

Labelling Machine

Translation of the Original Operating Instructions

SFLAG T5-R (Flagmaker)

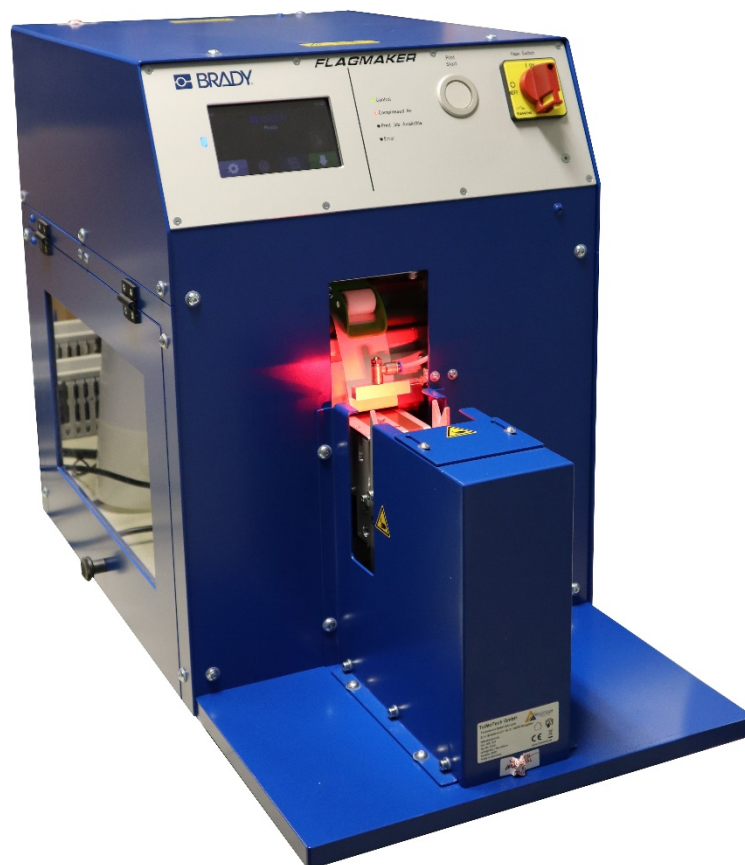


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Annex A	Safety Regulations
Annex B	Declaration of Conformity
Annex C	<u>User Manual for Printer i7100</u>

1 Introduction / General / Operation of the Device

These operating instructions are part of the information for use and must be kept in a place accessible to both the operating company and operating personnel when the equipment is put into service. If the labelling machine is relocated, the operating instructions and/or user manuals (including those of the suppliers) must be handed over with it.

The directions in the operating instructions and/or user manuals (including those of the suppliers) must be observed in all phases of the device's operational lifespan. Therefore, be sure to read the relevant chapters in the operating instructions carefully before starting work.

Brady accepts no liability for any damage or malfunctions resulting from non-compliance with these operating instructions.

The user is responsible for allowing only authorised and instructed specialists to operate the device. This also includes the responsibilities for transport, installation, preparation, set-up, operation, care, maintenance and servicing. Unauthorised modifications and improper use shall exclude any liability on the part of the manufacturer for any resulting damage.

2 Safety Notice

By accepting these operating instructions, the customer confirms

- that he has received the operating manual belonging to the labelling machine duly and in its entirety,
- that he has been informed that the operating instructions contain extremely important information (in particular the safety instructions in Appendix A) as well as information about residual risks,
- that he has been informed that the labelling machine may only be put into operation after having studied the operating instructions in detail,
- that he has been informed that the labelling machine may only be operated by trained, instructed and qualified personnel,
- that he has been informed that compliance with the operating instructions does not release the user from the obligation to comply with the applicable laws and regulations, especially when used outside the EU. This also applies if extended requirements have to be implemented due to corresponding changes in laws and regulations and as a result of landmark decisions.

The full safety instructions are contained in Appendix A to these operating instructions. Both these operating instructions and the safety instructions should preferably be kept in printed form on the device for the operating personnel.

3 Description of the Device

3.1 Configuration/Operation

The labelling machine consists of the four main components of printer (standard printer for thermal transfer printing), labelling unit, housing and control electronics.

The printer is mounted horizontally (overhead) in the housing, the control panel is set apart from the printer and integrated into the front panel of the device. Thus, all settings and operating modes of the printer can be accessed via this panel.

Internally, the printer communicates with the device's PLC (Siemens LOGO) via its hardware interface. Nevertheless, all IO signals of the printer (cf. printer user manual in Annex C) are also accessible at the rear of the device via the X101 (25-pin) D-Sub connector. The labelling unit consists of a dual roller mechanism that closes the printed label to form a flag when the operator, holding the cable to be labelled tightly with both hands in the fork guide (left and right fork), pushes it quickly downwards and then guides it quickly upwards again through the roller guide.

A vacuum hole (on the dispense plate) and a fixed stop are used to position the label. Once the positioning has been completed, the vacuum is switched off.

	Warning! Risk of injury!
	Do not reach into the cable entry shaft with your hands/fingers.

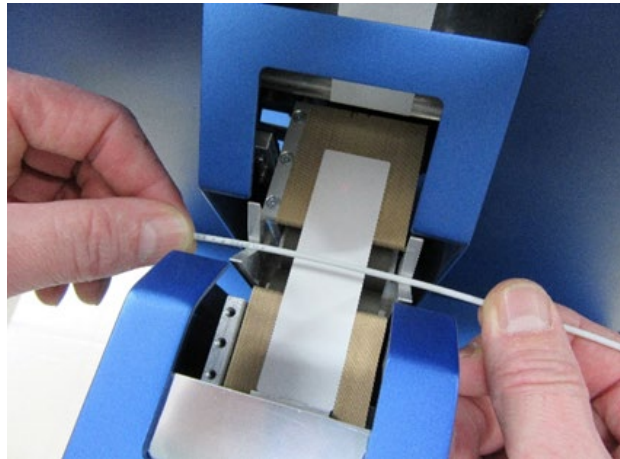


Figure 1: Secure the cable manually

	Guide the cable from outside the housing only
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The labelling process for the device is complete when the labelled cable has been guided upwards and the fork has reached the upper end position again!

Errors with the PRINTING PROCESS (label is not printed and/or peeled off correctly) are both rectified and acknowledged on the printer! On the other hand, an error at the dispensing table (label is not positioned correctly, sensor does not recognise the label, etc.) is rectified there and subsequently the fork is pushed through to complete the labelling and flagging cycle!

3.2 Technical Data for Flagmaker Type 5-R

	Type 5-R
Drive	Electro-pneumatic
Labelling unit (interchangeable)	Type: WE-T5-R
Supply voltage	100–240 V AC
Power consumption	400 VA max
Air pressure	nom. 6 bar (= max)
Fuse (mains filter module)	1 x T4AH250V
Protection class	IP20(2)
Appliance class	I / Protective conductor
Cables that can be worked (round)	(approx.) 1–20 mm
Ambient temperature	
– Operation	10°C to 40°C
– Storage/transport	10°C to 55°C
Humidity	50% at 40°C (without condensation), 90% at 20°C (without condensation)
Degree of pollution	2
Continuous sound pressure level	< 70 dB(A)
Dimensions	352 x 505 x 700 mm (WxHxD)
Weight	35 kg
Colour	Depending on the model number
Accuracy with 80% of labels	
– Y-offset of the label	Max. 2 mm
– X-offset of the label	Max. 2 mm
– Label closure (above cable)	Max. 4 mm not glued

3.3 Scope of Delivery

Labelling machine
Mains cable (10 A, 250 V)
Operating instructions / user manual(s)

3.4 Labelling Unit

The T5 labelling machine is fitted with an interchangeable labelling unit.
This allows the user to process a variety of labels with the device by changing the labelling units.
The respective size of the labels can be found on the type plate on the labelling unit.

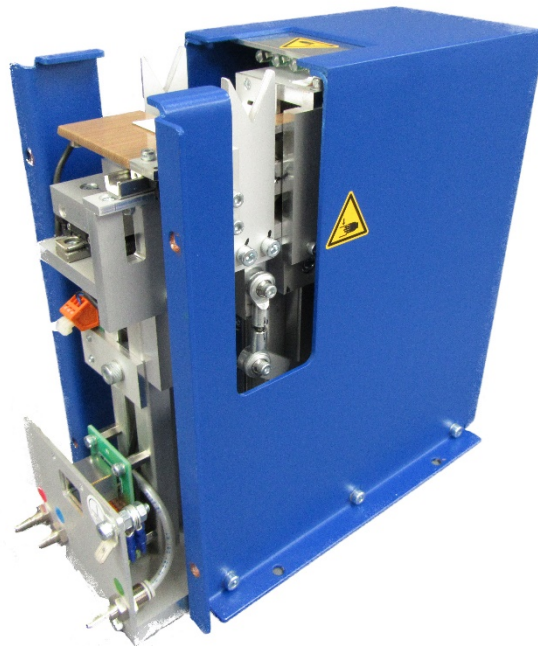


Figure 2: Interchangeable labelling unit WE-T5-R

4 Installation / Set-up / Initial Operation

4.1 Preparations for Operation

As a matter of principle, this device must only be operated by authorised and instructed operating personnel who meet the necessary requirements with regard to training, instruction and qualification. The granting of this authorisation is the sole responsibility of the customer.

Transportation safeguards, transport aids and packaging should only be removed after the unit has been installed. Dispose of the packaging material in an environmentally friendly manner or continue to use it. Specific transport aids and transportation safeguards shall remain with the customer. Store them in case the machine should ever be moved.

After unpacking the machine, check it:

- For damage which may have occurred during transport
- For completeness
- For other noticeable problems
- Document any damage found immediately (sketch, digital/instant camera, description of damage).

4.2 Safety Regulations

Only operate the device if the following conditions are met:

- The device is in good technical order and condition
- The device is used as intended
- The operating instructions are observed
- All safety devices are in place and operational



Remedy any errors immediately. In the event of a fault, immediately switch off the device and secure it against unintentional or unauthorised operation.

Any changes must be reported immediately to the responsible body or supervisor.
Log all errors and changes.

Please note the safety requirements described in Annex A.

4.3 Requirements for the Operating Personnel

(See Chapter 5 in Annex A)

4.4 Installation / Installation Site

The installation site must meet the following requirements:

- Stable base with straight, level surface (for weight of the device see Chapter 3.1)
- At least 30 cm free work space on both sides and in front of the device
- Connection for electricity and compressed air easily accessible nearby
- To move the device, lift it only by the base plate



Figure 3: Lift ONLY by the base plate

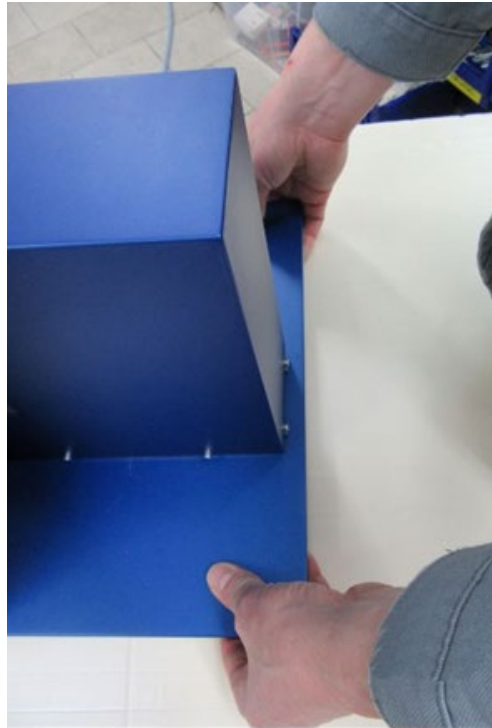


Figure 4: Lift and/or move safely

- Never place the device unsecured more than 100 cm from the ground, danger of tipping over.
- Ensure that the machine stands securely when installing it
- Do not push the device across the installation surface



Danger of tipping over or falling when installing the device; provide for adequate stabilisation; alert employees to the danger!

4.5 Installing Connections

Place the device in the designated location, plug the power cable into the device's power outlet and connect it to the power supply. Connect the compressed air supply (6 bar, $\pm$ 0.5 bar).



Backplane with:

- Power supply 230 V 50 Hz
- Compressed air supply 6 bar
- X100 printer interface
- X101 interface for external operation

Printer connector area with:

- USB
- LAN
- RS232
- SD card

Figure 5: Rear of the device

4.5.1 Preparing the Printer

Insert the label roll and the ribbon into the printer. To do this, follow the instructions in the printer user manual (Annex C, Printer i7100). Now switch on the device with the main switch. The system is ready to start when the display shows "Ready".

Note

If prior to restarting the machine the print head was opened or a printer reset was carried out, or if a label layout was transferred which differs from the last layout in terms of label length, two (blank) labels will be peeled off by the printer after printing starts. These may not be correctly positioned or not completely peeled off, i.e. they remain partially attached to the peel off bar. This is not a malfunction as prior to serial operation, the printer must first measure the correct label length with its internal label sensor and needs to up to two labels to synchronise the correct label position. The operator must remove these labels from the dispensing table and discard them.

On delivery, the printer's mechanical and electronic settings have generally been configured by the supplier so that they correspond to the selected label size. Therefore, there should be no need for the user to make any changes. The settings for the peel-off position of the printer in particular (should not be more than 4 mm) determine the correct transfer of the label to the dispensing table! Remember that the absolute numerical value of the peel-off position is the sum of the value stored in the printer PLUS the numerical value that may be transferred to the printer from a labelling software!

4.5.2 Driver Settings / Printer Configuration

For a repeatedly accurate and reliable printing and peel-off cycle, various settings must be configured in the printer driver under Windows, or in the configuration settings of the labelling software, or in the case of direct programming in the print file.

The parameters are often named differently in different drivers and various labelling software. Print temperature, print heat and density usually describe the same parameter. Don't be confused by this.

The following applies to all print modes described in Chapter 5:

Specify the exact label length / label height (attention: not the resulting flag length, but the base size of the label!)

Specify the exact gap length (distance between two labels on the liner), set label sensor setting to “Transmitted light” or “Gap”

4.5.3 Continuous Jobs With or Without External Start Signal

The following applies to these two printer modes (cf. Chapter 5.1.4):

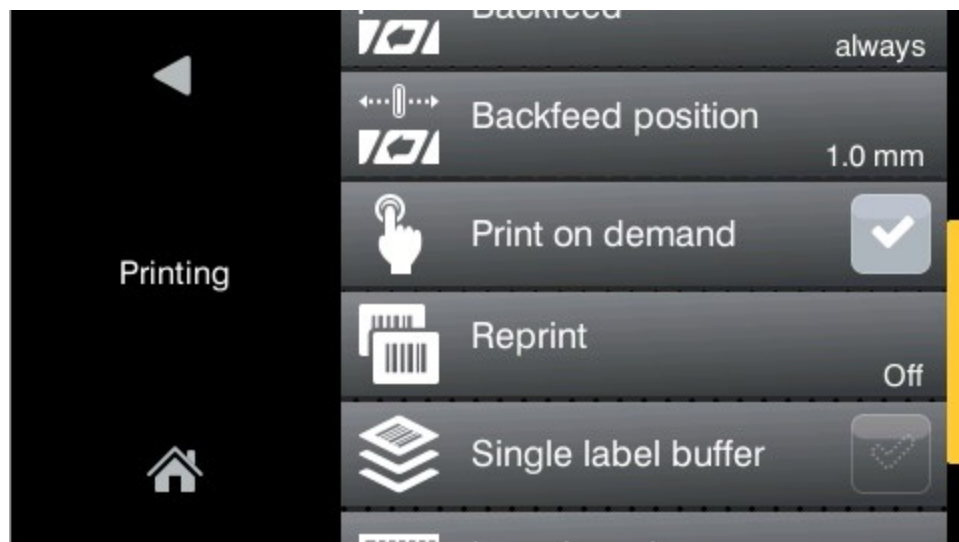


Figure 6: Select “Print on demand”

Set the print mode to “Peeling-off” (this automatically enables “Print on demand” in the printer). Set the “Peel-off position” to a value so that the label, after it has been printed, is moved forward so far that it lies completely on the dispensing table.

4.5.4 Single Job Without External Start Signal

Set the print mode to “Tear-off mode” or “Tearing-off”.

Disable “Print on demand” on the printer. ATTENTION: This does not occur automatically if you have previously worked with one of the other modes and “Print on demand” was enabled as a result! For this purpose, the coding plug on the rear of the device (X101) must NOT BE PLUGGED IN.

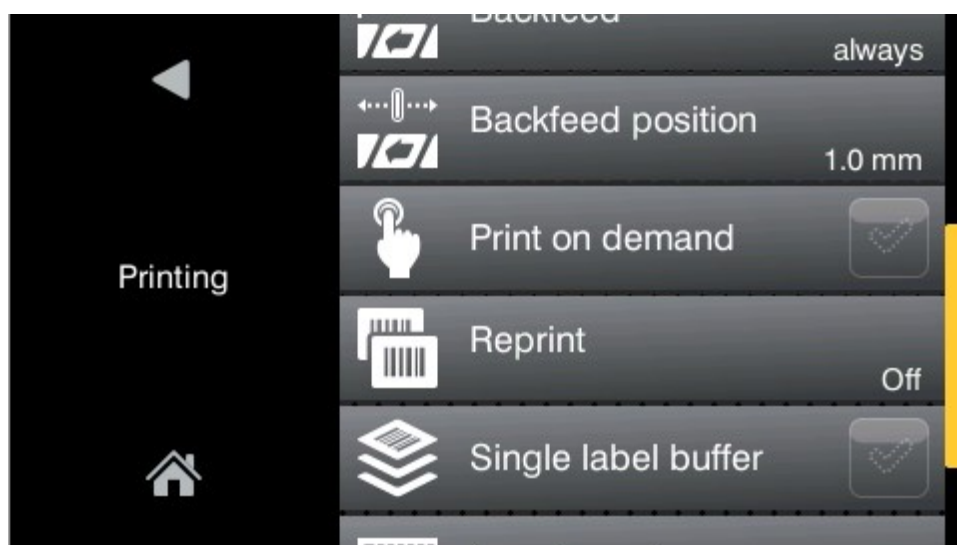


Figure 7: Disable “Print on demand”

On the printer, set the value for the tear-off position so that the label, after it has been printed, is moved forward so far that it lies completely on the dispensing table.

Note

Other settings, such as the print heat, must of course also contain meaningful values in order to obtain a print result of impeccable quality.

4.6 Exchanging the Labelling Unit



Before exchanging the labelling unit, switch off the device with the main switch and disconnect the device from the power supply (pull out the mains plug). Furthermore, disconnect the device from the compressed air supply (pull off the air hose on the backplane).

4.6.1 Removing the Labelling Unit

Open the side flap to the printer.

Disconnect the connectors from the connection plate of the labelling unit in the order specified.

Disconnection sequence: 1-2-3-4-5

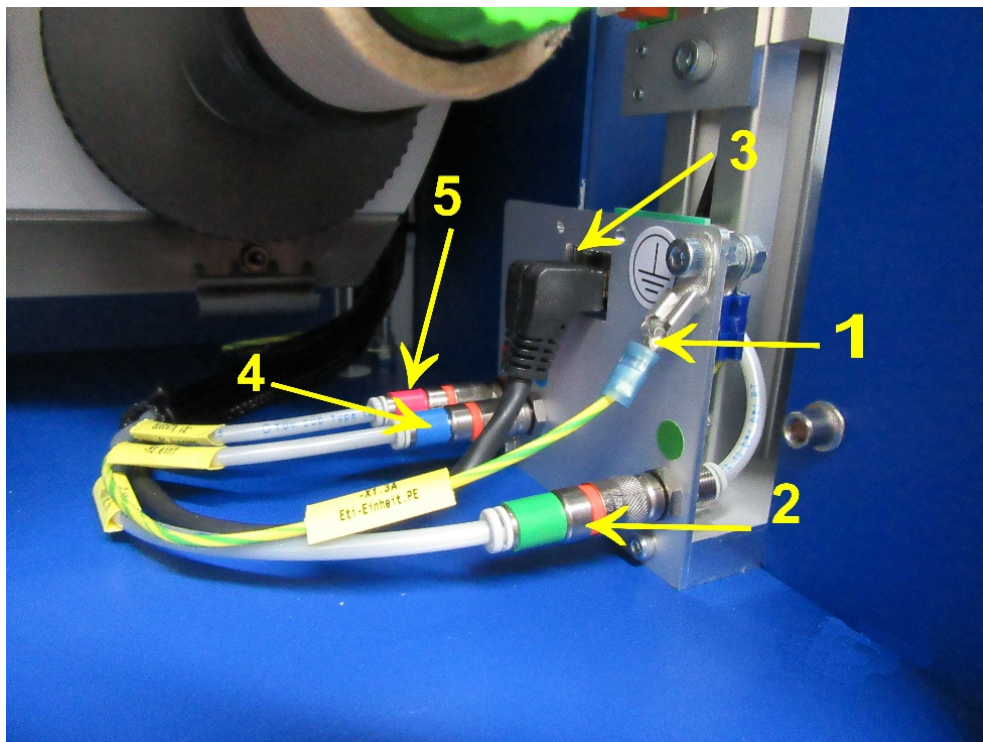


Figure 8: Disconnection sequence for the connectors

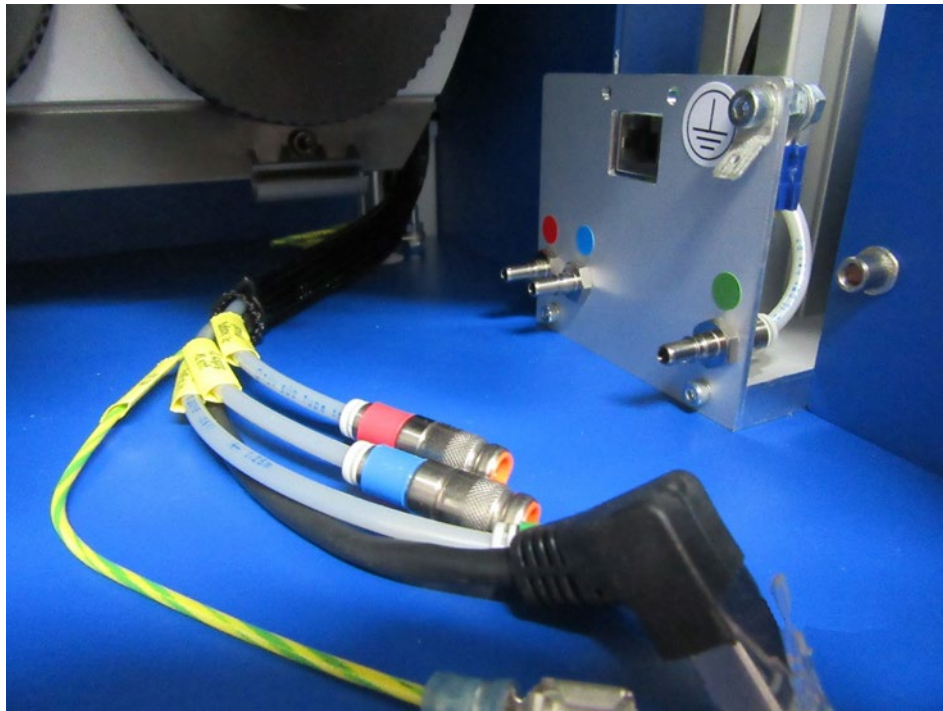


Figure 9: Disconnected connectors

Unscrew the housing bolts (yellow arrows), there are 4 each on the left and on the right side of the housing.



Attention (8 bolts in base plate M5x12).

Recommended tool: Hexagon ballpoint screwdriver 3mm

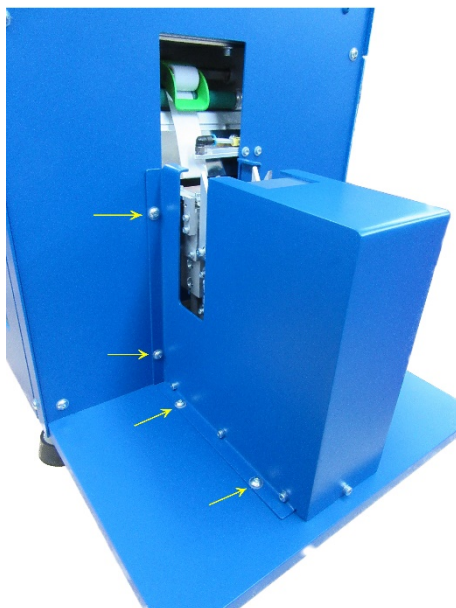


Figure 10: Unscrew the housing bolts

Carefully pull out the labelling unit towards the front

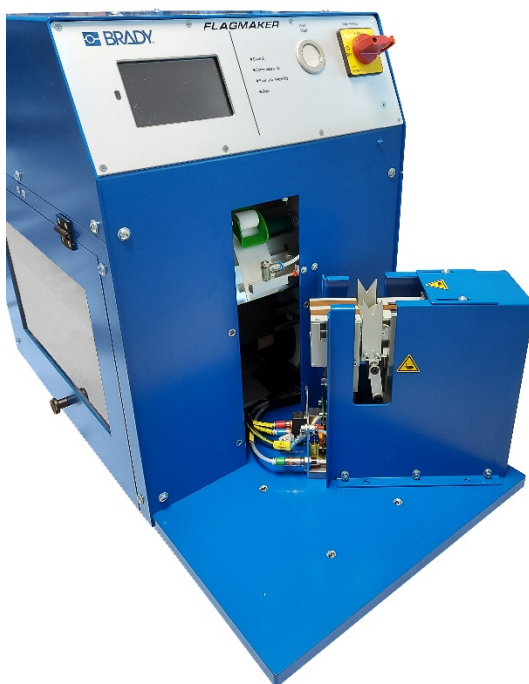


Figure 11: Labelling unit removed

4.6.2 Installing the Labelling Unit

Move the labelling unit into the installation position and carefully guide it into the shaft of the device until the 8 mounting holes overlap.



Figure 12: Labelling unit positioned for attachment

Grease the bolts with a little bolt grease (manufacturer's recommendation see fig. 13); for the time being, only put all bolts in place, do NOT tighten them. Only after all bolts have been put in place, tighten the 4 bolts on the housing first, then the 4 mounting bolts on the base plate. Note the tightening torques (2 Nm!).



Figure 13: Bolt grease

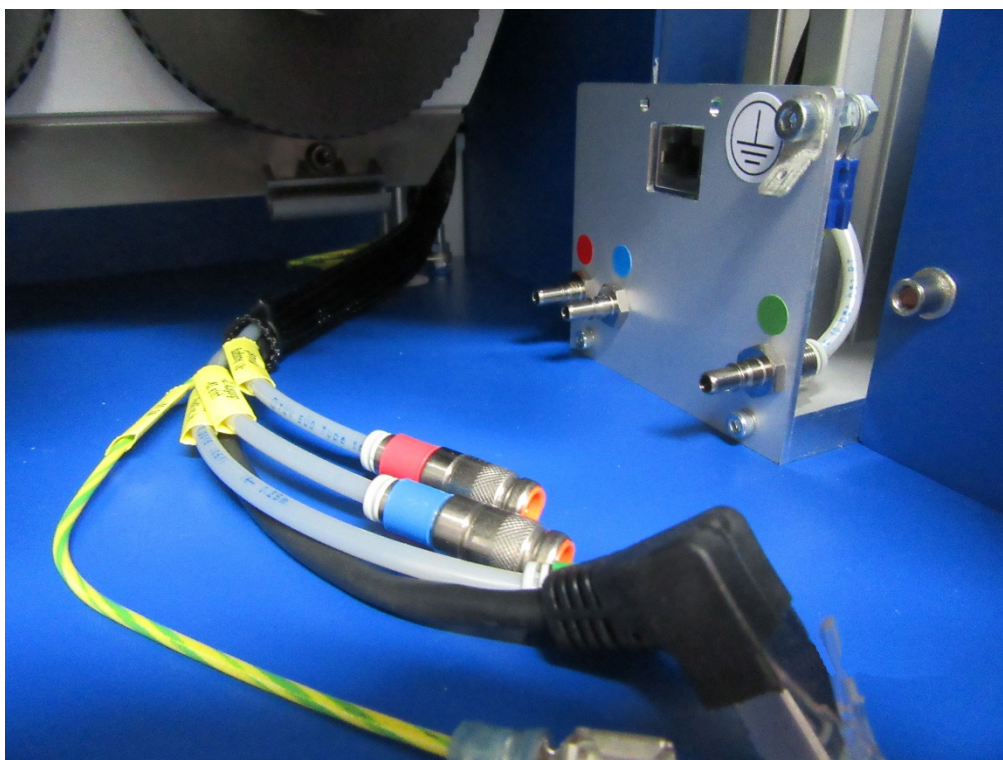


Figure 14: Terminal area for connection

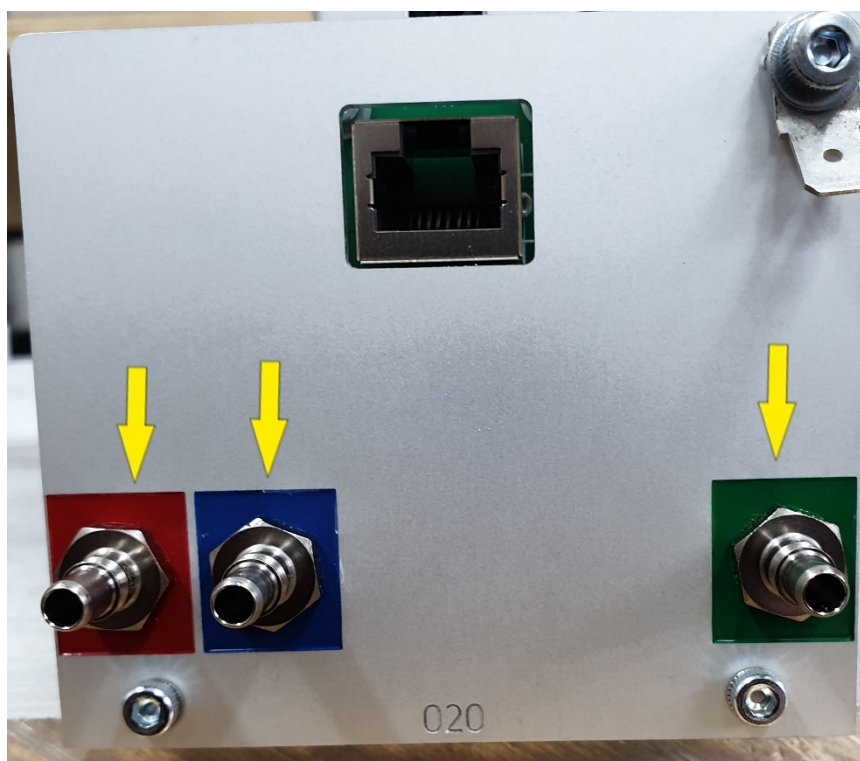


Figure 15: Colour coding of labelling unit terminal area

Now reconnect the connector plugs. Observe the colour coding of the individual connectors (see fig. 14) and the connection sequence (see fig. 8).
Connection sequence: 5-4-3-2-1.

After successful replacement of the labelling unit, insert suitable labels for the new labelling unit and the ribbon into the printer. The printer settings may need to be adjusted for this purpose.

Reconnect the device to the power supply and the compressed air supply. Switch on the device with the main switch, now it is ready for use again.

The removed labelling unit should be stored in a place where it is protected from mechanical, weather-related and other potential damage. (see also Chapter 7 Storage and Transport).

5 Serial Operation / Select Operating Mode

After switching on and booting the device, the display shows the message “Ready” and at the same time the cable entry shaft and the dispensing table are illuminated in red. In this case, “red” signals that the system is not ready for a cable to be pushed downwards (labelled) through the fork guide.

5.1 Selecting the Operating Mode

The device can be operated in one of four different modes. Two of these modes require an external start signal (e.g. from a higher-level controller), while the other two allow automatic printing without an external start signal, simply by loading/sending a print job to the printer.

Two of the modes require a coding plug. Compare with interface description, see 5.2 and 5.3.

The parameters named in the subsequent description refer to the following:

Internal = operation directly on the device

External = the device is controlled by a higher-level (external) controller

Loading a print job = via the printer interface: LAN/USB/RS232

These four modes are characterised as follows:

5.1.1 Mode A Continuous Job — Internal

For this mode, the coding plug must not be plugged into the X101 interface on the rear of the device. On the printer, select the “Print on demand” setting.

Load a print job

When pressing the “Request label” button, the label is printed/peeled off and positioned on the dispensing table.

After the red signal goes out (illumination of the shelf on the dispensing table), the cable can be guided in the fork and pushed downwards.

When the fork is back in the top position, the next label is printed automatically.

The continuous job can be cancelled at any time by pushing the “Cancel” button on the printer display.

5.1.2 Mode B Single Job — Internal

For this mode, the coding plug must not be plugged into the X101 interface on the rear of the device. On the printer, select the “Print on demand” setting. On the printer, deselect (untick) “Print on demand”.

Load a print job.

The label is printed/peeled off immediately and positioned on the shelf.

After the red signal goes out (illumination of the shelf on the dispensing table), the cable can be guided in the fork and pushed downwards.

This completes the print job and the device goes back to standby mode and waits for a new single job.

5.1.3 Mode C Continuous Job With External Start Signal

For this mode, the coding plug must be plugged into the X101 interface.

On the printer, select (tick) “Print on demand”.

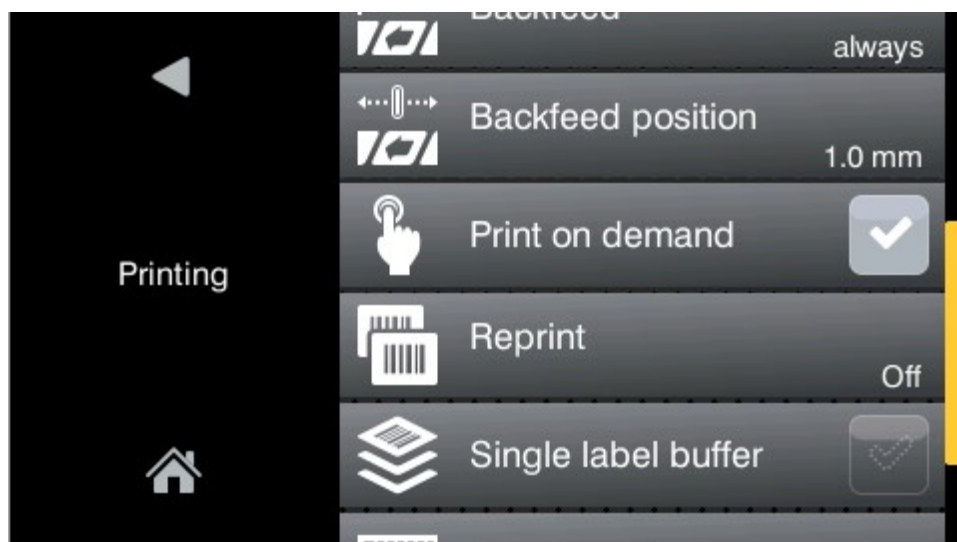


Figure 16: Enable “Print on demand”

Load a print job.

The device waits for an external start signal via the X101 interface. Send an external start signal.

The label is printed and positioned on the shelf.

After the red signal goes out (illumination of the shelf on the dispensing table), the cable can be guided in the fork and pushed downwards.

After the fork is back in the top position and the cable has been removed, this is the acknowledgement to the printer that this label has been removed/processed.

The device waits for the next external start signal.

The job can be cancelled at any time by pushing the “Cancel” button on the printer display.

5.1.4 Mode D Single Job — With External Start Signal

For this mode, the coding plug must be plugged into the X101 interface.

On the printer, select (tick) “Print on demand” (cf. 5.1.3).

Load a print job.

The device waits for an external start signal via the X101 interface.

Send an external start signal.

The label is printed and positioned on the shelf.

After the red signal goes out (illumination of the shelf on the dispensing table), the cable can be guided in the fork and pushed downwards.

This completes the print job and the device goes back to standby mode and waits for a new single job.

5.2 Labelling Operation

5.2.1 Standard

Depending on the selected mode, either after an external start signal or automatically after a job has been sent, the label is printed, moved from the printer to the dispensing table, secured there by means of a vacuum and pulled against a fixed stop so that it is thereby aligned perpendicular to the fork guide. This alignment process is required to ensure that the flags are closed correctly (without any noticeable lack of overlap on the left or right). The position of the fixed stop in relation to the position of the centre of the fork determines whether the flag is closed in the correct position in the vertical direction.

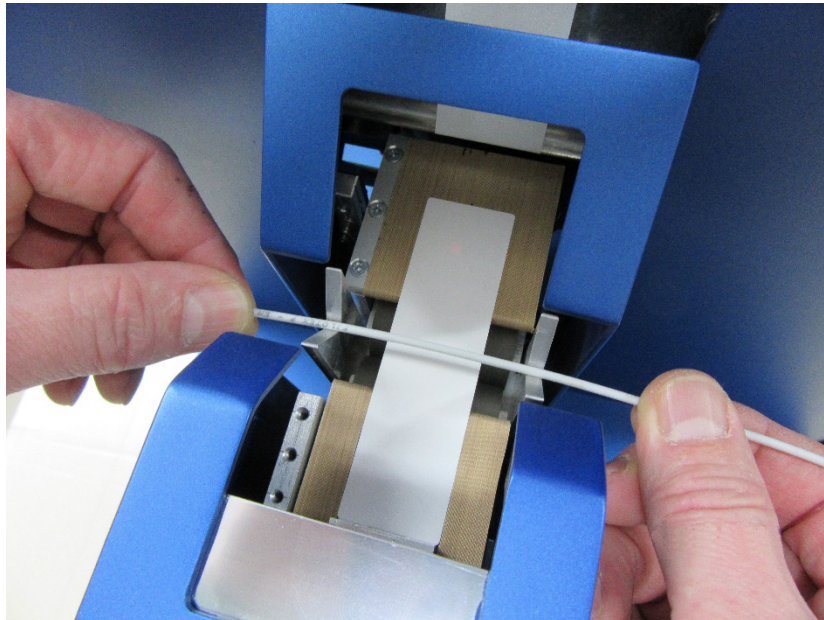


Figure 17: Label correctly positioned on the dispensing table

Once the currently printed label has been positioned correctly on the dispensing table, hold the cable to be labelled tightly with both hands, insert it into the fork guides and quickly push it downwards as far as the mechanical stop of the forks and then quickly guide it back up. This way, the label flag “passes” the roller mechanism for closing the flag twice. Don’t worry if the flag is kinked slightly on the way back up through the rollers. This does not affect the durability of the flag or the label material.

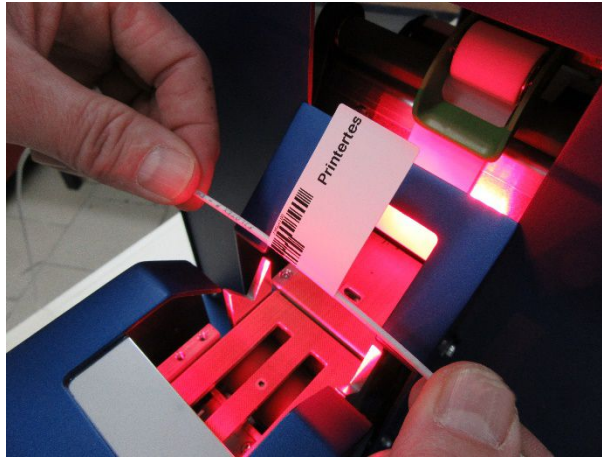


Figure 18: Correctly closed label/flag

5.2.2 Airstream Nozzle Operation

For flexible label materials or materials with stronger adhesive that do not detach sufficiently easily from the liner or are not placed correctly on the dispensing table, the device is equipped with an airstream nozzle above the label outfeed at the peel off bar. The airstream can be adjusted directly on the nozzle by means of the throttle valve.

There, an airstream is emitted while the label is being peeled off. This supports the peeling-off process and the correct positioning of the label.

Once the label has been peeled off completely, the airstream is switched off.



Figure 19: Air nozzle B

5.2.3 X100 Interface

This interface is the hardware/printer interface, led out to the back panel. The printer can be controlled directly via this interface and all IO signals of the printer can also be queried directly, completely independent of the labelling unit.

WARNING!

Setting IOs via this interface that do not match the selected mode can generate implausible states on the device. Therefore, this interface should be used only by trained specialists.

For the wiring and the levels (input/output), please refer to the enclosed printer manual. Some of the signals are also looped through to the X101 device interface in order to be able to connect the device to a higher-level control system in a meaningful way.

5.2.4 X101 Interface

The X101 interface is located on the rear of the device and can be accessed via the 15-pin D-Sub connector. With the signals available there, the device can be connected to external controls in any constellation.

Pin	Signal type	Name	Description	Activation or active state
1	-	+ 24V intern	Internal 24V operating voltage for external control	
2	Output	READY	Printer ready (directly from printer)	+24V on Pin 2
3	Output	Air pressure	Air pressure > 2.5 bar	+24V on Pin 3
4	Output	3SIG	LS Label + LD > 2.5 bar + print job ready	+24V on Pin 4
5	Output	Vac-pos	Vacuum hole position (open)	+24V on Pin 5
6	-	-	Do not use	-
7	Input	EXT-Next	External signal = next label	+24V on Pin 7
8	Output	BUSY	Device is busy	+ 24V on Pin 8
9	-	GND — Int	Internal GND for sensors, switches or buttons	-
10	Input	EXT — AN	External operation is on	+ 24V on Pin 10
11	Output	SENS — ETI	Label sensor (label lies on dispensing table)	+ 24V on Pin 11
12	Output	JOBRDY	Job loaded (directly from printer)	+ 24V on Pin 12
13	-	-	Do not use	-
14	-	-	Do not use	-
15	-	-	Do not use	-

Figure 20: Interface pin assignment

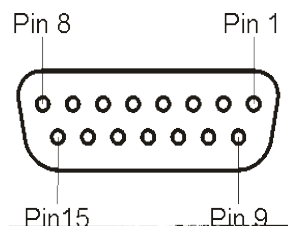


Figure 21: Connector view (contact side)

6 Maintenance and Cleaning

Maintenance, servicing and cleaning must be carried out by appropriately qualified personnel (according to their tasks). Generally, the following activities must be carried out or observed by the operator:

6.1 Cleaning the Outside of the Device

The machine should be regularly wiped to remove dust.

Cleaning the interior is part of the maintenance, which must only be carried out by instructed personnel.

When cleaning the exterior, ensure that the machine is switched off and wipe the surface of the machine with a damp cloth. If necessary, use a soap-based cleaning agent. Do not use aggressive detergents or solvents.

6.2 Maintaining the Device

To ensure trouble-free operation of your device, the maintenance work described (see section 6.3) must be carried out at the specified intervals. Only the tasks listed under "Operator" may be carried out by instructed personnel. All other maintenance work must only be carried out by authorised specialists or by the manufacturer. Do not open the housing under any circumstances!

6.3 Maintenance Schedule

<i>Interval</i>	<i>Who</i>	<i>What</i>	<i>Tasks</i>
Daily	Operator	Entire device	Visual inspection for loose objects
Daily	Operator	Main switch On/Off	Operational check
Daily	Operator	Housing	Completeness, damage
Daily	Operator	Cables, air lines	Check for operation and damage
Daily	Operator	Electrical lines, connections	Check, if necessary replace/repair
Daily	Operator	Label plate / label sensor	Remove dirt
Annually	Operator	Entire device	Arrange annual service interval by manufacturer

Figure 22: Maintenance schedule

6.4 Proof of Annual Maintenance Intervals

Seq. No.	Date	Name	Stamp/signature	Comment
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

7 Storage and Transport

During transport and storage, as with machine operation, the following specifications apply with regard to the ambient conditions:

Dry Frost-free
Dust-proof
Corrosion-protected (e.g. salt water)

7.1 Transporting the Device

Always wear safety shoes with toe guards when transporting the machine. Note the weight of the machine (see section 3.2).

7.2 Safety Regulations During Transport

Only use suitable, undamaged and fully functional means of transportation. For the transport dimensions, see section 3.2. Attach necessary transportation safeguards and transport devices, secure against slipping. Pay attention to the centre of gravity! Observe accident prevention regulations and local regulations. Transport the device carefully, do not lift, support or push on sensitive parts!

Preparations for transport:

- Secure moveable parts of the device
- Clean the device
- Seal open cable ends
- Attach the device securely
- Protect the device against moisture and corrosion
- Secure enclosed accessories against slipping

All power, supply and disposal connections must only be disconnected by specialists.

7.2.1 Acceptance and Checks

Suitable transport equipment must be provided at the time of acceptance. Check the packaging after delivery for damage which may have occurred during transport and other noticeable problems. Document any damage found immediately (sketch, digital/instant camera, description of damage). Have the carrier confirm any damage in writing on site. Forward the relevant documents immediately to Brady.

7.2.2 Troubleshooting — FAQ

If an error cannot be rectified with the measures described below, contact the technical service.

- **Machine reports “compressed air error” after switching on even though compressed air is present**
- **Check the compressed air level with an air pressure regulation unit and adjust it to a value below 6 bar until the error is no longer displayed.**

- **The labels do not detach properly from the carrier with their rear edge during peeling-off**
- **If necessary, increase the peel-off position by 1 millimetre in the printer set-up. If this does not remedy the situation, change the label roll.**

- **The peeled off label is on the dispensing table but no vacuum is applied, the slider does not move against the fixed stop to align the label**
- **Check whether the label sensor in the recess of the dispensing table is dirty or covered by label residues. If required, clean the sensor.**

- **Even though a print job is loaded, the machine does not respond to an external start signal**
- **Check in the printer set-up whether “Print on demand” is ticked**

- **After a print job has been sent, the printer immediately prints the label without waiting for an external start signal**
- **Check whether the coding plug is connected AND if the mode “Print on demand” is switched on.**

- **The flags are closed with a clear offset in the printing direction (the ends of the flags are not flush with each other)**
- **Either the rear stop (against which the label is secured) is misaligned, or the length assignment of the label in the control file or driver is incorrect.**

- **There are white vertical lines on the print image**
- **Either the print head is defective (in which case it must be replaced), or one or two heating elements of the printhead are dirty. Please follow the instructions for cleaning in the printer manual.**



8 Product Monitoring

We continue to monitor our products after delivery.

In order to be able to warrant a continuous improvement process, we depend on you and your impressions when using our products.

- Problems that occur when using the product
- Malfunctions that occur in certain operating situations
- Experiences that may be important for other users

We ask you to record any such observations and send them to us:

9 Contact Information

In case of malfunctions, or if you have any questions or require spare parts, please contact us at one of the following addresses:

Brady Solution Centre

+44 333 333 1111

tseurope@bradycorp.com

Brady EMEA Repair Centre

Return address:

WH Brady nv
Industriepark C/3
Lindestraat 7
9240 Zele
Belgium

Return address Turkey:

Esentepe Mahallesi, Harman Sokak,
No: 4, Duran İş Merkezi, Kat:10,
34394, Levent, Şişli
Istanbul

Brady EMEA — Country-specific telephone numbers for technical service

Comprehensive support in the national language

Belgium	02 404 06 76
Germany	0302 215 3184
France	01 76 75 32 57
Great Britain	0208 865 0438
Ireland	01 447 5269
Luxembourg	+32 2 404 06 76
Netherlands	020 7091207
Austria	01 928 75 52
Switzerland	044 583 06 06

Partial support in the national language, otherwise in English/French

Denmark	36 92 76 62
Italy	02 36009972
Sweden	08 566 425 38
Slovakia	02 3278 6671
Spain	91 114 7460
Czech Republic	2 39 01 69 85
Turkey	0212 375 52 33
Hungary	06 1 778 9513



Support in English/French

Estonia	622 5702
Finland	9 231 955 59
Norway	21 03 40 39 (partial support in Swedish)
Poland	22 295 37 00
Portugal	308803162
Romania	021 5291389
All other countries	+44 333 333 1111

Opening hours

Monday to Thursday: 9 am to 5 pm CET

Friday: 9 am to 4 pm CET

Opening hours in Turkey:

Monday to Friday: 9 am to 6 pm GMT+3

Opening hours in Great Britain:

Monday to Friday: 8 am to 4 pm GMT

In order to ensure a high level of operational safety and a long service life for your machine and to largely avoid the costs of major repairs, we offer you the option of taking out a maintenance contract with us via our customer service department. The individual benefits of our maintenance service are to be agreed for each individual requirement. We will be happy to send you a custom quote upon request.

Annex A

Safety regulations

-Labelling machine- SFlag T5-R

(Version 2.02 dated 10/06/2020)

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1 General safety instructions

The health and safety of personnel can only be ensured if the safety measures described are adhered to in all phases of the device's operational lifespan (construction, transport, set-up, operation, maintenance, decommissioning).

1.1 Explanation of symbols and instructions



Warning – hazardous area!

This symbol indicates an imminent or immediate threat to life and health of the personnel. Ignoring this warning can lead to damage to property, mild injuries, severe adverse effects on health and even life-threatening injuries.



Warning of dangerous electrical current!

1.2 Hazards associated with your device

- The device is connected to a 230V AC power supply via a power supply cable
- The supply must be fitted with an RCD (residual current device/residual-current circuit breaker)
- If you notice visible damage, turn off the device
- If taking a break for a considerable period or leaving the work station, disconnect the device from the power supply (danger of fire)

In general, the usual accident prevention regulations (UVV) apply, especially the UVV on safety of devices.

- The operator is obliged to adhere to the applicable country-specific laws and regulations
- The device may only be operated in Germany/the EU
- Take note of the corresponding specifications/standards

In particular, this applies if requirements there are any modifications or changes due to changes in the laws or regulations.

1.3 Use for intended purpose

The operational safety of the supplied device is only ensured if used as intended. Intended use includes observing the operating instructions/manual (including those of the supplier) and proper maintenance and servicing. This device may only be used for attaching labels to cables/wires of the specified dimensions (cf. 3.1 Technical Data in the "Operating Instructions" document).

The type of device (Type 5-R) used here is exclusively to be operated by hand by the operator. It is not possible to use it in an automated process or integrate it into/mount it onto another device.

Furthermore, only authorised labelling materials (compare Section 3.3 of the Operating Instructions) may be processed with the device.

The device may only be used within the technical limits described (Section 3.2 Technical Data).

Changes and modifications to the device are not permitted. Additional objects (e.g. screwdrivers, etc.) which are not specifically intended for the purpose and are not included in the scope of supply, may not be added to the device (e.g. mixing of the parts listed above, etc.).

Similarly, no components from other manufacturers may be added to the device. Objects such as this may cause damage to people and the device. The manufacturer is not liable for damages resulting from this. In the case of damages, the operator is responsible and responsibility may not be transferred to the manufacturer.

1.4 Product monitoring

The operator must check the device at regular intervals for faults and evaluate error statistics collected. The operator must inform the manufacturer immediately if faults of any kind are identified to enable the manufacturer to perform an error analysis as quickly as possible to determine corrective action.

In the time between identifying a fault and completely resolving it, the operator is responsible for deciding whether the machine

- is operated as normal
- in a limited capacity with attached warning notices and instructions tailored to the problem
- or
- shut down

If in doubt:

**Shut down the machine
with immediate effect!**

1.5 Improper use

Warranty and liability claims for personal damage or damage to property are excluded if they can be traced to one or more of the following causes:

- Incorrect assembly, commissioning, operation or maintenance of the device.
- Operating the device
 - with faults
 - without protective equipment
 - in an area with potentially explosive atmosphere

- The improper use of
 - fixtures
 - accessories
 - peripheral devices, etc.
 - operation without safety equipment
- Operation with safety equipment which is not
 - in a good state of repair
 - or are short-circuited or damaged
- The use of materials which are not permitted by the manufacturer
- Insufficient monitoring of parts of the device which are subject to wear
- Repairs carried out improperly
- Disasters due to external elements and force majeure
- Any kind of in-house structural changes on the device.
- In-house changes to the device (e.g. connection, adapter cables, pin assignment, among others)
- All other actions which are not named/listed as proper use (Chapter 1.3 of this attachment).

1.6 Duty to provide training

The operator must instruct his employees prior to the initial commissioning of the device about the possible dangers and residual risks when using this device and about the measures to avoid them. Every employee who will operate the device or be working in the immediate vicinity of this device should receive training.

Proper use of the device requires knowledge of the operating methods and maintenance as per the following device maintenance, servicing and cleaning regulations. The operator must hold a suitable qualification for tasks such as this (in order to carry out the relevant work with up-to-date subject knowledge). This includes the ability to judge residual risks.

The operator of the device is responsible for ensuring that these operating instructions are supplemented and complied with by internal company instructions regarding work instructions, supervision and reporting duties, work organisation, personnel qualification, etc. The individual competences with regard to the various tasks on and with the device and in the immediate vicinity of the device must be clearly defined, marked and observed by the operator. Potential risks and hazards should be taken into account.

1.7 Safety Devices

The device may only be operated if all safety devices are fully functional. These safety devices may not be removed, bypassed or switched off. The safety devices also include modifications of any kind to the device.

Structural modifications to the device and its accessories usually require written permission from the manufacturer. In the event of infringements, all liability and warranty of the manufacturer becomes void.

All device components, especially safety components, may only be replaced with original manufacturer components and with written permission from the manufacturer.

If faults or defects are discovered on the safety devices, the device must be switched off immediately. The following procedure must always be followed:

- Set the main switch to position 0 "OFF"
- Disconnect device from power supply/remove plug
- Disconnect device from compressed air supply
- Mark the device as malfunctioning
- Inform the person responsible for the equipment immediately

The causes of the defect must be determined, documented and resolved by a qualified specialist before the device can be switched on again.

1.8 Safety specifications

Before the machine is switched on and/or every working day, as well as after a fault is resolved, the safety equipment must be checked as follows:

- Visual check of the safety devices, regarding the general proper state and functionality (e.g. possible bypasses must be immediately resolved, etc.)
- Check of all safety systems, if any.

When checking the safety equipment, ensure that no body parts or objects enter the risk zones which are exposed due to the open housing and that parts cannot escape from the device.

1.9 Duty of inspection

When the device is transferred to the operator, the responsibility for maintenance and duty of inspection, especially regarding the safety equipment, is transferred to the device operator.

2 Personnel and operator obligations

2.1 Training/instructing the operating personnel

Only trained, instructed personnel may work with the device. The device may only be switched on by an appropriately qualified employee, instructed by the operator, after reading all chapters of these operating instructions and the operating instructions for individual components of the device. The personnel responsibilities for operation, modifications and maintenance must be clearly defined. Personnel subject to training may only use the device under supervision of an experienced member of staff. Maintenance and repair work may only be carried out by appropriately trained and qualified specialists. These specialists must also take note of the manufacturer's instructions for maintenance and all applicable safety regulations, as well as the local (applicable) safety regulations.

In general, work on electrical devices may only be carried out by qualified electrical specialists.

Personnel (Table operating personnel)

2.2 Special responsibilities for operators

Every operating company must write operating instructions. These contain:

- Organisational measures for working with the device
- Road safety

Both the operating company and operating personnel ensure that the operating instructions and/or manual (including those of the supplier) are accessible and nearby the device.

The operator undertakes to only use the device in perfect operating condition. The condition of the device must be checked before use and the operator must ensure that all faults are resolved before commissioning.

Furthermore, the operator ensures order and cleanliness in the working environment on and around the device, for example, by providing appropriate instructions and checks.

The operator is responsible for ensuring that work on the machine is only performed by persons who are familiar with the basic occupational safety regulations and accident prevention and are trained to operate the device.

Furthermore, the operator ensures that the responsible employee has read and understood this safety chapter and the warning information in this attachment. This is confirmed by the operating employee's signature.

The operator is responsible for ensuring that operating personnel wear the necessary prescribed PPE.

Personnel are to be monitored at regular intervals for safe working behaviour.

2.3 Behaviour in case of malfunctions

In the case of irregularities/malfunctions

- Stop work
- Switch off the device and wait for it to fully stop
- If not constantly in view of the main switch, this must be secured with a lock to ensure it is not restarted unintentionally. Information labels should also be attached, indicating the ongoing work on the system
- Resolve error and, if necessary, notify the operational manager/customer service/Service
- Compare to Section 1.4 of this document

2.4 What to do in case of danger

- Turn the device off. Warning: residual energy!
- Further measures should be determined by the operating company.

2.5 Saving lives, first aid

- Measures to be determined by the operating company.

2.6 Information on remaining risks

- Do not open housing, remove plugs if repair work is required
- Disconnect from compressed air supply
- There is constant current running through the supply to the device, right up to the main switch! Some components in the device may still conduct voltage even when the main switch is switched off.
- Current-carrying parts in the device are designed to be finger-safe, but there is still a risk of contact with live parts through contact with tools
- Danger of injury with sharp tools

Grading residual risks

- = No risk or minimal risk
- 1 = Delivery, unpacking, setting up
- 2 = Installation
- 3 = Commissioning
- 4 = Operation
- 5 = Modifying, cleaning
- 6 = Decommissioning
- 7 = Maintenance, servicing, repairs
- 8 = Other

Only in accordance with DIN EN 1050	Danger	Occurs during/when:	Comment
1.1	Crushing hazard	1	Severe risk of crushing due to mass inertia of device when moving. Never stand and/or reach under the load. Never stand and/or reach between the load and a fixed point.
1.1	Crushing hazard	1	Carry out each task slowly, carefully and calmly. Instruct required personnel, discourage "onlookers"
1.1	Crushing hazard	7	Particular danger when repairing. Always switch off the device and disconnect it from the power supply.
1.2	Danger due to cutting	-	see 1.1

1.3	Risk due to cutting or trimming	-	see 1.1
1.4	Risk due to catching	-	see 1.1
1.5	Risk due to seizure or entrapment	-	see 1.1
1.6	Impact hazards	1, 2, 3, 7	
1.7	Risk of puncture or incision	-	see 1.1
1.8	Risk of friction or abrasion	-	see 1.1
1.9	Hazard due to penetration or spraying of liquids under high pressure	-	-
2	Electrical hazard	-	-
2.1	Electrical hazard due to personnel coming into contact with charged components	2, 3, 5, 7	Work on the device
2.2	Personnel coming into contact with components which have become charged due to a fault	1, 2, 3, 4, 5, 6, 7	Work on the device
2.3	Approaching components which are under high voltage	-	-
2.4	Thermal radiation or events such as melted components escaping, or chemical events in the case of short circuits, overloads and resistance welding, etc.	-	-
3	Thermal hazards (burns, scalding, etc.)	-	-
4	Noise-related hazards	-	-
5	Vibration-related hazards	-	-
6	Radiation hazards	-	-
7.1	Risk due to contact with or breathing in dangerous gases, vapours, mist or smoke	3, 4, 5, 7	Only clean the device with suitable substances and ventilation systems. Never clean the device with pressurised air.
7.2	Hazard due to fire or explosion	-	-

8.3	Negligent use of personal protective equipment	1 to 7	-
8.5	Mental strain/overloading, under-loading, stress	1 to 7	-
8.6	Human behaviour or misconduct	1 to 7	-
10	Unexpected start-up, unexpected torque/overtightening due to failure of/error with the control system	2, 3, 7	-
16	Break during operation	3, 5, 6, 7	-
17	Objects or fluids falling out or being thrown out	-	-
18	Loss of stability or the device tipping over	1	-
19	Personnel slipping, tripping or falling (in connection with the device)	1, 2, 3, 5, 7	-

2.7 Safety and protective devices

The device is fitted with the following safety devices:

- Protective cover (housing)
- Mains plug
- Main switch

This safety equipment should not be adjusted. It must be checked annually by a service engineer.

2.8 Structural modifications to the device

Structural modifications to the device and its accessories usually require written permission from the manufacturer. Non-compliance with this rule invalidates any manufacturer liability and warranty (cf. 1.5 of this document).

Structural modifications carried out on the device by the operating company or third parties, misaligning regulators or throttles, changes to the electricals, to the hardware or software, use of replacement parts or wear parts which are not originals from the manufacturer, and similar, are all the responsibility of the operating company (especially regarding device safety and the overall functionality).

If any such instance is responsible for damage, then the manufacturer is not liable for this damage or for any resulting damage (including to third parties).

All machine components, especially safety components, may only be replaced with original spare components and with written permission from the manufacturer.

3 Specific hazards associated with maintenance or repair work

Any repair work or maintenance may only be carried out by the manufacturer or a trained service engineer.

3.1 Special safety instructions

It is imperative that you also take note of the operating instructions provided for individual components. These special instructions are a crucial part of the operating instructions as a whole and are to be adhered to in all cases. In these special instructions you will find safety information which may protect you from potentially life-threatening hazards.

3.2 Safety regulations for corrective maintenance

Observe accident prevention regulations!

Repairs should be carried out by the manufacturer.

Work on electrical equipment may only be carried out by qualified electricians.

Switch off the unit before maintenance work and secure it against unauthorised reconnection.

Although current-carrying parts in the device are designed to be finger-safe, there is still a risk of contact with live parts through contact with tools.

Only perform maintenance, cleaning, etc. when the unit is switched off.

For maintenance or servicing work:

- Switch off power supply
- Determine the absence of tension
- Do not clean the device with compressed air
- Do not clean the device with high-pressure cleaning equipment. Supplied parts must be maintained according to manufacturer instructions
- Take care that the area is clean and tidy before commencing any maintenance work



After maintenance work, ensure that the device is ready for operation again, i.e. check that:

- loosened screw connections are re-tightened
- all safety devices are fully mounted and functional
- all cables are correctly fixed

All maintenance work is to be carried out in exactly the order specified. Only use permitted auxiliary and operational materials.

Always use genuine replacement parts.

3.3 Requirements for the operating personnel

Compare with Section 2.1

4 Decommissioning

4.1 Safety regulations for decommissioning

Observe accident prevention regulations! Decommissioning may only be carried out by trained persons instructed to perform the task. Before decommissioning, switch off the device and ensure it cannot accidentally be switched on again.

Work on electrical equipment may only be carried out by qualified electricians. Although current-carrying parts in the device are designed to be finger-safe, there is still a risk of contact with live parts through contact with tools.

Decommissioning procedure:

- Shut down
- Disconnect power and energy supply cables
- Switch off power supply
- Disconnect compressed air connection from the device
- Disconnect the device from the mains
- Cleaning
- Clean prior to storage
- Return the device to its original packaging



The device is now ready for transport and disposal, if necessary.

4.2 Operating personnel

(See Chapter 5 on Training Personnel)

4.3 Disposing of the device

Decommission the device as described in Section 4.1 of this document. Ensure that the device is disposed of in accordance with national and regional directives.

Annex B

Declaration of Conformity

EU Declaration of Conformity

EN

**We, ToWoTech GmbH
Zum Schäferstuhl 19, D-38259 Salzgitter, Germany**

declare that the DoC is issued under our sole responsibility
and belongs to the following product:

Product name: Labelling Machine

Model number: SFlag T5-R

The object of the above declaration described above is in conformity
with the relevant Union harmonisation legislation:

2006/42/EC

2014/30/EU

2011/65/EU

The following harmonised standards have been applied:

**EN ISO 12100:2011; EN 60204-1:2010
DIN EN 61000-6-4:2011; DIN EN 61000-6-2:2011
DIN EN 61000-3-3:2014; DIN EN 61000-3-2:2015**

This Declaration of Conformity loses its validity if the device is converted, modified
or used for purposes other than those for which it is intended without our written
consent, or if the directions in the operating instructions are not complied with.

Salzgitter 17/01/2020
Place Date

Thorsten Lehrmann
Managing Director
ToWoTech GmbH

