and the counter pressure of the pusher plate pushed onto the product.

The counter pressure of the pusher plate and the wrapping unit (the speed of the wrapping unit is twice as fast as the speed of the base conveyor) put the product to rotation.

The conveyor belt moves the completely labeled products to the outfeed area. Here the products are removed manually or be the customer-specific conveying system.

## Complete overview

This figure shows the essential assembly parts of the Geset 114.

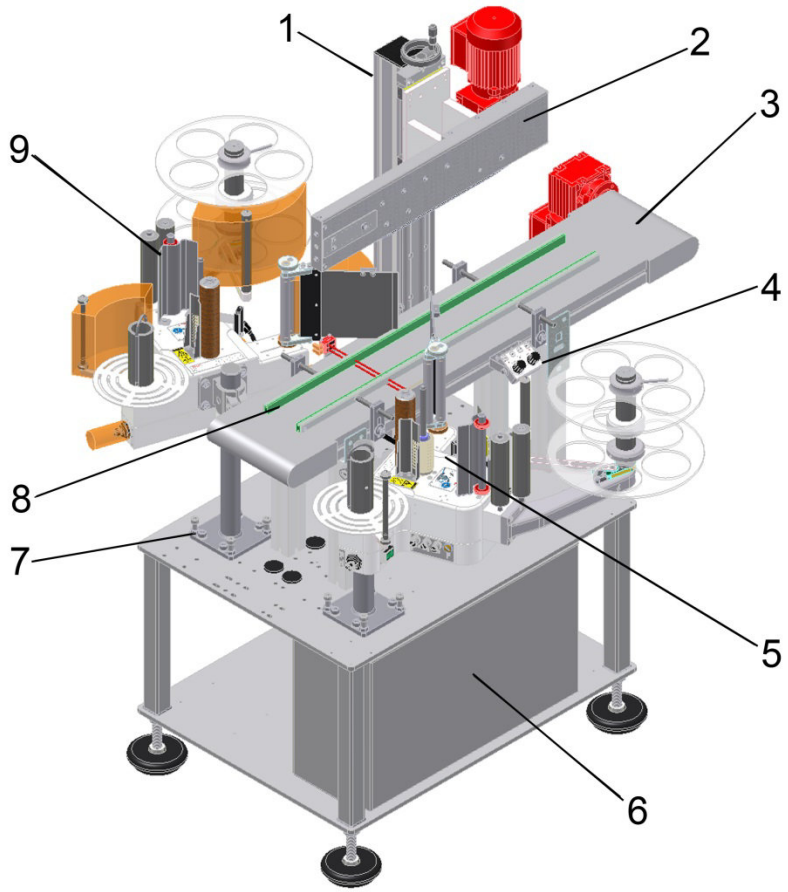



Fig. 4-1: Overview of labeling station Geset 114

| No. | Description |
|---|---|
| 1 | HEIGHT ADJUSTMENT TOP CONVEYOR |
| 2 | TOP CONVEYOR WITH DRIVE |
| 3 | BASE CONVEYOR WITH DRIVE |
| 4 | OPERATOR UNIT (ALPHA) |
| 5 | LABELER (ALPHA RH-VERSION) |
| 6 | SWITCH CABINET |
| 7 | GIMBAL LABELER |
| 8 | PRODUCT GUIDANCES |
| 9 | LABELER (ALPHA LH-VERSION) |

This figure shows the essential assembly parts of the Geset 121.

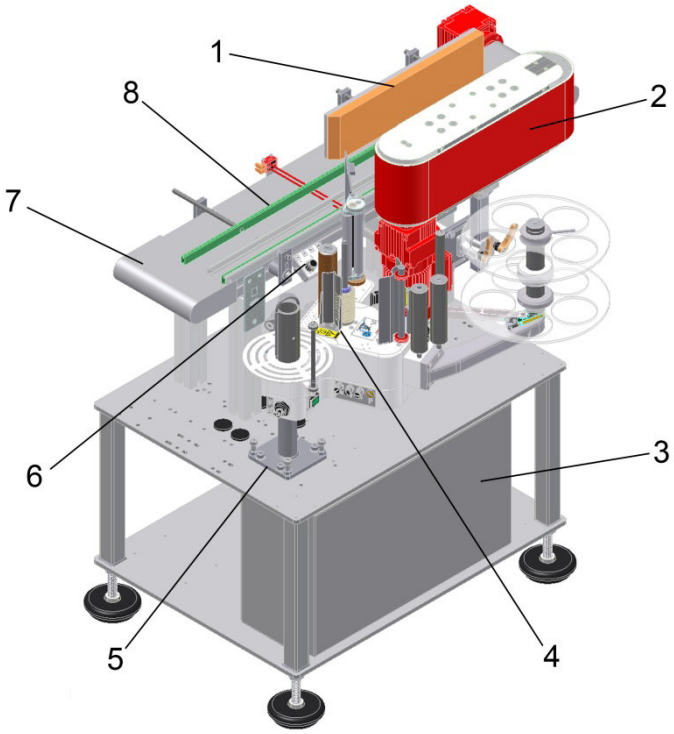



Fig. 4-2: Overview of labeling station Geset 121

| No. | Description |
|---|---|
| 1 | PUSHER PLATE (SPONGE RUBBER) |
| 2 | WRAPPING UNIT WITH DRIVE |
| 3 | SWITCH CABINET |
| 4 | LABELER (LH-VERSION) |
| 5 | GIMBAL LABELER |
| 6 | OPERATOR UNIT (ALPHA) |
| 7 | BASE CONVEYOR WITH DRIVE |
| 8 | PRODUCT GUIDANCES |

# 5. Transport

## Delivery

The labeling station is normally delivered by a haulage contractor. Check the package for any damage. If you notice anything unusual, notify the haulage contractor immediately and note it on the delivery slip.

### Scope of the delivery

The elements of the system delivery depend on the selected options and the customer's specific application. When the system is delivered, check to see if everything is there against the delivery slip.

## Transportation and unpacking

### Safety instructions


**Hazard from lifted loads.**

Falling loads can cause severe injury or death.

- Do not walk under a lifted load. The load may not be tilted.
- The location of the center of gravity must be taken into account when transporting the system. Loads with displaced center of gravity have special markings for the targeted placement of material handling equipment.


**Hazard from tight straps.**

The straps are secured tightly and can snap off if they are cut and cause severe injury.

- Wear protective glasses and gloves.
- Stand to the side outside of the hazard zone.


**Hazard from falling parts.**

- Wear protective footwear.

The transport will be arranged by a Technician of the Bluhm Weber Group or by authorized specialists.

**NOTICE**

Remove the packaging material and the transport securing devices only at the site of use, and transport the labeling system in its original packaging to the labeling site. If the labeling system is not secured, it can tip over easily when transported.

### Requirements

- The labeling system is packed when delivered (with possible exceptions), that is:
  - It is standing on a pallet
  - It may be wrapped with stretch film or in a transport box
  - It may be secured with additional straps and the plate feet may be screwed to the pallet
- Access ways to the machine are sufficiently dimensioned and not blocked.

### Required equipment

- Suitable means transport (double pallet trucks or forklifts with a minimum capacity of 1000 kg). When using a forklift, drive slowly.
- Use a steel strapping cutter to remove the straps
- A crescent wrench for the transport securing devices.

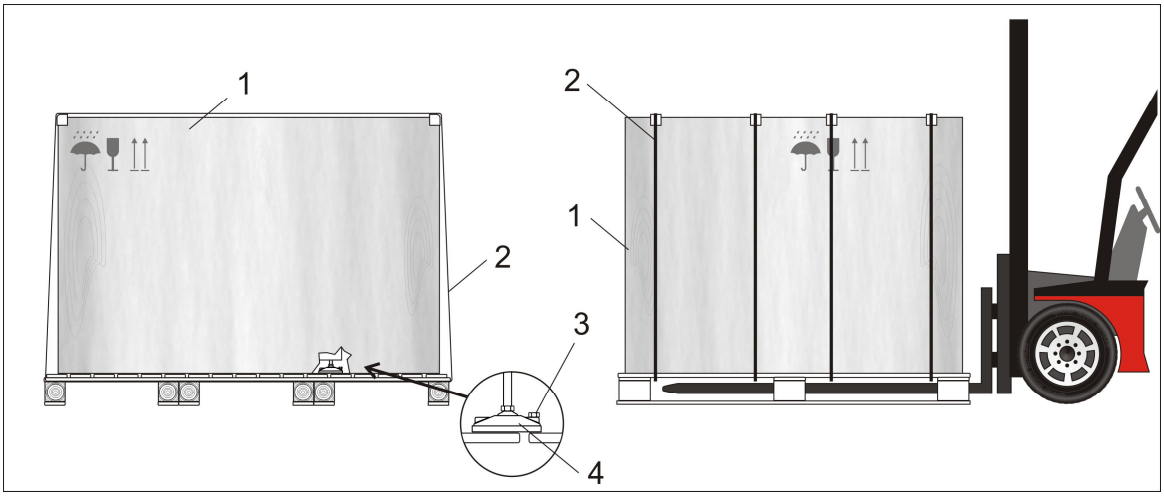



Fig. 5-1: Examples of packaging

| No. | Description |
|---|---|
| 1 | TRANSPORT BOX |
| 2 | STRAP |
| 3 | TRANSPORT SECURING SCREW |
| 4 | RUBBER FEET |

### Instruction

Use the following procedure to transport the labeling system to its site of use.

| Step | Procedure |
|---|---|
| 1 | Transport the labeling system to its site of use (within 3 m). The labeling system is precisely positioned during installation by a Technician from the Bluhm Weber Group. |
| ⚠CAUTION | The straps are secured tightly and can fly back when they are cut and cause injury. |
| 2 | Open, if available, the transport box (applied notes have to be observed!). Remove any film and straps (if available). |
| 3 | Remove, if available, all transport securing devices from the rubber feet. |

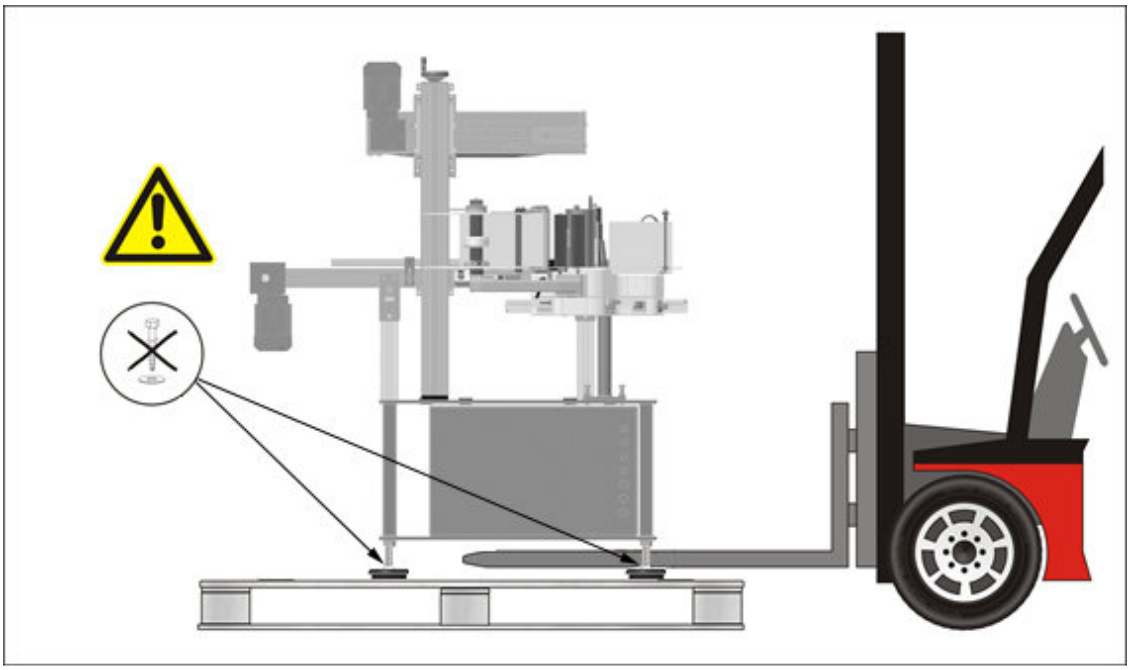


Fig. 5-2: Lift labeling system from pallet

| | |
|---|---|
| 4 | Lift the labeling system with a suitable material handling equipment in shown way from the pallet (applied notes have to be observed!). |
| 5 | Before startup, remove all transport securing devices (identified red tie wrap). |

## Storage conditions

The conditions for storing a labeling system are the same as those of normal operation. For details see the chapter: "Specifications" on page 24**.**

### Instruction

Store the labeling system securely as follows.

| Step | Procedure |
|---|---|
| 1 | *2 Remove the label material from the system. |
| 2 | Transport the system to its storage location. For securing and transporting the labeling system, follow the safety instructions in the above section "Transportation and unpacking". |
| 3 | To protect from dust, cover the labeling system with a cotton or paper cloth. To prevent the formation of condensate, do not use film. |
| 4 | Climatize the storage location like written in chapter “Specifications“ on page 24. |
| 5 | Before restarting the labeling system, check the system. |

# 6. Installation and initial startup

## Safety instructions

**⚠WARNING** **Danger to life from actively controlled movements**.


RISK OF INJURY FROM CRUSHING!
The movements of the labeling system are motor-driven by an automatic controller in automatic operation.
- Maintain a distance from moving parts.

**⚠CAUTION** **Danger of being pulled in by rotating elements.**


DANGER OF BEING PULLED IN!
Rotating elements at the labeling machine, backing rewinder, label feed, *²conveyor belt and *²top conveyor are driven by a motor.
- Do not grip in, at or between the moving parts.

## Installation

Continuous operation with minimal wear and downtime can only be ensured when the system is installed properly. Fine adjustments to the conditions of use are essential when installing the system. These fine adjustmetns are adapted to the surrounding conditions. To make these fine adjustments, detailed professional knowledge is necessary that arises from experience with labeling systems.

This required professional knowledge cannot be completely communicated by the operating instructions; therefore a Technician from the **Bluhm Weber Group** needs to perform the installation or accept the labeling system in a final inspection. The warranty does not cover damage or consequential damage arising from improper installation lacking the necessary fine adjustments.

### Requirements at the installation site

- An enclosed and clean room.
- Flat, solid base.
- Any unevenness may not exceed 5 mm when stands from the Bluhm Weber Group are used.
- Sufficient bearing capacity: 1,500 kg/m².
- Low vibration environment.
- Sufficient lighting: 500 Lx.
- No direct exposure to sunlight or a radiator.
- The machine may not be operated within electrostatic or magnetic fields. This can cause the controls to malfunction.
- A proper energy supply (electricity) according to the chapter, "Specifications" on page 24.

### Placing the labeling system

- The labeling station has to be adapted to the customer's conveying system in position and height. The height of the system parts has to be ergonomically designed according to the user's requirements.
- The installed position must allow sufficient access for users and service technicians. In particular at all times, the mains switch / plug must be freely accessible to disconnect the power supply
- Make sure that all fasteners are sufficiently tight.
- Observe all of the items under "Intended use" in the chapter "Safety regulations" on page 13.

## Setting up the labeling system

### Requirements

- The labeling system is unpacked and prepared (see the chapter: "Transport" on page 28) near the labeling site in the area of the installation site.
- The base is solid, level and flat.
- The labeling system and if applicable the turning plate must be completely installed.
- The connections for the compressed air and electricity are close to the labeling site (maximum distance of 1.5 m) as specified in the chapter: "Specifications" on page 24.

### Required equipment

- Flat wrench
- Spirit level
- If applicable 2-3 persons

### Instruction

Set a labeling system up as follows.

| Step | Procedure |
|---|---|
| 1 | Move the labeling system to installation site. Move labelers without rolls piece by piece diagonally. Consider all points for "Placing the labeling system" on page 33. |
| 2 | Adjust the labeling system with an air lever by the adjustable feet horizontally. (With rolls, the brakes have to be locked). See also "Adjust base conveyor" on page 40. |

## Connecting the labeling station

The labeling station requires electricity to work. For details see the Chapter: "Specifications" on page 24.

## Connection to supply voltage

### Safety instructions

**⚠CAUTION**

**Hazards from actively controlled movements.**

RISK OF INJURY FROM PULLING AND CRUSHING!
Immediately after turning on, several system parts make a reference run or move to its home position!
- Maintain a distance from powered system components.

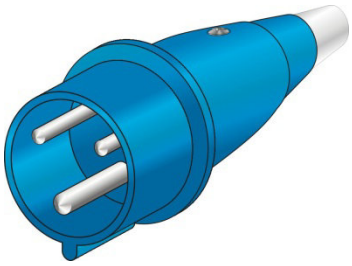


Fig. 6-1: 230V-CEE- Connection plug

### Requirements

- Power supply according to "Specifications" on page 24 is installed close to or (max. 1,5 m distant) from the labeling site.
- Main switch is in OFF/ 0-position
- Power cabling is available

### Instruction

Please connect the labeling system with the power supply as follows.

| Step | Procedure |
|---|---|
| 1 | Connect the power voltage cable with the power socket. |
| ⚠CAUTION | **Risk of injury from pulling in and crushing!**<br>Immediately after turning on, several system parts make a reference run or move to its home position!<br>- Maintain a distance from powered system components. |
| 2 | Turn on the main switch. |
| 3 | Turn on the machine and control the running directions of the drives. If the drives run against the intended driving direction, turn off the system immediately. The electrical rotating field must be changed in this case by an Electrician. |
| 4 | Stop the labeling station and turn off the main switch. |

# 7. Adjustment and initial operation

## Safety instructions

**CAUTION**

**Hazards from actively controlled movements.**

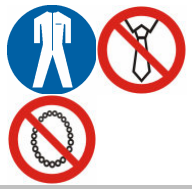
RISK OF INJURY FROM CRUSHING!
The movements of the labeling system are motor-driven by an automatic controller in automatic operation.

– Maintain a distance from moving parts.

**CAUTION**

**Danger of being pulled in by rotating elements.**

DANGER OF BEING PULLED IN!
Rotating elements at the labeling system like transport-, side or top conveyor, chain alignment, unwinder, drive rollers or feed rollers are powered by a motor.



– Do not grip in, at or between the moving parts.
– Wear only tight clothes with low tensile strength with tight sleeves.
– Do not wear jewelry, wristlets, watches or similar.

## Positioning device and scales

**NOTICE**

**Hazard from damages caused by improper use of interlocks.**

Positioning equipment has interlocks (normally clamp levers) to ensure a connection that is force-fit.

- Loosen all interlocks of the respective positioning device **before** each change of position!
- Tighten again the respective interlock **after** the change of position!

The labeling station is provided with different positioning devices, and its handling is described in advance.

Screwings (without „grip“) or similar are mountings that may normally not have to be adjusted. The gimbal adjustment is described in a section below separately (s. from page 50).

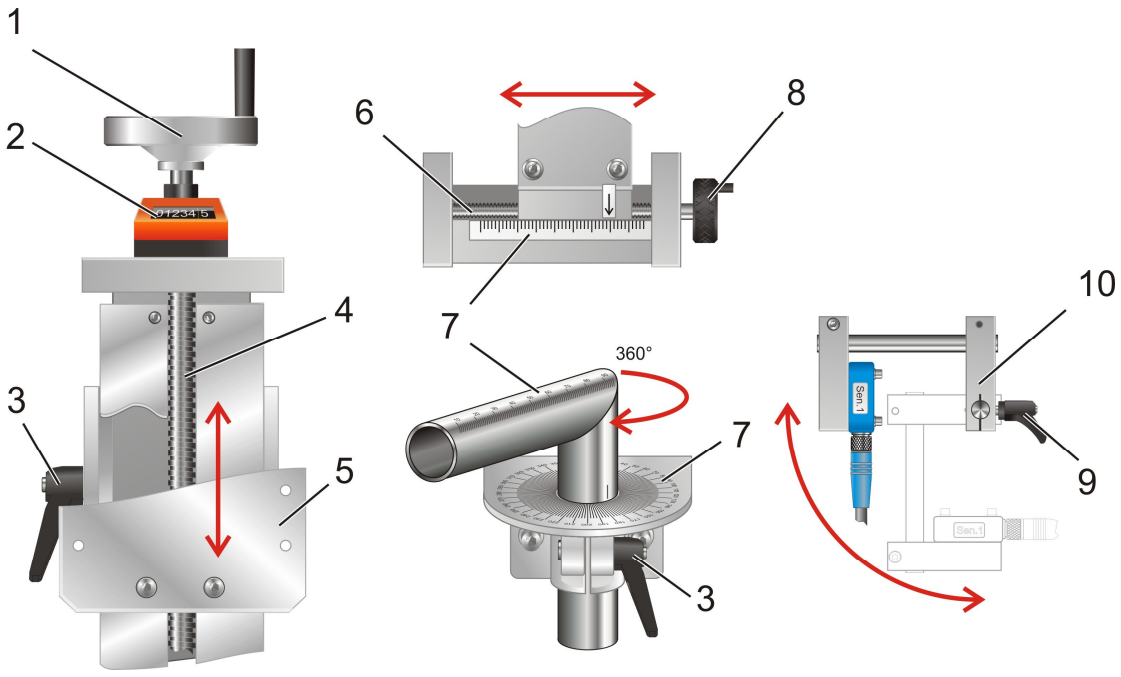



Fig. 7-1: Examples for positioning device

| No. | Description |
|---|---|
| 1 | CRANK |
| 2 | DIGITAL-COUNTER [mm], 1/10 [mm |
| 3 | CLAMP LEVER (INTERLOCK) |
| 4 | SPINDLE |
| 5 | SPINDLE SLIDE |
| 6 | SPINDLE |
| 7 | SCALE |
| 8 | CRANK WHEEL |
| 9 | CLAMP LEVER |
| 10 | CLAMPING PIECE |

## Clamp lever for adjustment or interlock

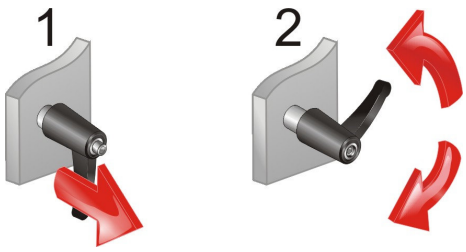



Fig. 7-2: Move clamp lever

The most simple kind of adjustment is the clamping piece with clamp lever (s. Fig. 7-1, Pos. 10). If the clamp lever can not be rotated by 360 ° due to shortage of space, it can be easily moved by being pulled out (s. Fig. 7-2).
Clamp levers are also used for interlock of spindle slides (s. Fig. 7-1, Pos. 3). They will always have to be loosened before adjustment and then they have to be tightened again.

## Spindle adjustments and digital counter

Depending on version, a system provides spindle adjustments with different inclinations. I. e. at a crank rotation, the spindle slide covers a distance of resp. 2 or 4 mm


Fig. 7-3: Spindle adjustment with digital counter

| No. | Description |
|---|---|
| 1 | CLAMP LEVER |
| 2 | CRANK |
| 3 | DIGITAL-COUNTER [mm], 1/10 [mm] |
| 4 | NUMBERING OF THE ADJUSTMENT |

## Record of adjustment values

Adjustments with scales or digital counters simplify the position determination and enable thus repeatable adjustment for each product charge.

For labeling stations with scales or digital counters, we recommend to maintain a list with „values per product“. All relevant settings should be numbered to ease the assignment of the values.

All relevant adjustments are numbered (s. Pos 4, Fig. 7-3), to ease the alignment of documented values. They have then only be adjusted at product change only at the respective adjustments.

For labeling stations without scales or counters, there can maybe arranged markings at the adjustments if applicable.

## Adjustment and initial operation

The labeling system has to be re-adjusted at initial operation or at a product change. The adjustments comprise two functions, operation of the controller (s. from page 55) and mechanical setup of the assembly groups (explained in the following).

In following adjustment table all required working steps are listed. Experienced operators may use the adjustment tables later on as a checklist.

### Requirements

- Control about product transport.
- One or more sample products.
- Labeling system is connected to power. Triggering of the labeling system is possible by product sensor or I/O-interface.

### Instruction

Please put the labeling system Geset 114 into operation as follows.

| Step | Procedure |
|---|---|
| 1 | If there are already exist notes of the „adjustment values“ (ref. page 37) for the product to be labeled, the values should be available. |
| 2 | Adjust base conveyor (s. from page 40). |
| 3 | Adjust side guidance (s. from page 41). |
| 4 | Adjust top conveyor Geset 114 (s. from page 42) |
| 5 | Insert label roll in labelerr (s. from page 46) |
| 6 | Adjust product light barrier (s. from page 46) |
| 7 | Change peeler plate (s. from page 47) |
| 8 | Positioning of peeler plate to product (s. from page 48) |
| 9 | Pitch peeler blade (Gimbal adjustment) (s. from page 50) |
| 10 | Adjust pusher roller, - brush and – squeegee (s. from page 52) |

Please put the labeling system Geset 121 into operation as follows

| Step | Procedure |
|---|---|
| 1 | If there are already exist notes of the „adjustment values“ (ref. page 37) for the product to be labeled, the values should be available. |
| 2 | Adjust base conveyor (s. from page 40). |
| 3 | Adjust side guidance (s. from page 41). |
| 4 | Adjust wrapping unit (s. from page 44) |
| 5 | Insert label roll in labeler (s. from page 46) |
| 6 | Adjust product light barrier(s. from page 46) |
| 7 | Change peeler plateChange peeler plate (s. from page 47) |
| 8 | Positioning of peeler plate to product (s. from page 48) |
| 9 | Pitch peeler blade (Gimbal adjustment) (s. from page 50) |

## Adjust base conveyor

The base conveyor transports the product to be labeled from infeed passage to labeler and from labeler to outfeed passage. .

### Information on adjustment of base conveyor's height

The height of the base conveyor has to be adapted to the customer-specific conveyor system or to the ergonomic requirements of the operator personnel accordingly.

The base conveyor (Fig. 7-4: Pos. 1) is installed fix. The height of the base conveyor can be adjusted by the threads at the rubber feet (Fig. 7-4: Pos. 4) of the switch cabinet.

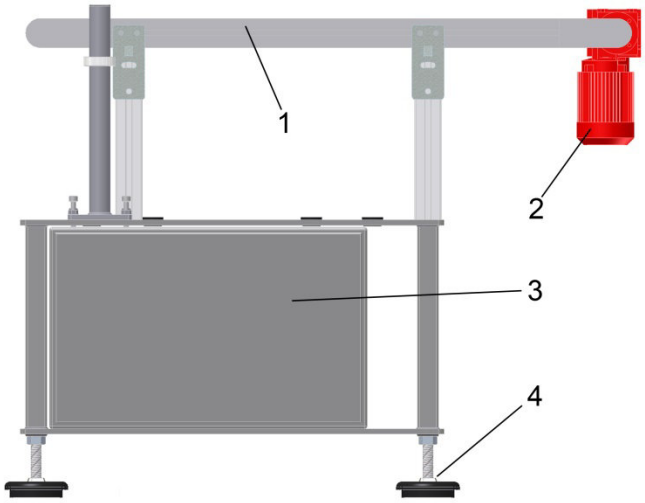



Fig. 7-4: Base conveyor and switch cabinet

| No. | Description |
|---|---|
| 1 | BASE CONVEYOR |
| 2 | DRIVE MOTOR |
| 3 | SWITCH CABINET |
| 4 | RUBBER FEET |

### Requirements

- Power supply is turned off.
- No transportation of products.

### Required equipment

- Screw wrench (for rubber feet adjustment)
- Air level

### Instruction

Please adjust the height of the base conveyor as follows.

| Step | Procedure |
|---|---|
| 1 | Loosen the counternuts of the rubber feet. |
| 2 | Adjust the height of the base conveyor to the required criteria (s. section above). |
| 3 | Tighten again the counternuts. |

## Adjust side guidance

The side guidances are used to determine the place at the conveyor where the product to be labeled should be transported to. For side labeling, the adjustment is generally centered to the base conveyor.

At wrap-around labeling, products have to be transported laterally at the base conveyor's outside edge. I.e. at wrap-around labeling the products are positioned at base conveyor's outside edge at which also the fixed part of the wrapping unit is located

### Information on adjustment of side guidance

The side guidances are adjusted by the star grips. The guidances have to be adjusted that between product and side guiding is a crack of appr. 1-1,5 mm per side

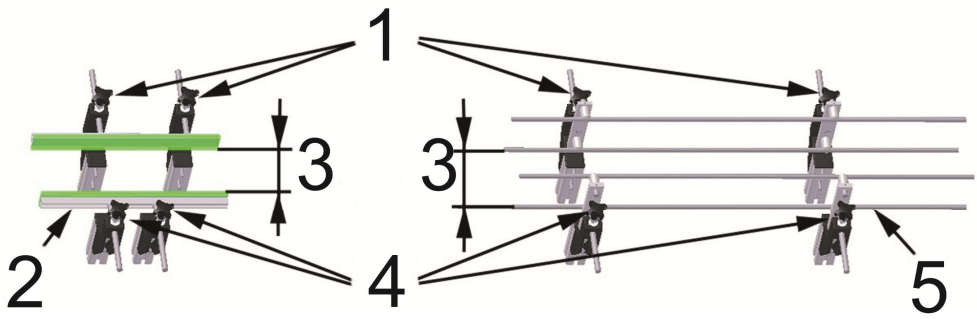



Fig. 7-5: Examples of side guidances

| No. | Description |
|---|---|
| 1 | STAR GRIP SIDE GUIDANCE OPERATOR'S SIDE |
| 2 | SIDE GUIDANCE WITH WEAR STRIP |
| 3 | DISTANCE = PRODUCT + 2-3 mm |
| 4 | STAR GRIP SIDE GUIDANCE DRIVE SIDE |
| 5 | SIDE GUIDANCE WITH RODS |

**Requirements**

- Labeling system is turned off.
- 2 sample products.
- No transportation of products.

Please adjust the side guidances as follows.

| Step | Procedure |
|---|---|
| 1 | Loosen the star grips. |
| 2 | Open the side guidances and place one sample product at beginning and end. |
| 3 | Adjust the side guidance to the required criteria (s. section above). Observe a distance of 1 - 1,5 mm to the product. (In infeed passage this distance can be adjusted larger.) |
| 4 | Tighten the star grips. |
| 5 | Check the adjustment by moving a sample product through the side guidances. The sample product has to slide easily through the guidance at each passage. |

### Adjust top conveyor Geset 114

**The top conveyor is used exclusively for side labeling and has to be placed otherwise out of the range of production.**

Products are moved with the base conveyor below the top conveyor and are there fixed and the side labeling is applied. The top conveyor has a powered conveyor belt that is balanced with the speed of the base conveyor.

The top conveyor fixes products in aligned position so that they can be labeled laterally without any movement. The top conveyor compensates product tolerances in height by spring-mounted units.

The top conveyor is screwed at the top conveyor-mounting. It has a vertical positioning device (ref. page 36) with which the top conveyor is adjusted to the different product heights.

The top conveyor is used only for side labeling and has to be put up when not used so that products can pass without any contact.

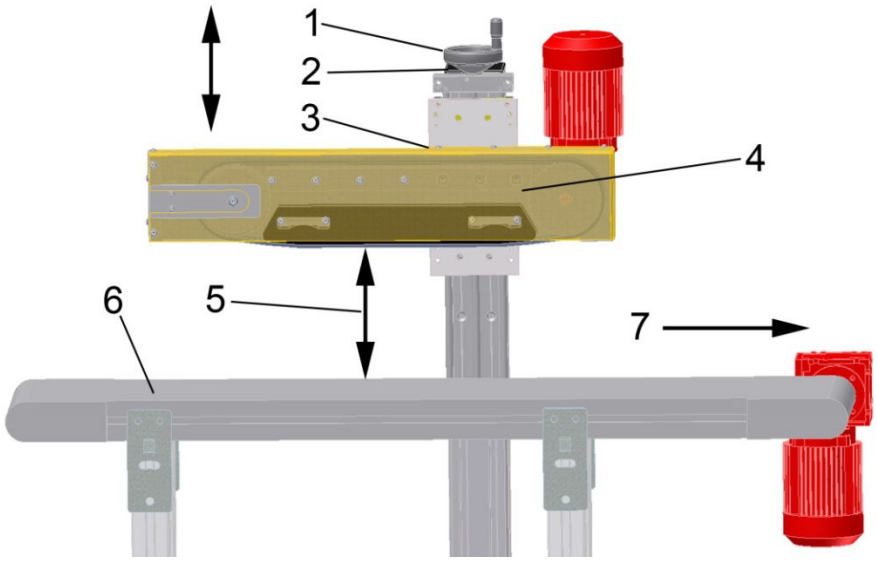



Fig. 7-6: Adjust top conveyor

| No. | Description |
|---|---|
| 1 | CRANK FOR HEIGHT ADJUSTMENT (OPTIONAL) |
| 2 | DIGITAL DISPLAY (OPTIONAL) |
| 3 | CLAMPING TO HEIGHT ADJUSTMENT (INTERLOCK) |
| 4 | TOP CONVEYOR |
| 5 | ALIGNMENT POINT FOR PRODUCT HEIGHT |
| 6 | BASE CONVEYOR |
| 7 | TRANSPORT DIRECTION OF PRODUCT |

**Information on adjustment of top conveyor with spindle adjustment**

The height of the top conveyor (Fig. 7-6: Pos. 4) is adjusted by the crank (Fig. 7-6, Pos.1). The top conveyor provides at beginning and end a diagonal infeed or outfeed. In order to adjust the top conveyor height to the product, please position the product in the center area of the slopes (Fig. 7-6: Pos. 5). The right top conveyor height is achieved if the product is positioned tightly between both conveyor belts (Fig. 7-6: Pos. 6) and it does **not deform** in doing so.

**Requirements**

- Power supply is turned off.
- One or more sample products.
- No transportation of products.

**Instruction**

Please adjust the top conveyor as follows.

| Step | Procedure |
|---|---|
| 1 | Loosen the interlock (clamping lever Pos. 3 Fig. 7-6). |
| 2 | Open the top conveyor with the crank (Fig. 7-6: Pos. 1), until a product can be placed between top- and base conveyor. |
| 3 | Adjust the top conveyor to the required criteria (s. section above). |
| 4 | Tighten again the interlock (clamping lever Pos. 3 Fig. 7-6). |
| 5 | Remove the product. |
| 6 | Arrange several sample labelings to check the adjustments. |

## Information on adjustment of top conveyor without spindle adjustment

The top conveyor provides at beginning and end a diagonal infeed or outfeed. In order to adjust the top conveyor height to the product, please position the product in the center area of the slopes (Fig. 7-6: Pos. 5). The right top conveyor height is achieved if the product is positioned tightly between both conveyor belts (Fig. 7-6: Pos. 6) and it does **not deform** in doing so.

**Requirements**

- Power supply is turned off.
- One or more sample products.
- No transportation of products.

**Instruction**

Please adjust the top conveyor as follows.

| Step | Procedure |
|---|---|
| ⚠CAUTION | **Crushing hazard!**<br>After loosening the clamping device, the top conveyor will lower in direction to the base conveyor.<br>- Maintain a distance from top- and main conveyor. |
| 1 | Support the top conveyor with a suitable device to avoid a lowering of the top conveyor to the base conveyor. |
| 2 | Loosen the interlock (clamping lever Pos. 3 Fig. 7-6). |
| 3 | Lift the top conveyor until one product can be placed between top- and base conveyor. |
| 4 | Remove device from pos. 1. |

| Step | Procedure |
|---|---|
| 5 | Adjust the top conveyor to the required criteria (s. section above). |
| 6 | Tighten again the interlock (clamping lever Pos. 3 Fig. 7-6). |
| 7 | Remove the product. |
| 8 | Arrange several sample labelings to check the adjustments. |

### Adjust wrapping unit Geset 121

The label with the preparatory part is applied onto the product and by means of the rotation and the counter pressure of the pusher plate pushed onto the product. The counter pressure of the pusher plate and the wrapping unit (the speed of the wrapping unit is twice as fast as the speed of the base conveyor) put the product to rotation.

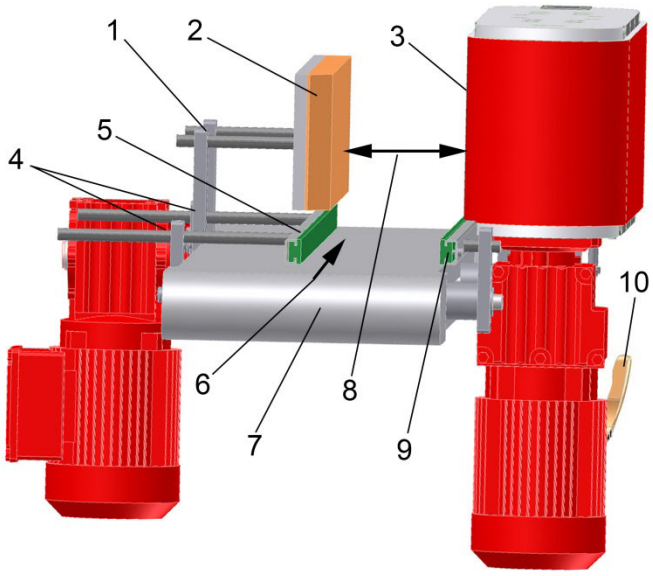



Fig. 7-7: Wrapping unit

| No. | Description |
|---|---|
| 1 | BRACKET AND POSITIONING DEVICE OF FOAM RUBBER PLATE |
| 2 | PUSHER PLATE (SPONGE RUBBER) |
| 3 | WRAPPING UNIT |
| 4 | BRACKET AND POSITIONING DEVICE OF SIDE GUIDANCE |
| 5 | SIDE GUIDANCE OUTSIDE |
| 6 | PRODUCT TRANSPORT DIRECTION |
| 7 | BASE CONVEYOR |
| 8 | DISTANCE (PRODUCT WIDTH - APPR. 5 MM) |
| 9 | SIDE GUIDANCE INSIDE |
| 10 | CLAMPING LEVER FOR HEIGHT ADJUSTMENT |

## Information on adjustment of pushing plate

Depending on product and label, the pushing plate has to be selected and adjusted. The pushing plate should include the product appr. 5 mm deeply.

### Requirements

- Power supply is turned off.
- One or more sample products.
- No transportation of products.

### Instruction

Please adjust the pushing plate as follows.

| Step | Procedure |
|---|---|
| 1 | Install the pushing plate that is suitable for the product. |
| 2 | Adjust the pushing plate (Fig. 7-7: Pos. 2) at the positioning device (Fig. 7-7: Pos.1) to the height of the label position and to the product width. When adjusting the product width, the product should get as deeply in the pushing plate (appr. 5 mm), that the label is safely pushed onto the prduct. |
| 3 | Check and correct this adjustment if necessary. |

## Information on adjustment of wrapping unit

Depending on product and label, the wrapping unit has to be adjusted in height.

### Requirements

- Power supply is turned off.
- One or more sample products.
- No transportation of products.

### Instruction

Please adjust the wrapping unit as follows.

| Step | Procedure |
|---|---|
| ⚠CAUTION | **Crushing hazard!**<br>When loosening the clamping device, the wrapping unit lowers in direction to the base conveyor.<br>- Maintain a distance from wrapping unit and base conveyor. |
| 1 | The wrapping unit has to be supported by a suitable device to avoid a lowering from wrapping unit to base conveyor. |
| 2 | Loosen carefully the interlock (clamping device Pos. 10 Fig. 7-7). |
| 3 | Lift the wrapping unit, remove the supporting device and place the wrapping unit to the product's height. |
| 4 | Tighten the interlock (clamping device Pos.10 Fig. 7-7) again. |
| 5 | Check and correct this adjustment if applicable. |

### Insert label roll in labeler

Further information on adjustment of the labelers is described separately in provided manual.

Additionally there is a threading pattern sticked on each labeler that shows the guiding of the label web. Thread the label web accordingly. Please observe that for each labeler and to the product to be labeled, there will be inserted the correct label roll.

### Adjust product light barrier

One light barrier is used for detection of the product at the labeling station. If a product is detected, a signal is forwarded to the controller of the appropriate labeler to start the labeling process.

The point of time of the product detection is significant for the positioning of the label onto the product. A delay value in the controller enables to change the label position exactly per each millimeter (s. Alpha manual).

The light barriers are installed at a fix position ex-factory. A position change is not required. It is even undesired as it may impact the application rate of the labeling station unfavorably.

Depending on product property a balancing of the sensor sensitivity may be necessary. Particularly glossy and transparent products (e.g. foils) require a careful balancing of the sensor. Further notes on balancing can be found in the manual of the sensor manufacturer.

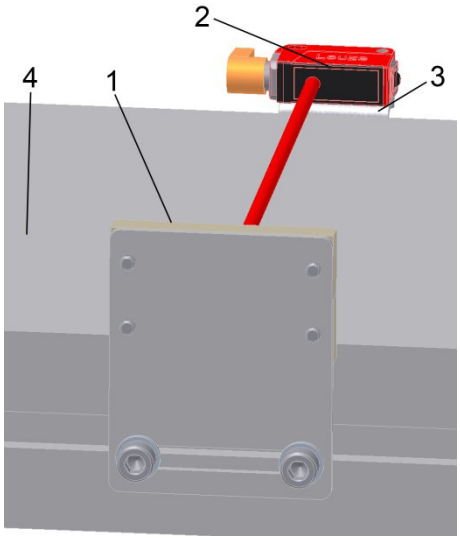



Fig. 7-8: Example of a product light barrier

| No. | Description |
|---|---|
| 1 | REFLECTOR (EXAMPLE) |
| 2 | LIGHT BARRIER SENSOR (EXAMPLE) |
| 3 | SENSOR MOUNTING (EXAMPLE) |
| 4 | BASE CONVEYOR |

## Change peeler plate

The peeler plate is part of a labeler (Fig. 7-9: Pos. 1). Its version depends on intended use, product and label width and has to be changed according to requirements.

### Information on changing the peeler plate

The peeler plate (Fig. 7-9: Pos. 1) is screwed with the bracket (Fig. 7-9: Pos. 2). The complete peeler plate is fixed at the labeler's bracket (Fig. 7-9: Pos. 4). After each change, an adaption of the peeler plate's position is necessary.

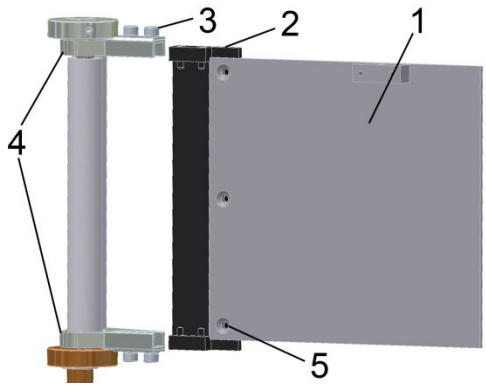



Fig. 7-9: Change peeler plate

| No. | Description |
|---|---|
| 1 | PEELER PLATE |
| 2 | PEELER PLATE'S BRACKET |
| 3 | MOUNTING SCREWS |
| 4 | LABELER'S BRACKET |
| 5 | MOUNTING SCREWS PEELER PLATE |

**Requirements**

- Labeling station is turned off.

**Required equipment**

- Philips screw driver
- Hexagon socket screw

Please exchange the peeler plate as follows.

| Step | Procedure |
|---|---|
| 1 | Remove the label material from labeler. |
| 2 | Loosen the screws (Fig. 7-9: Pos. 1) of the peeler plate (Fig. 7-9: Pos. 2) and remove the complete peeler plate. |
| 3 | Change the peeler plate. Unscrew screws (Fig. 7-9: Pos. 5), put the new peeler plate onto the peeler plate's bracket and fix it with the screws. Observe during installation that the beveled part of the peeler plate shows to the product. |
| 4 | Put the complete peeler plate into the bracket (Fig. 7-9: Pos. 4) and fix it with the screws (Fig. 7-9: Pos. 5). |
| 5 | Position the peeler plate to the product (s. next section). |

## Positioning of peeler plate to product

After a product change, the position of the peeler plate to the product may be adapted. Use for adjustment of the peeler bar the positioning device of the labeler (s. page 36). Adjust thus the height, distance and angle from peeler bar to product.

### Information on adjustment of peeler plate's height

The height of the peeler plate is adjusted by the height adjustment of the labeler. Observe particulary for labels that should be applied close to the product's bottom, that peeler plate and base conveyor do not touch each other.

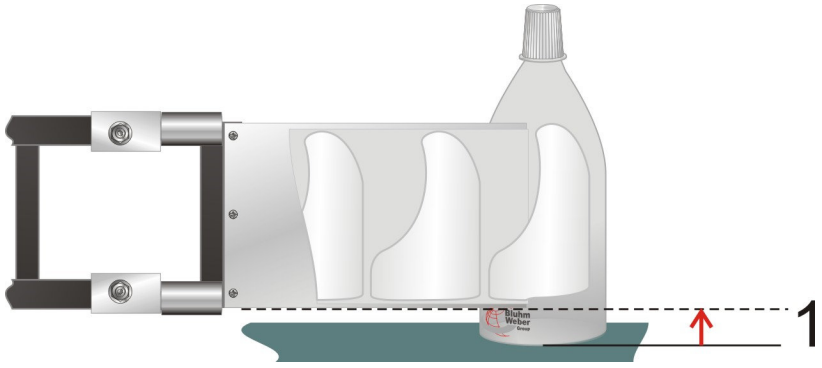



Fig. 7-10: Peeler plate height

| No. | Description |
|---|---|
| 1 | HEIGHT OF PEELER PLATE (DEFINITION) |

## Information on adjustment of peeler plate (side labeling)

The peeler plate has to be positioned in a distance of appr. 1-3 mm. to the product by the positioning device of the labeler (no product touching!). The peeler plate should be located in a blade angle of 15° - 30° to the product.

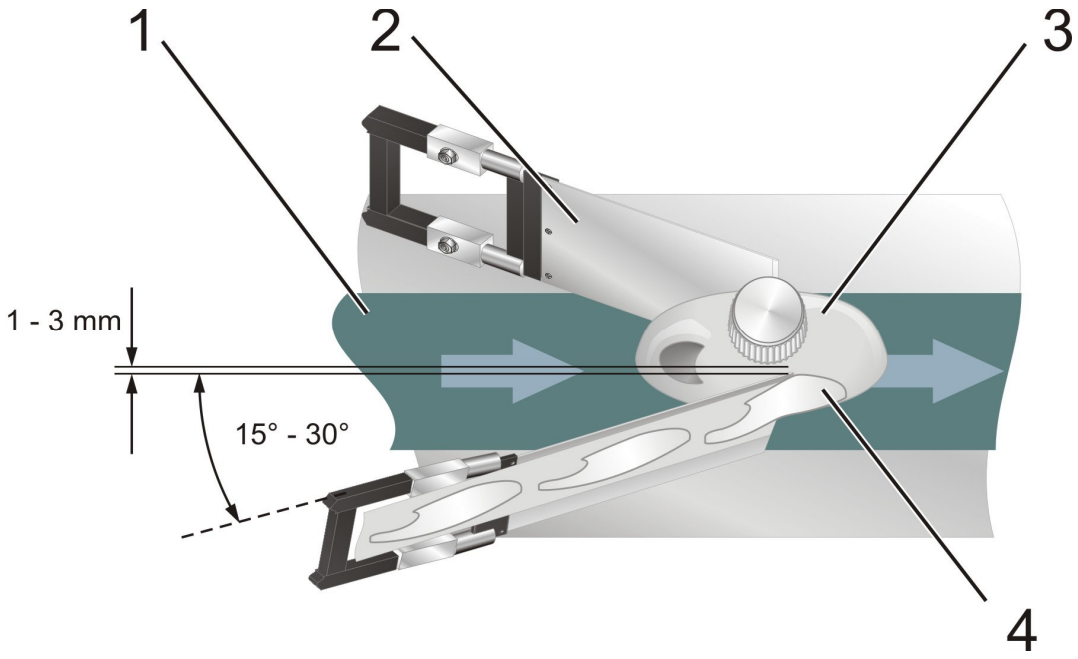



Fig. 7-11: Adjust peeler plates

| No. | Description |
|---|---|
| 1 | BASE CONVEYOR |
| 2 | PEELER PLATE |
| 3 | PRODUCT |
| 4 | LABEL |

### Requirements

- Side guidances (s. page 41) and chain alignment (page 44) are correctly adjusted.
- Labeling system is turned on and ready for operation.
- One or more sample products.
- No transportation of products.

Please adjust the peeler plate to the product as follows

| Step | Procedure |
|---|---|
| 1 | Place one product at the infeed passage of the system. |
| ⚠CAUTION | Hazards from actively controlled movements.<br>Maintain a distance from moving parts. |
| 2 | Start briefly the base conveyor and stop it when the product is in the area of the peeler plate. |
| 3 | Please adjust the peeler plate's height (Info s. section above). Use therefore the positioning device of the respective labeler (s. from page 36). |

| Step | Procedure |
|---|---|
| 4 | Adjust the distance of the peeler plate (s. Fig. 7-10 or Fig. 7-11) and if applicable. –angle (s. Fig. 7-11) to the product according to required criteria (s. section above). Use therefore the positioning device of the respective labeler (s. from page 36). |
| 5 | If a gimbal adjustment is available and an adaption is necessary, please follow the description „Gimbal adjustment (pitch peeler blade)“ from page 50. |
| 6 | Let further products run in singly in the label system to check your adjustment. |

## Pitch peeler blade (Gimbal adjustment)

If it is necessary to adjust the pitch or to enable a tipping of the labeler resp. The peeler bar, labelers provide an additional, so-called gimbal. It is located at base flange of the labeler.

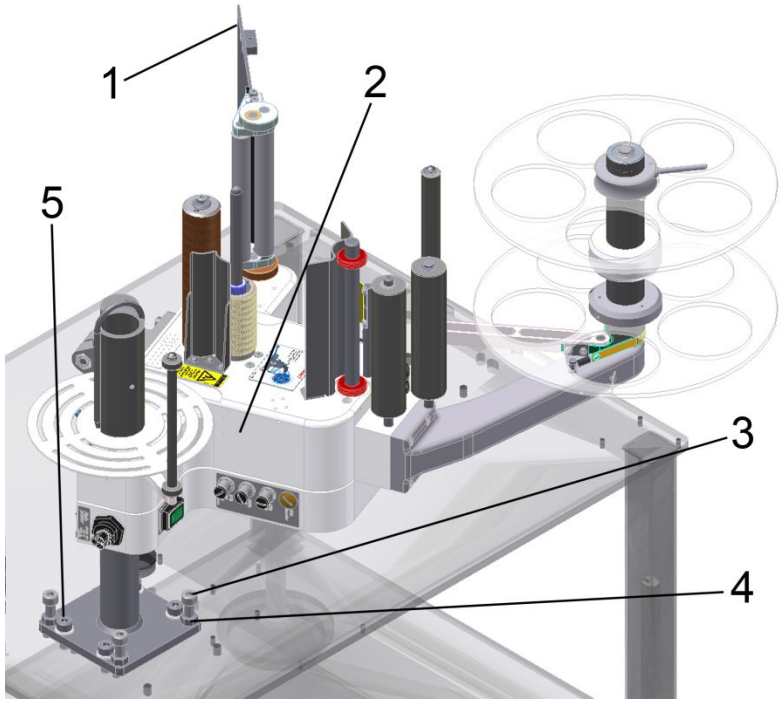



Fig. 7-12: Gimbal adjustment

| No. | Description |
|---|---|
| 1 | PEELER PLATE |
| 2 | LABELER |
| 3 | SET SCREWS |
| 4 | COUNTERNUTS |
| 5 | MOUNTING SCREWS |

## Information on adjustment of gimbal

Fig. 7-13 shows the different adjustment possibilities (A and B) of the gimbal.

The inclination of the peeler plate (s. Fig. 7-13 lefthand figure) enables the correction of the parallelism between label and product. Generally conveyor belt and peeler plate have to be adjusted parallel to each other. Possible exceptions are products with curves or slopes or wrap-around labeling with wrap belt or three-roll systems (only for experienced, trained personnel). After adaption of the inclination, an increase of the feed speed of the labeler may be necessary.

The figure on the righthand side shows the adjustment of the tamp pad for conical products. The tamp pad has to be adjusted parallel to the product shape.

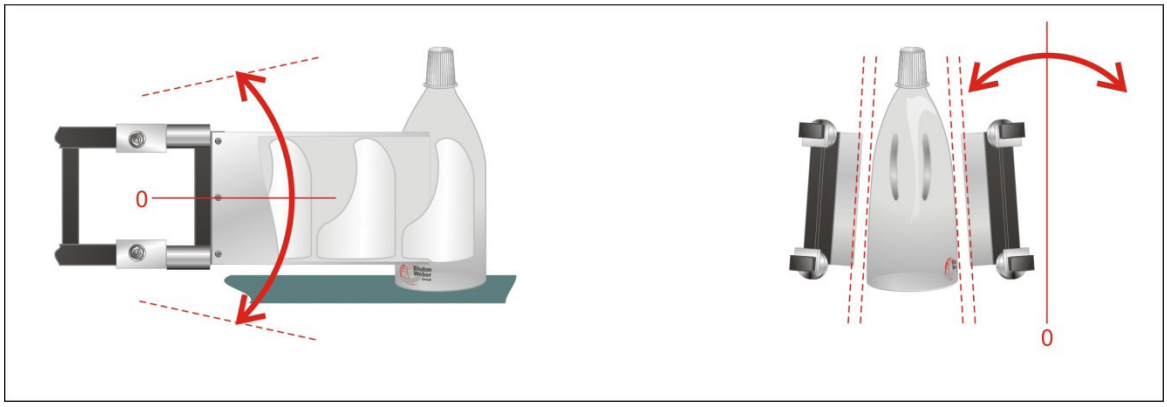



Fig. 7-13: Inclination angle of peeler plate with gimbal

### Requirements

- All points of „Change peeler plate“ from page 47 (until step 5) are fullfilled.

### Required equipment

- Tools

### Instruction

Please adjust inclination as follows

| Step | Procedure |
|---|---|
| 1 | Loosen the counternuts (Fig. 7-12: Pos. 4) and the mounting screws (Fig. 7-12: Pos. 5). |
| 2 | Adjust the inclination with the setscrews (Fig. 7-12: Pos. 3) to the required criteria (s. section above). |
| 3 | Tighten again screws and counternuts. |
| 4 | Chech this adjustment and correct it if necessary. |

### Adjust pusher roller, - brush and – squeegee

**Pushers, like pusher roller, -brush or –squeegee are used exclusively for side labeling. For wrap-around labeling, they have to be turned away or dismantled.**

Pusher rollers and –brushs have generally the function to push the applied label strong sticking onto the product.

Squeegees provide furthermore a forming property. I. e. deformed products (example: round bodied canister) can be leveled out by the pushing of the squeegee. Label and product stick in the contact area of the squeegee at a flat surface. This advantage has a particulary impact at products in „Nolabel look“ and avoids viewable air entrapments. A disadvantage of the squeegee is the mechanical wear of label and product.

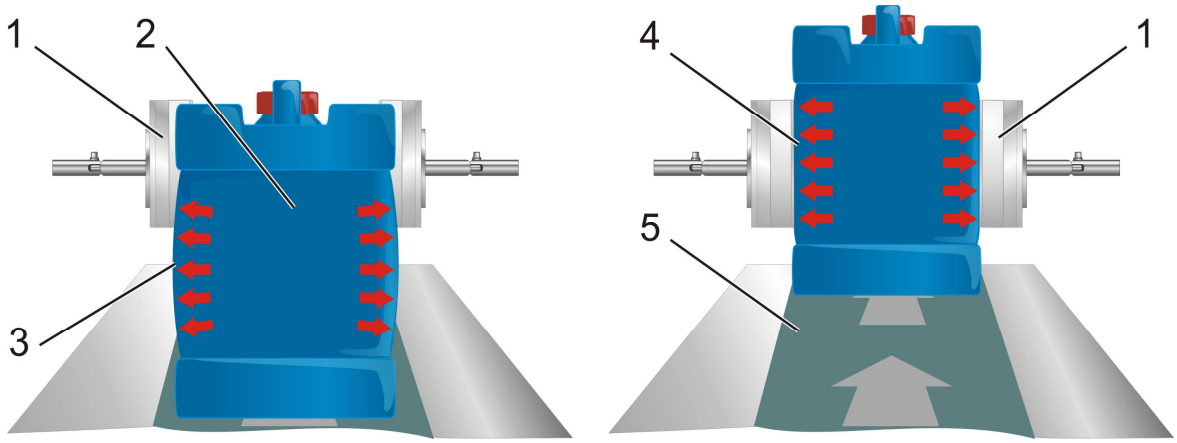



Fig. 7-14: Example round bodied canister

| No. | Description |
|---|---|
| 1 | SQUEEGEE |
| 2 | PRODUCT (CANISTER) |
| 3 | CONVEXITY OF THE PRODUCT |
| 4 | EVEN PRODUCT SURFACE |
| 5 | BASE CONVEYOR |

For decision making which pusher can be used, we recommend to arrange the labeling generally without pusher. If the labeling result is not satisfying after optimum adjustment of the labelers (ref. from page 47), please arrange further tests with pusher roller or – brush (s. next section).

**Optimum results are only possible if label and pusher have an identical width.**

Only if pusher roller or –brush do not lead to desired result, the squeegee should be used. (Assumed there are no damages to be expected that are caused by mechanical wear.)

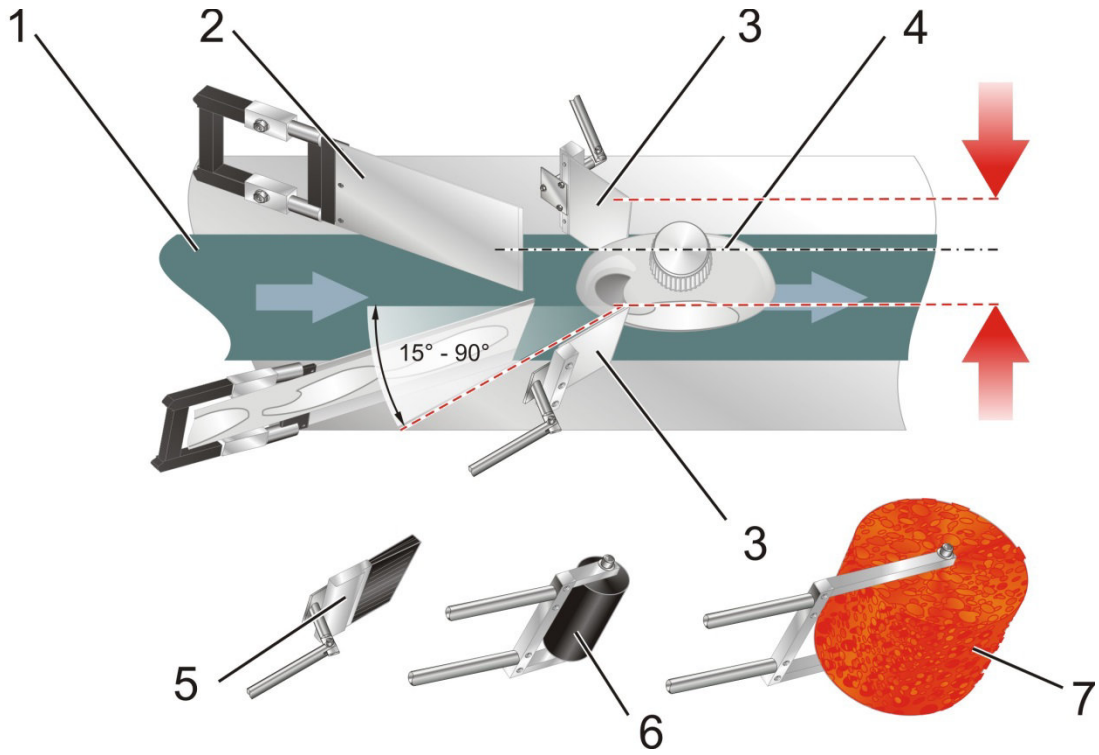



Fig. 7-15: Adjust pushers

| No. | Description |
|---|---|
| 1 | BASE CONVEYOR |
| 2 | PEELER PLATE |
| 3 | SQUEEGEE |
| 4 | PRODUCT |
| 5 | PUSHER BRUSH |
| 6 | PUSHER ROLLER |
| 7 | PUSHER FOAM ROLLER |

## Information on adjustment of pusher roller, - brush and squeegees

The pusher is located so far behind the labeler, that even if it springs back, there will not be any contact with the peeler plate. It can normally be adjusted by simple axis – and clamping piece brackets (s. positioning device from page 36). It is possibly exactly adjusted in height of the sticked labels. The height of the pushing with which the pusher operates, can be adjusted by the blade angle and the distance to the conveyor belt's center (ref. Fig. 7-15). Following rules apply:

- The more flat the angle and the lower the distance, the larger the force.
- The force should be as small as possible but as large as necessary without the product being influenced in its further transportation.
- At 2-side labeling, the alignment of the pusher has always to be symmetrical for a constant force distribution.

Observe when using squeegees that only the side with the rounded edges shows in direction to the product.

Pushers are powered by pushers that are often started by a pneumatic cylinder. Pushers have to be extended completely for adjustment. Therefore they may be pulled out manually if they are without compressed air.

### Requirements

- The „Positioning of peeler plate to product" from page 48 is completely terminated.
- Labeling system is turned on and ready for operation.
- One or more sample products.
- No transportation of products.

### Instruction

Please adjust the pushers as follows:

| Step | Procedure |
|---|---|
| 1 | Place one product at the infeed passage of the system. |
| ⚠CAUTION | Hazards from actively controlled movements.<br>Maintain a distance from moving parts. |
| 2 | Start briefly the base conveyor and stop it when the product is in the area of the pusher. |
| 3 | Adjust the distance and angle of the pusher to required criteria (s. section above). Information on positioning devices s. from page 36. |
| 4 | Let further products run-in singly in the labeling system to check the adjustment. |

# 8. Operation

## Safety instructions

**VORSICHT**

**Hazard from actively controlled movements.**

CRUSHING HAZARD!
Movements of the labeling station are powered automatically by the controller in automatic operation. In manual operation, assembly groups can be activated per touchscreen.
- Maintain a distance from moving parts.

**VORSICHT**

**Danger of being pulled in by rotating elements.**

DANGER OF BEING PULLED IN!
Rotating elements at the labeling station like label liner rewinder, label feed at labeler, base conveyor and *2top conveyor are driven by a motor
- Do not grip in, at or between the moving parts.

## Turn on and off labeling machine

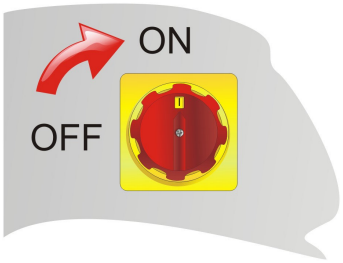



Fig. 8-1: Main switch on

The main switch of the machine is located at the switch cabinet's front. To turn the machine on, turn the main switch to [ON]-position (clockwise).

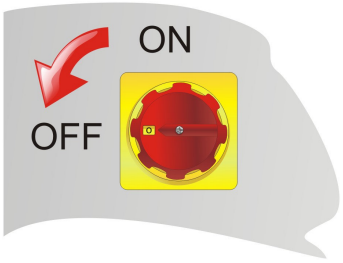



Fig. 8-2: Main switch off

To turn the machine off, turn the main switch to [OFF]-position (counter clockwise).

## Control element (Pushbutton box)

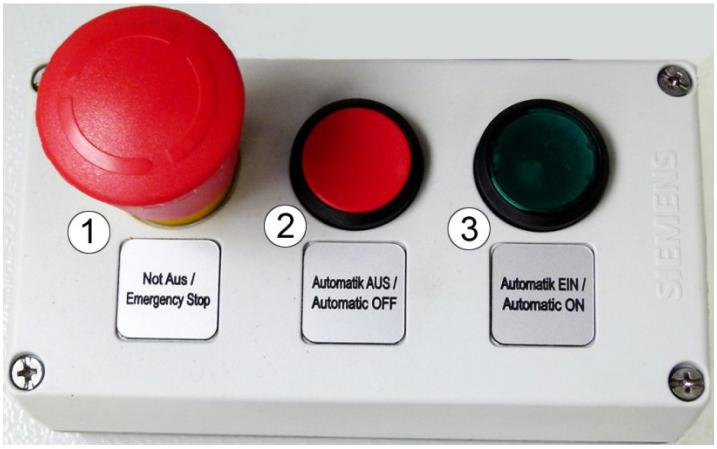



Fig. 8-3: Display- and operator elements

| No. | Description |
|---|---|
| 1 | EMERGENCY STOP PUSHBUTTON |
| 2 | RED BUTTON AUTOMATIC OFF |
| 3 | GREEN ILLUMINATED BUTTON AUTOMATIC ON |

## Turn on labeling operation

The automatic operation is used to label products.

**Requirements**

- Labeling system is turned off.
- Material rolls at labeling system loaded and threaded.
- Labeling system is connected to power and compressed air.
- System was put into operation (see chapter „Installation and initial startup” on page 38).

**Instruction**

Please turn on the labeling system for operation as follows.

| Step | Procedure |
|---|---|
| 1 | Turn on the main switch. |
| ⚠CAUTION | RISK OF INJURY FROM CRUSHING!<br>- Maintain a distance from moving parts |
| 2 | Push the [START] –button at labeler. |
| 3 | Push the [AUTOMATIC ON] –button at control element. |
| 4 | Add the products to the labeling station. |
| 5 | Remove the products from outfeed of labeling system. |

## Stop labeling operation

### Requirements

- Labeling station is in labeling operation (s.a.)

### Instruction

Please stop labeling operation as follows.

| Step | Procedure |
|---|---|
| 1 | If possible, the labeling system should be run empty. |
| 2 | Push the [AUTOMATIC OFF] –button at operator panel to stop automatic labeling operation. |
| 3 | Push the [STOP] –button at labeler. |
| 4 | Remove all products. |
| 5 | Observe the notes „Putting the system out of service“ (s. page 57) |

### Putting the system out of service

**NOTICE** **When turning off the system for several hours, the label web must be removed from the applicator to avoid failures at re-start.**

The label material running around the deflection rollers is curved which can cause problems with the operation mode. This characteristic of the labels as well as the retained curvature depend on the material which can vary significantly between the different print media. The ambient conditions such as high temperatures and humidity enhance this effect.

**Remove critical label material before long breaks and after end of work from labeler!**

### Instruction

Please put the label system out of service as follows.

| Step | Procedure |
|---|---|
| 1 | Turn on and off labeling machine (s. page 55) |
| 2 | Stop labeling operation (s. page 57) |
| 3 | Disconnect the power supply. |
| 4 | Protect the labeling station if applicable from dust with a cotton or linen cloth. |
| 5 | If the labeling station should be stored and/or transported, please observe the notes referring…<br>• Transport (Page 28)<br>• Storage conditions (Page 31) |
| 6 | Transport the labeling station like described in chapter “Transport“ to its storage location. |

## Operation of labeler

Information on operation of the labeler can be found in the manual of the labeler in the documentation referring to this labeling station.

.

# 9. Maintenance

## Safety instructions

**WARNING**

**Hazard from direct or indirect contact with voltage-conducting parts.**

DANGER TO LIFE!

- Before performing any work at the labeling station, disconnect it from electrical power.

**CAUTION**

***2 Hazard from residual compressed air in the pneumatic components.**

Connecting lines for power, compressed air and computer and signal lines can pose a tripping hazard, causing serious injury.

- Before performing any work at the labeling station, disconnect it from compressed air supply.

**CAUTION**

**Danger to health from the improper use of lubricants and cleaners.**

HEALTH HAZARD!

The instructions in the manufacturer's current safety data sheets for the specific lubricants and cleaners that are used must be observed along with the applicable safety and disposal regulations

**NOTICE**

Repairs and servicing may only be performed by electrician when the device is turned off (voltage-free) according to UVV 7.0 § 2 Para.3. Jobs that must be performed when the electri-cal power and compressed air are still on may only be done by trained experts who are aware of the associated hazards and regulations (such as AuS).

**NOTICE**

**The machine functions must be continuously monitored.**

Unusual noise or movements (such as bucking, hammering, etc.) are indicative of malfunctions and must be investigated.

**The maintenance instructions that are described in this section refer exclusively to the labeling station without (Alpha-) labeler.**

Maintenance works that have to be arranged at the (Alpha-) labelers, are described in detaild in separately provided documentation in the chapter maintenance.

## Daily servicing (after appr. 8 hours of operation)

Please arrange this maintenance at each roll change or at least once per day.

**Requirements**

- Labeler is without electrical power.
- No transportation of products.

**Required equipment**

- Alcohol (*21800915) or roller solvent (*21800977)
- Lint-free cloth (*21800978)
- Label remover (*21800771)

*Product recommendation. Can be obtained from the Bluhm Weber Group with the eight-character article number.

**Instruction**

Please arrange the daily maintenance as follows.

| Step | Procedure |
|---|---|
| 1 | Arrange the required maintenance work at the labelers (Description s. correspondent chapter in provided manual of Alpha …). |
| 2 | Check…<br>• Base conveyor<br>• *²Top conveyor<br>• *²Pusher brushs, -squeegee or -rolls<br>• Conveyor belts<br>• Product guidings and deflection rollers<br>…for label- and adhesive residues. Remove residues with label remover or alcohol. (Instruction s. page 66 ) |
| 3 | Examine / clean the *²air filters of switch cabinet, protective cabinets. |
| 4 | Examine moving or rotating system parts for mobility and freewheel as well as for fix position of the mounting parts. Only few stress marks or –noises have to be observed. Possible repairs have to be arranged professionally. |

*²Only if system has the appropriate features.

## Weekly servicing (after appr. 40 hours of operation)

### Requirements

- Labeler is without electrical power.
- No transportation of products.

### Required equipment

- Alcohol (*21800915) or roller solvent (*21800977)
- Lint-free cloth (*21800978)
- Label remover (*21800771)
- Compressed air spray (*21800768)
- Soft brush (round or flat, appr. 100 mm)

*Product recommendation. Can be obtained from the Bluhm Weber Group with the eight-character article number.

### Instruction

Please arrange the weekly maintenance as follows.

| Step | Procedure |
|---|---|
| 1 | Clean all sensors (product-, low label-, label gap sensor) carefully with a soft brush and compressed air spray. (Instruction s. page 63) |
| 2 | Examine lines, tubes, screw connections, valves, cylinders and motors for leak tightness and/or fixed seat.<br>Possible repairs have to be arranged immediately and professionally. |
| 3 | Check …<br>• Base conveyor<br>• *[2]Top conveyor<br>• *[2]Pusher brushs, -squeegee or -rolls<br>• Conveyor belts<br>• Product guidings and deflection rollers<br>… for wear or damages. (Transverse cracks and frayed edges. Instruction s. page 65). Possible repairs have to be arranged immediately and professionally. |
| 4 | Remove possible dust deposits from the labeling station. |
| 5 | Check the emergency stop device for function. |

*[2]Only if system has the appropriate features.

## Semi-annual servicing (after appr. 1000 hours of operation)

### Requirements

- Labeler is without electrical power.
- No transportation of products.

### Required equipment

- Vacuum cleaner

### Instruction

Please arrange the semi-annual maintenance as follows

| Step | Procedure |
|---|---|
| 1 | Replace all *²air filter elements of *²switch cabinet, *² protective cabinets.... |
| 2 | Clean the system cover's outside and the *²protective cabinet's inside with a vacuum cleaner. |
| ***NOTICE*** | Do **not** use air pressure from the shop air supply as it is often not dry (oil-/ water residues). If humidity gets in the electronics, it may lead to damages! |
| 3 | Check moving or rotating machine parts for bearing play. Possible repairs have to be arranged professionally. |

## Annual servicing (after appr. 2000 hours of operation)

### Requirements

- Labeler is without electrical power.
- No transportation of products.

### Required equipment

- Bearing grease Proline, Pro 672U (92100772, food compliant)

*Product recommendation. Can be obtained from the Bluhm Weber Group with the eight-character article number.

### Instruction

Please arrange the yearly servicing as follows.

| Step | Procedure |
|---|---|
| 1 | Examine …<br>• Base conveyor<br>• *²Top conveyor<br>• Conveying belts<br>… for correct belt tension. Possible repairs have to be arranged immediately and professionally. (Instruction s. pages 67 and 69). |
| 2 | Clean at all *²linear strokes the guiding- and piston rods and grease them slightly. |

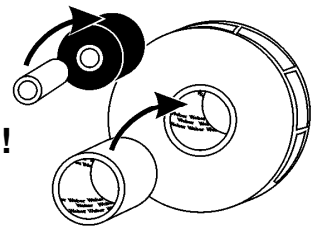
*²Only if system has the appropriate features.

# REINIGUNGSHINWEISE / *CLEANING NOTES*

DE/GB

SERVICE-HOTLINE:
☎ +49 (0) 2224/ 7708 - 440
✉ hotline-ed@bluhmsysteme.com

**REINIGUNG NACH JEDEM ROLLENWECHSEL !**



***CLEANING AFTER EACH ROLL CHANGE !***

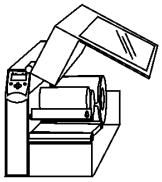
BESTELL-NUMMERN / *ORDER NUMBERS*

| 21800771 | 21800915 | 21800768 | 21800977 | 21800978 | 21800921 |
|---|---|---|---|---|---|
| ETIKETTEN-LÖSER *LABEL REMOVER* | ALKOHOL *ALCOHOL* | DRUCKLUFT *COMPRESSED AIR* | WALZENREINIGER *ROLLER-SOLVENT* | FLUSENFREIES TUCH *LINT-FREE CLOTH* | REINIGUNGSFOLIE *LAP SHEET* |
| 1 | 2 | 3 | 4 | 5 | 6 |

BESTELLANNAHME *ORDER PROCESSING* ☎ **+49 (0)2224/ 7708-672** ✉ **bestellung@bluhmsysteme.com**

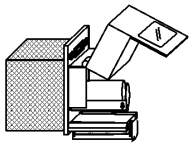
**a**

TISCHDRUCKER *DESKTOP PRINTER*



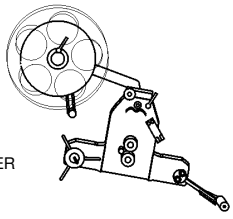
**b**

DRUCKMODULE *PRINT MODULES*



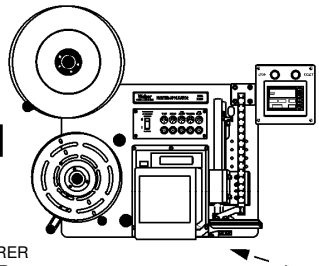
**c**

ETIKETTIERER *LABELER*

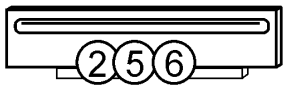


**d**

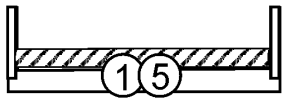
ETIKETTIERER *LABELER*



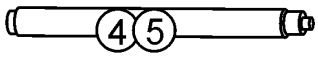
a ✓ b ✓ c d DRUCKKOPF / *PRINTHEAD*



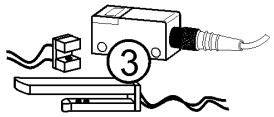

a b ✓ c d FRIKTIONSEINHEIT / *FRICTION UNIT*



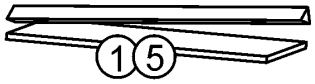

a ✓ b ✓ c d GUMMIWALZEN / *PLATEN ROLLERS*



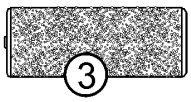

a ✓ b ✓ c ✓ d SENSOREN/ *SENSORS*



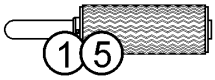

a ✓ b ✓ c d SPENDEKANTEN / *PEELER BARS*



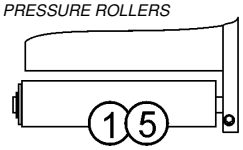

a b c ✓ d ANTRIEBSWALZE / *DRIVER ROLLER*



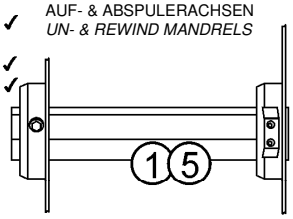

a b c ✓ d



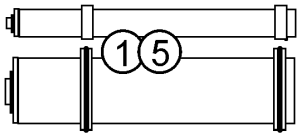

a b c ✓ d ANDRÜCKWALZEN *PRESSURE ROLLERS*




a ✓ b c ✓ d AUF- & ABSPULERACHSEN *UN- & REWIND MANDRELS*

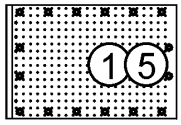



a b ✓ c ✓ d FÜHRUNGSROLLEN/ *GUIDE ROLLERS*




a b c ✓ d STÜTZLUFT-EINHEIT *AIR ASSIST ASSEMBLY*


a b c ✓ d STEMPELPLATTE /*TAMP PLATE*




Artikel-Nr./ Part-No.: 55203819 /18.08.2010

## Cleaning of sensors

### Safety instructions

**CAUTION**

**Unintended system start**

 RISK OF INJURY!
When cleaning the light sensors and light barriers, it may be triggered an accidentally reaction of the labeling station due to approaching or touching.
- Turn off the labeling station before cleaning.

**CAUTION**

***2 Hazard from light beams.**

 RISK OF INJURY!
*2Sensors or *2camera illumination may have high light intensity
- Do not look directly into the light source.

**NOTICE**

**Damages due to incorrect detergents.**

The light sensors and barriers may be damaged when cleaning with compressed air, steam cleaner, aggressive dissolvers or scrubbing agents
- Do not use any liquids that may cause short circuits
- Do not use aggressive dissolvers or scrubbing agents
- Do not use hard or sharp-edged parts for cleaning

Maintain the optics of the light sensors and light barriers free of dust and grease. Use for cleaning a smooth, lintfree cleaning cloth.

### Requirements

- Labeler is without electrical power.
- No transportation of products.

### Required equipment

- Smooth, lint-free cleaning cloth.

### Instruction

Please clean the light barrier and sensors as follows

| Step | Procedure |
|---|---|
| 1 | Wipe the optics and the reflectors with the cleaning cloth. |

*2 Only if system has the appropriate features.

## Maintenance instruction *2conveying systems

### Safety instructions

**WARNING**

**Hazard from direct or indirect contact with voltage-conducting parts.**

DANGER TO LIFE!

- Before performing any work at the labeling station, disconnect it from electrical power.

**CAUTION**

**Danger of being pulled in by rotating elements.**

DANGER OF BEING PULLED IN!

To clean the belts and chains, they have to be forwarded piece by piece.

- Do not grip in, at or between the moving parts.
- Ensure that no other persons are working ath the labeling system at the same time.

### *2Check transport belts and timing belts

#### Adjustment of belt run

The base conveyor has to be adjusted that it is tensed centrically. All rolls have to be adjusted parallel and right-angled to belt's axis if possible. The correction of the belt run is arranged by adjustment of the drive- and deflection rollers. The rolls on which the base conveyor runs, have to be adjusted.

#### Requirements

- Labeler is without electrical power.
- No transportation of products.

#### Instruction

Please check the drive belts and conveyor belts as follows.

| Step | Procedure |
|---|---|
| 1 | Remove foreign objects and much dirt, particularly in the area of the deflection- and drive rollers. |
| 2 | Check the drive belts and transport belts for any damage. |
| 3 | Examine the drive rollers and deflection rollers for excessive wear. |
| 4 | A jerk run is an indication for clamping unit or a belt tension that is too weak. Check if the drive belts and conveyor belts run without jerk. |
| 5 | Check the belt tension. Observe the different types (flat belt, timing belt) and applications. |
| 6 | Check if the deflection- and drive rollers align and examine the wear of available flanged pulleys. |
| 7 | Check that the conveyor belts do not run sideways. |

| Step | Procedure |
|---|---|
| 8 | Check the distances to other system parts. |
| 9 | Check the oil- and grease lubrication at flange bearings and the drive motor block. |
| 10 | Oil and lubricate the flange bearings and the drive motor block according to the respective maintenance instructions. |

### Cleaning of base conveyor

Residues at base conveyor complicate the lateral belt run. At the bottom side of the base conveyor, dirt, label rests or small parts may get onto the rollers and tip.

The base conveyor and adjacent assembly parts have to be cleaned regularly and carefully.

**Requirements**

- Labeler is without electrical power.
- No transportation of products.

**Required equipment:**

- Alcohol (*21800915) and/or roller solvent (*21800977)
- Lint-free cloth (*21800978)
- Label remover (*21800771)

* Product recommendation. Can be obtained from the Bluhm Weber Group with the eight-character article number.

**Instruction**

Please clean the base conveyor as follows.

| Step | Procedure |
|---|---|
| 1 | Remove strong sticking adhesive- and label residues with label remover. |
| 2 | Clean carefully track bed, base conveyor and adjacent assembly parts. |

*² Only if system has the appropriate features.

## Adjust belt tension

The manufacturer's adjustment of the base conveyor does normally not require any adaption. If tension or the base conveyor‘ s run have to be readjusted, it has to be arranged by experts only.

### Requirements

- Labeler is without electrical power.
- No transportation of products.

### Instruction

Please adjust the belt tension as follows.

| Step | Procedure |
|---|---|
| 1 | Apply two markings with a highest possible distance (e.g. 500 mm) at the upside of the base conveyor. |
| 2 | Calculate the required lengthening of the base conveyor. (e. g. lengthening: 500 mm +0,5 % = 2,5 mm). |
| 3 | Tense the base conveyor with both clamping nuts until the distance between the markings has increased by the calculated value (e. g. 500 mm+2,5 mm = 502,5 mm).<br>Observe that the tension pulley is tensed parallel. |
| 4 | Fix this adjustment with both counternuts. |

## Belt run correction of conveyor belts

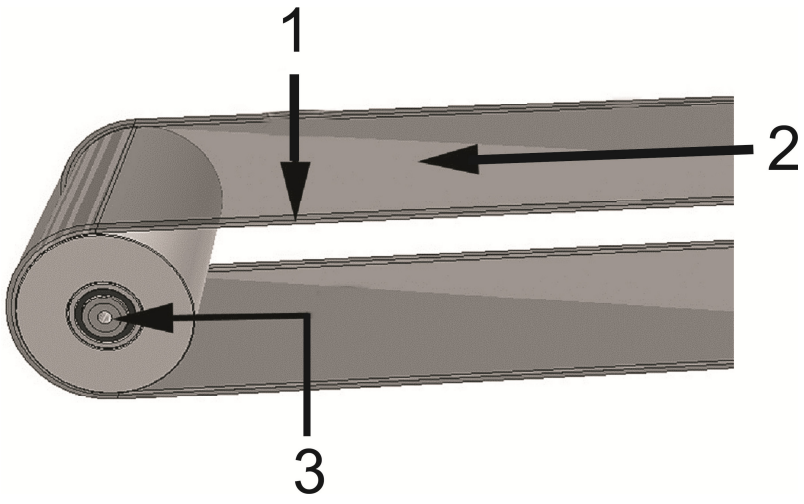



Fig. 9-1 Adjust base conveyor principle

| No. | Description |
|---|---|
| 1 | TRANSPORT DIRECTION |
| 2 | DIRECTION WHERE THE BASE CONVEYOR RUNS |
| 3 | ADJUSTMENT DIRECTION OF THE DEFLECTION ROLLER TO BELT RUN CORRECTION |

All rolls involved in belt running should be possibly parallel and exactly right-angled to conveyor axis.

The correction of the belt run should take place at the rolls at which the chain runs from a longer distance that is not influenced by any deflection.

### Requirements

- No transportation of products.
- Emergency stop pushbutton is unlocked.
- Labeling station is connected to power.
- Labeling station was put into operation (see chapter “Installation and initial startup“).

### Instruction

Please adjust the belt running direction as follows.

| Step | Procedure |
|---|---|
| ⚠CAUTION | Risk of injury! The examination of the belt running has to be arranged when the labeling station is running under load.<br>- Do not grip in, at or between the moving parts. |
| 1 | Start base conveyor. |
| 2 | Tense slightly the deflection rollers at the side where the base conveyor runs to. |
| 3 | Transport belts should run for a certain time. |
| 4 | Control belt running, correct it again if applicable. |

## Retension of timing belts (Timing belt)

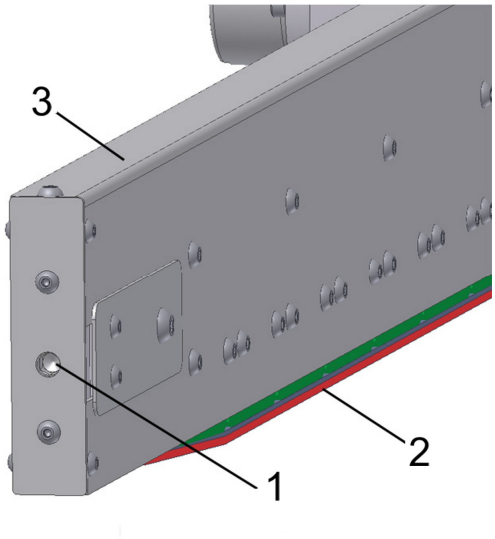



Fig. 9-2 Tense top conveyor

| No. | Description |
|---|---|
| 1 | CLAMPING SCREW |
| 2 | TRANSPORT TIMING BELT |
| 3 | TOP CONVEYOR |

The pick up of the timing belt at the drive roller is arranged by form fit of the pulley. Thus the required belt tension is much lower than with the base conveyor. The correct tension is reached when a skipping of the timing belt at the pulley is not possbile anymore. A belt tension that is too high can result in damages of the deflections, bearings and timing belts.

At optimum belt tension, the belt should be adjusted in center by 90°.

### Requirements

- No transportation of products.
- Labeling station is turned off.
- Labeling station was put into operation (see chapter “Installation and initial startup“).

### Required tool

- Tool: 8 mm Hexagon socket screw wrench

### Instruction

Please adjust the web tension at transport timing belt as follows.

| Step | Procedure |
|---|---|
| 1 | Tension the timing belt by means of the clamping screw. |

## Exchange of transport timing belts

If the transport timing belt is damaged or worn, it has to be replaced. Observe that the new transport timing belt is also suitable for the base conveyor and that it has the specified dimensions. When using own timing belts, changes in the conveying behavior may occur. We recommend to use only our original transport timing belts.

### Requirements

- Labeling station is without power.
- No transportation of products.

### Instruction

Please exchange the base conveyor as follows.

| Step | Procedure |
|---|---|
| 1 | Dismantle all assembly parts (side guidings, hopper aso.), that may impact the belt change. |
| 2 | Dismantle the deflection plate with deflection roller that is located opposite to the roll of the drive timing belt. |
| 3 | Put out the timing belt laterally. Put in a new timing belt in revised order. |
| 4 | Mount deflection plate with deflection roller. |
| 5 | Reinstall if available the assembly parts again. |
| 6 | Tension the transport timing belt (see page 68). |

## Exchange of rollers

The lifetime of drive rollers in the bearings depend on the appropriate load and the conveyor speed.

They are normally sufficient for an operational time of 4-5 years. After this time it is advisable to exchange the bearing or rollers.

## Spare parts

### Safety instructions

**WARNING**

**Hazard from incorrect spare parts!**

Incorrect or faulty spare parts can impair safety and cause injury or damage to the machine

- Only use original spare parts or parts that are specifically approved by the Bluhm Weber Group.

## Wiring diagram

The wiring diagram is included in switch cabinet.

# 10. Troubleshooting

**Instructions to arrange the troubleshooting address only to trained personnel.**

If the service personnel is not able to remedy the failure, please contact our Service-Hotline (see page 8).

## Safety instructions

**WARNING**

**Hazard from direct or indirect contact with voltage-conducting parts.**

 DANGER TO LIFE!

- Before performing any work at the labeling station, disconnect it from electrical power.

**CAUTION**

**Hazards from actively controlled movements**

 RISK OF INJURY FROM CRUSHING!!

The movements of the labeling system are motor-driven by an automatic controller in automatic operation.

- Maintain a distance from moving parts.

**CAUTION**

**Danger of being pulled in by rotating elements.**

 DANGER OF BEING PULLED IN!

Rotating elements at the machine, backing rewinder, label feed, conveyor belt are driven by a motor.

- Do not grip in, at or between the moving parts.

## Mechanical error

| Problem | Possible cause | Solution |
|---|---|---|
| Label liner tears. | Label roll is damaged.<br>Nicks or label cutter-die damage on liner.<br>Dents/damages at the side of the label roll.<br>The liner width varies significantly. | Exchange label roll. |
| | Adhesive residues in the area of the peeler bar. | Remove adhesive residues and check the label roll for damages caused by adhesive residues. Otherwise exchange roll. |
| Label placement on the product is consistently poor. | The product is not yet/ not anymore incorrect labeling position. | Check sensors of the conveyor used to determine the product's stop position. |
| | Product sensor (or its reflector) are loose or vibrate. | Check sensors and remount, if required. |
| | Changing conveyor speed (e.g. depending on load) | Check the speed and record. Contact supplier of conveying system. |
| | Label with not suitable adhesive, insufficient initial adhesion. | Change label quality. |
| | Wrong parameterization. | Check time- and delay settings of the responsible configuration parameters (blow-, extension- …) |
| The desired rate of application can not be reached with the labeler. | The required rate of application from the conveyor exceeds the specifications. | Check conveyor speed and the product gap. Reduce conveyor speed if possible. |
| | Incorrect configuration parameter values of the labeler. Excessive cycle processing time. | Check the delay times. Inquire Service Technician at the Hotline (s. page 8). |
| Machine functions occur at random without being initiated. | Product detector loose or vibrating or being affected of reflecting light from product surface. | Check the adjustments of the sensors and inquire if needed a Service-Technician at the Service-Hotline (s. page 8). |
| | Loose wiring connections. | Check all connections at labeler. |
| Incomplete label feed. | Powered rewinder is not switched off by rewinder dancer arm. | Control the function of the dancer arm. If the liner tenses, the Rewinder has to stop. |
| | The unwinder brake is not approved by unwinder dancer arm. | Control the function of the dancer arm. If the label web becomes more tense, the label roll has to be unwinded easily. |
| No label feed possible. | Tamp home sensor is broken or out of adjustment. | Replace or adjust sensors as needed or inquire Service Technician at the Service-Hotline (s. page 8). |

## Correcting Adjustments based on labeler result

Based on the labeler result you can draw conclusions from the necessary adjustments.

### Correct labeling

If the labeling is performed correctly, the label is

- free from creases,
- straight,
- always at the same position on the product.

No correction is necessary

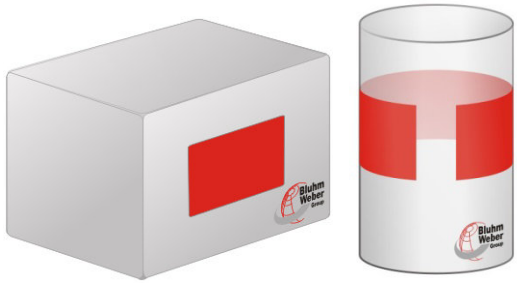


Fig. 10-1: Product with correct labeling result

### Error at labeling

The label has creases.

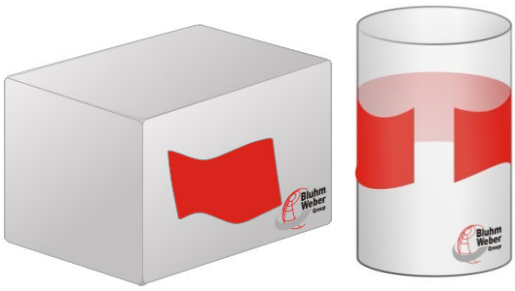


Fig. 10-2: Product with creases in the label

Correct the labeling result as follows:

| Step | Procedure |
|---|---|
| 1 | The application speed of the label may be too fast. Examine and correct the application speed. |

The label is beveled on the product.

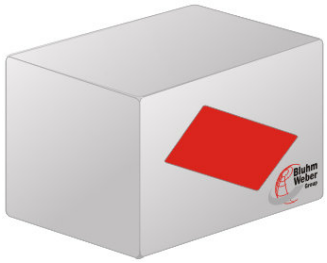


Fig. 10-3: Product with beveled label

Correct the labeling result as follows:

| Step | Procedure |
|---|---|
| 1 | The inclination of the tamp plate may be adjusted incorrectly. Examine and correct the inclination of the tamp plate. |
| 2 | *2 pusher brush, *2 squeegee, *2 pusher roller may brake the product too strongly. Examine and correct this pushing pressure. |
| 3 | It may be that the products are not transported the sufficient way by the top conveyor. Examine and correct the pushing pressure of the top conveyor to the product. |

The label position changes from product to product.

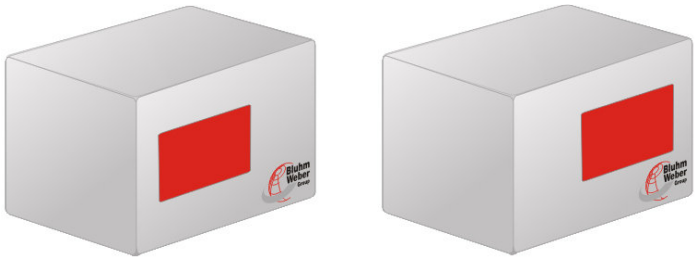


Fig. 10-4: Product with position displacement of the label

Correct the labeling result as follows:

| Step | Procedure |
|---|---|
| 1 | The application speed of the label may be too high or too low. Correct the application speed of the label. |
| 2 | Examine and correct the sensor for product detection. |
| 3 | Examine and correct the distance from peeler bar to product. |
| 4 | Examine and correct the stop sensor of the labeler. |
| 5 | It may be that the products are not transported the sufficient way by the top conveyor. Examine and correct the pushing pressure of the top conveyor to the product. |
| 6 | *2 pusher brush, *2 squeegee, *2 pusher roller may brake the product too strongly. Examine and correct this pushing pressure. |
| 7 | The start delay time may be too short or too long. Correct the entry of the start delay time of the labeler. |

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# 12. EC Declaration of conformity

**DE** EG-KONFORMITÄTSERKLÄRUNG gemäß EG-Maschinenrichtlinie 2006/42/EG, Anhang II A

**GB** EC-DECLARATION OF CONFORMITY according to EC Machinery Directive 2006/42/EC, Appendix II A

**FR** DECLARATION DE CONFORMITE CE conforme à la directive machine 2006/42/CE, appendice II A

**Weber Marking Systems GmbH**
**Maarweg 33**
**D-53619 Rheinbreitbach**

**DE** **Wir erklären in alleiniger Verantwortung, dass die Maschine:**
**GB** We declare under our sole responsibility that the machine:
**FR** Nous déclarons sous notre responsabilité exclusive que la machine:

## Geset 100

**DE** Seriennummern:
**GB** Serial number:
**FR** Numéros de série :

**12090106**

**DE** **auf das sich diese Erklärung bezieht, folgenden Bestimmungen und Richtlinien entspricht:**
**GB** to which this declaration relates corresponds to the regulations and directives.
**FR** que concerne cette déclaration, est conforme aux directives et réglementations suivantes:

**2006/42/EG**
**2004/108/EG**
**2006/95/EG**

**DE** **Bevollmächtigter für die Zusammenstellung der relevanten technischen Unterlagen:**
**GB** The person authorised to compile the relevant technical documentation:
**FR** Personne mandatée pour élaborer la documentation technique concernée:

**Lutz Krämer**
**Maarweg 33**
**D-53619 Rheinbreitbach**

Rheinbreitbach, 23.Mai 2013

Andreas Bluhm
**Prokurist**/ *Authorized Officer* / signataire autorisé