

# **Winder C9100**

## Technical handbook

<b>Index</b>	<b>page</b>
1 Safety advices .....	3
1.1 Important warnings .....	3
1.2 Danger advices .....	3
1.3 Symbol descriptions .....	4
2 Introduction .....	5
2.1 General information .....	5
3 The Winder C9100 .....	5
3.1 Prevention of accidents .....	5
3.2 Noise suppression .....	5
3.3 Mechanical stability .....	6
3.4 Installation examples .....	7
3.5 Rewinder and unwinder .....	8
3.5.1 General information .....	8
3.5.2 Support plate .....	9
3.5.3 Drive .....	9
3.5.4 Dancer .....	9
3.5.5 Winder mandrel .....	9
3.5.6 Brake .....	9
3.5.7 Winder control .....	9
3.6 Final assembly of the winder .....	10
3.6.1 Assembly of the dancer .....	10
3.6.2 Assembly of the unwinder/rewinder mandrel .....	10
3.6.3 Exchange of the dancer spring .....	10
3.7 Adjustments .....	11
3.7.1 Spring force of the dancer .....	11
3.7.2 Tension direction of the dancer .....	12
3.7.3 Direction of action of the dancer .....	12
3.7.4 Motor rotation direction .....	12
3.7.5 Tension force of the motor .....	12
3.8 Arrangement and mechanical adjustment of the rewinder .....	13
3.9 Arrangement and mechanical adjustment of the unwinder .....	15
3.10 Maintenance .....	15
3.11 Brake .....	16
3.11.1 Adjustment of brake .....	16
3.12 Motor brushes .....	17
4 Electrical settings .....	18

<b>Index</b>	<b>page</b>
4.0.1 Direction of action of dancer (DANCER) .....	19
4.0.2 Motor force (TORQUE) .....	20
4.0.3 Winder (WIND) .....	20
4.1 Electrical connection .....	21
4.1 The connector box 9100 .....	21
4.1.1 Fuse F1, 5A slow blowing .....	21
4.1.2 Pinassignment Monitor Connector DISPENSER .....	22
4.2 Cabling .....	23
4.3 Setting up .....	23
5 Technical data .....	24
5.1 Fuses .....	24
6 Troubleshooting .....	25
6.1 Troubleshooting Collamat 9100 .....	25
6.2 Trouble shooting checklist .....	26

**The information in this handbook reflects  
the state of the publication date.  
We reserve the right to make design modifications.**

# 1 Safety advices

## 1.1 Important warnings



Before installing and operating the Collamat® 9100 read the following safety instructions.

- The Collamat® 9100 labeller is exclusively intended for labelling goods. It must exclusively be controlled and driven by a C9100 monitor.
- Install the Collamat® 9100 only by a trained specialist considering the national specific regulations of
  - prevention of accidents
  - mechanical stability
  - construction of electrical and mechanical systems
  - noise suppression
- Take notice of the technical data of the Collamat® 9100. Especially the environment conditions must be observed.
- Operate the Collamat® 9100 only by trained personnel.
- In case of non-authorized modifications the guarantee will become void.
- Before connecting non-standard products, ask your competent technical supporter.

## 1.2 Danger advices

- The safety symbols and danger advices on the Collamat® 9100 and in this manual must strictly be observed.
- Switch the monitor C9100 off before connecting or disconnecting the labeller to or from the monitor C9100.
- Only authorized personnel may open the monitor and the connector box.
- Disconnect the monitor from the mains before opening the connector box.
- Danger of pinching hair, jewelry, ties, clothes etc. into the traction unit !
- Danger of injury by cutting fingers in the paper zone !
- Danger of injury in the dancer roller zone of the Collamat® 9100 rewinder and unwinder !
- Danger of injury in the case of non-expert use of the Collamat® 9100 paper stock control !
- When operating the labeller, the operating personnel must keep to a safe location to prevent injury by the products being labeled.

### 1.3 Symbol descriptions

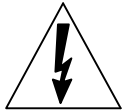


**ATTENTION**

Danger to damage the Collamat® 9100 or other system components, with a potential consequential danger of injuries.

**DANGER**

Imminent hazard for persons.



**DANGER**

Shock hazard due to high voltage at component.



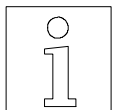
**DANGER**

Hazard of contact injury due to high component temperature.



**ATTENTION**

ESD (ElectroStatic Discharge) warning. The p.c.boards or other components may only be touched in an electrostatically protected environment.



**NOTE**

Important or additional information to Collamat® 9100 or its documentation.

## 2 Introduction

### 2.1 General information

This Technical Manual describes design and function of the Powered Winder C9100. In addition to the Operating Instructions, it contains the settings and notes necessary to get optimum use of the Winder C9100. The descriptions of the electrical and mechanical assembly also help for quick error analysis and trouble-shooting.

We recommend to replace p.c.boards always as complete units returning them to Collamat Stralfors or its representative for repair to be sure that the high quality standard of the Winder C9100 can also be guaranteed after any repair.

Special characteristics of the Winder C9100:

- resistant to wear
- rugged
- quick change-over to other labelling tasks
- high performance
- SMD-technology

## 3 The Winder C9100

The Winder C9100 must be installed by trained personnel considering the following national specific regulations:

- Prevention of accidents
- Noise suppression
- Construction of electrical and mechanical systems

### 3.1 Prevention of accidents

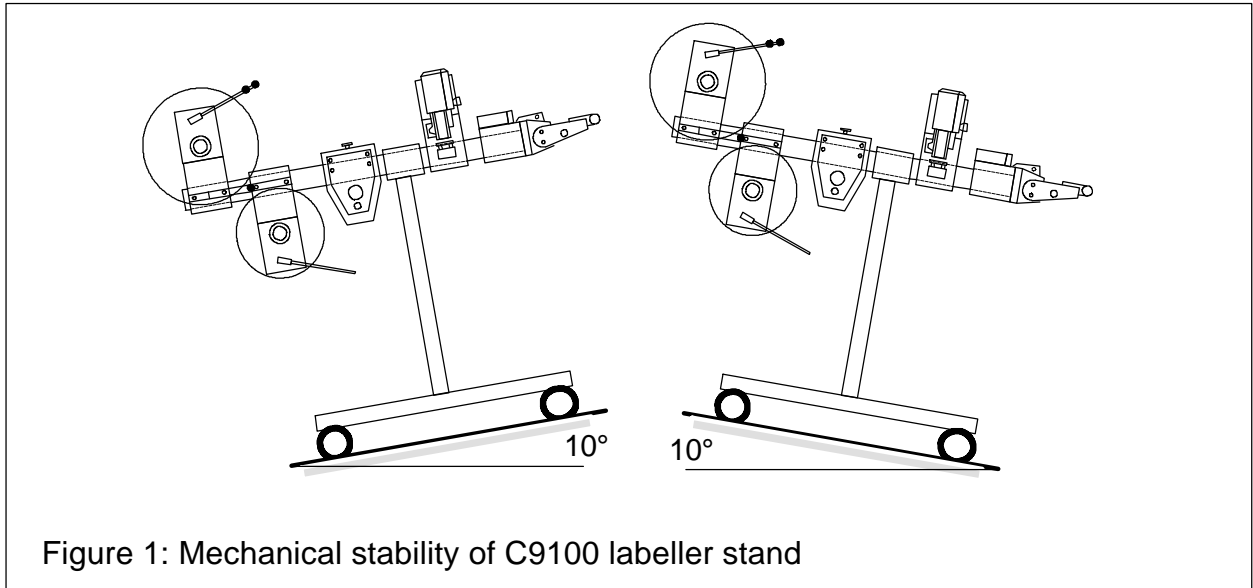
When installing and connecting the C9100 monitor and labeller pay attention that the signal and power cables cannot become stumble obstacles. Lay the cables according to the national safety regulations. Signal cables must not be placed in close proximity to power cables.

### 3.2 Noise suppression

For radio interference suppression the C9100 labeller and monitor are shielded according to the CE directives. Only cables approved by Collamat Stralfors are allowed to be used to connect the monitor to labeller and mains. Additional peripherals have to be connected only to the mains socket of the monitor. These devices must be approved by Collamat Stralfors.

### 3.3 Mechanical stability

If the Collamat® 9100 is used on a movable stand, this stand must be capable to be tilted by 10° in each direction. See Figure 1:



### 3.4 Installation examples

Due to the modular design of the Collamat® 9100 there is nearly no limit in variations of the installation. But for best results in labelling, the following figures show installation examples of constructions which do their work successfully:

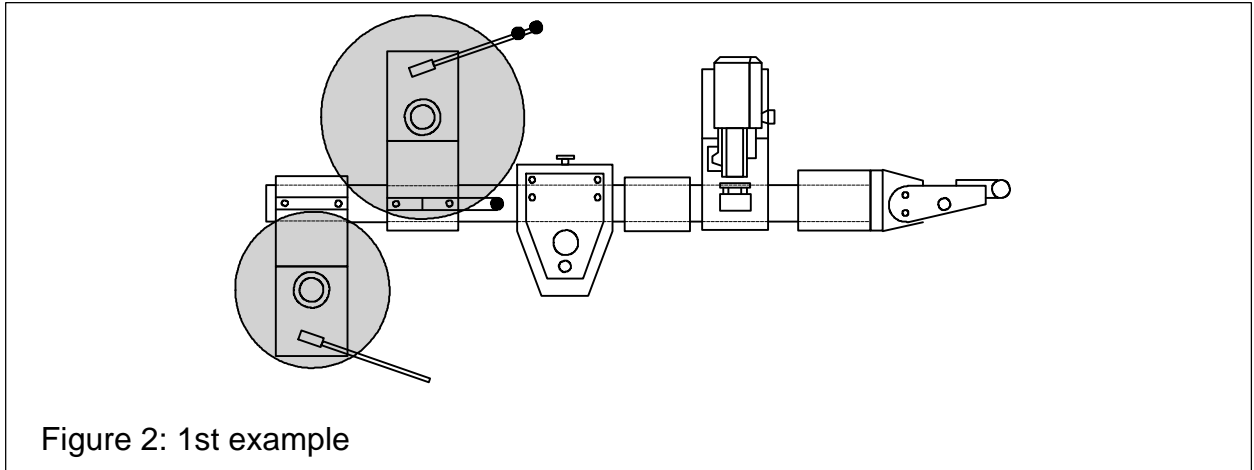


Figure 2: 1st example

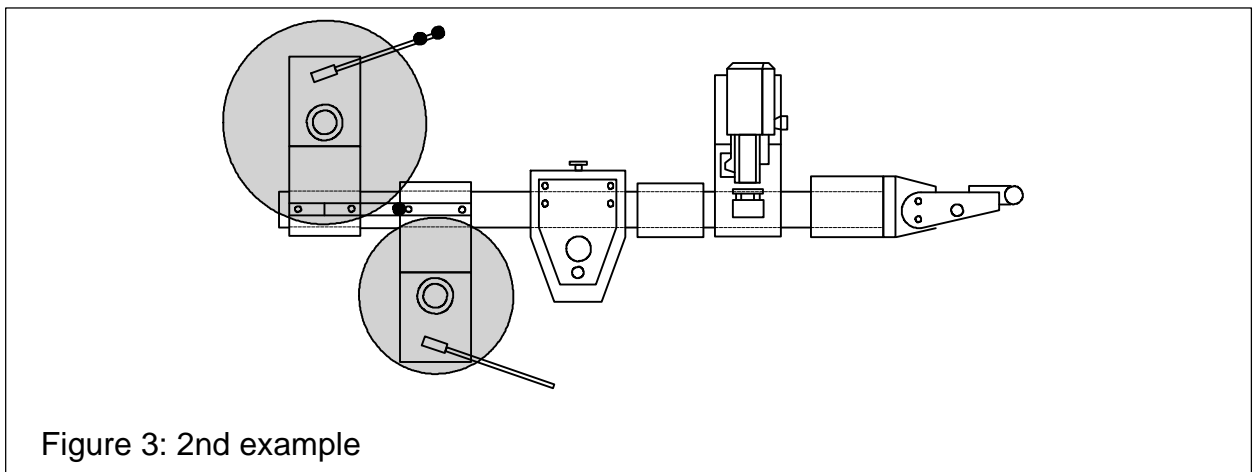
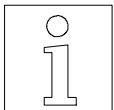


Figure 3: 2nd example



The threading of the paper web, the adjustment of the paper brake and adapter are described in the Operating Instructions of the Collamat® 9100 labeller.

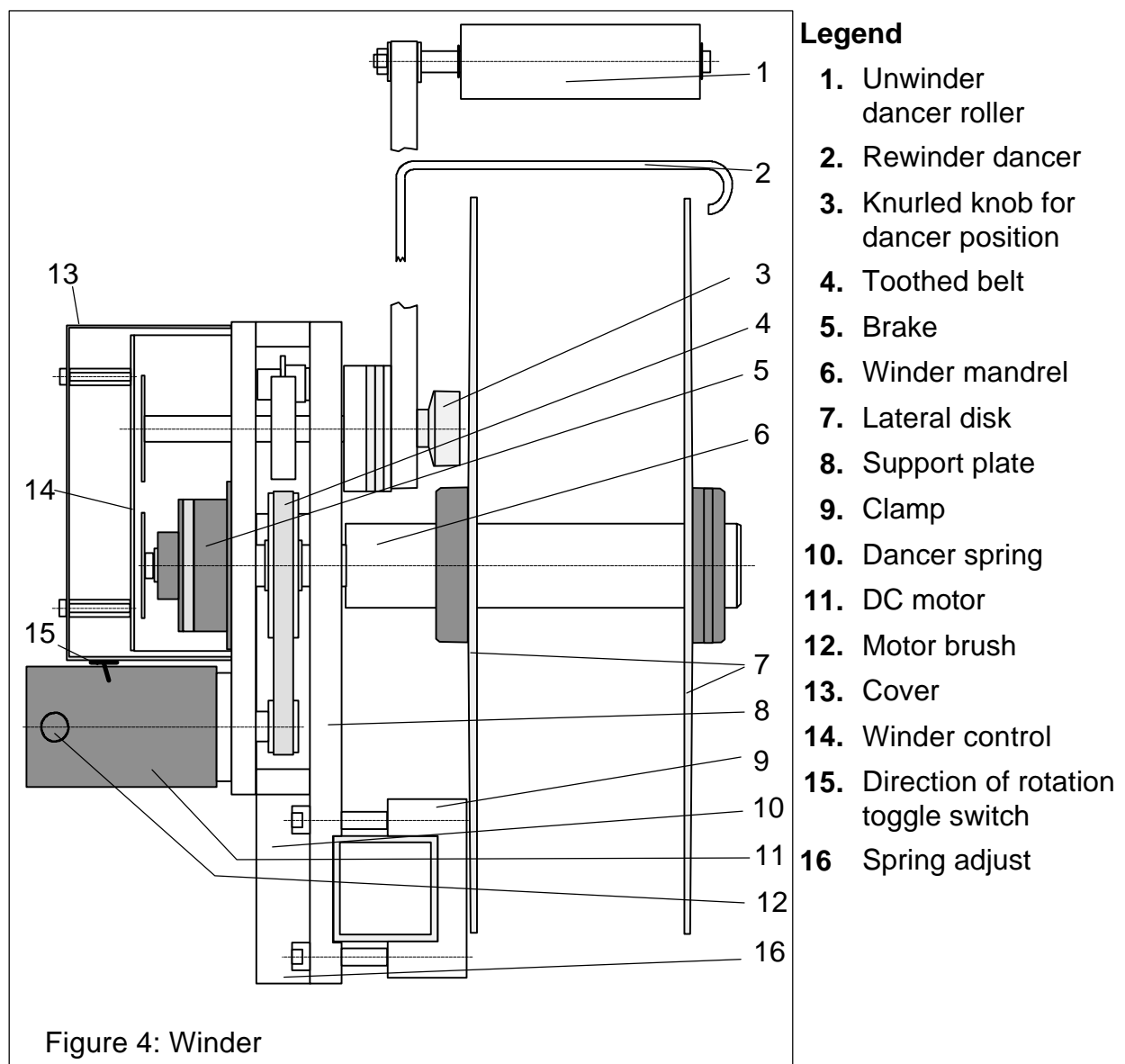


### 3.5 Rewinder and unwinder

#### 3.5.1 General information

Rewinder and unwinder (= winder) with motor drive are intended to automatically wind or unwind the paper web of the COLLAMAT 9100 labellers. The winder is powered with 24 VDC. A deviation of the dancer roller starts automatically the winder motor. The winding speed is electronically controlled as a function of the dancer roller position. At the end of the paper web or upon paper web break, the motor is stopped automatically after some revolutions to prevent an uncontrolled run-up of the winder. Thickness of the wound roll and direction of action of the dancer roller can be adapted by plug-in jumpers on the electronic winder system. The direction of rotation can be switched over from outside. Rewinder and unwinder distinguish themselves only by dancer roller and winder mandrel.

#### Design



### 3.5.2 Support plate

The assembly is mounted on a rigid support plate **8** fixing the winder on the module rail in a stable way. A cover **13** with rubber sealing protects the winder control **14** from dirt and humidity.

### 3.5.3 Drive

The winder mandrel **6** is driven by a current-controlled DC motor **11** via a toothed belt **4**. To prevent the winding from after-running the winder mandrel is braked with free dancer roller by brake **5**. The DC motor is equipped with exchangeable brushes **12**.

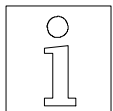
### 3.5.4 Dancer

The dancer roller arm has two tasks. On the one hand it represents a paper web stock for rapid supply or take-up of the paper web, on the other hand it signalizes its position to the winder control by optical sensors. With adjustable spring force, it stabilizes the tension applied to the paper web. The cooperation of the dancer roller with the winder control and the winder motor provides a controlled paper supply or take-up. Two different dancer roller types **1** or **2** are available for rewinders and unwinders, respectively.

### 3.5.5 Winder mandrel

The winder mandrels **6** of rewriter and unwinder are also different. The mandrel of the rewriter is designed to take up a clamping bow which provides a sure but well detachable connection of the empty paper web with the mandrel.

The winder mandrel can be provided additionally with a clamping core for paper rolls with 3" core diameter (76.2 mm). The clamping core is intended to correctly transmit the torque to the paper roll.



**On request, also clamping cores with other diameters are available.**

### 3.5.6 Brake

The winder mandrel **6** is braked by an electromagnetic brake. This brake is activated by the winder control **14** at the moment when the dancer runs free, after detection of a broken paperweb or when the motor stands still. The breaking force and breaking time can be adjusted.

### 3.5.7 Winder control

The winder control **14** controls the whole winding process controlling the DC motor **11** as a function of the dancer position which is optically measured and electrically weighted. The winder control also controls the electromagnetic brake **5**.

### 3.6 Final assembly of the winder

If the winder is delivered in parts (Dancer and winder mandrel not assembled) all parts must be finally assembled. Refer to the figure 4.

#### 3.6.1 Assembly of the dancer

- Remove the knurled knob **3** of its shaft
- Put the dancer **1, 2** on the dancer shaft and fix it to the desired position using the knurled knob **3**.

#### 3.6.2 Assembly of the unwinder/rewinder mandrel

- Plug the unwinder/rewinder mandrel **6** to the winder shaft and fix it with its fixing screw.

#### 3.6.3 Exchange of the dancer spring

The Collamat 9100 winders use three different springs types. To figure out the spring types the springs are coded with three different colours.

Colour	Springwirediameter [mm]	Winder
yellow	1,7	Rewinder C9110...C9130
blue	2,25	Unwinder C9110
red	2,5	Unwinder C9120, C9130

Normally the blue springs are used in the unwinder C9110. If you received another kind of winder the appropriate springs are delivered in the package. It must be exchanged.

- Remove the spring adjusting screw **16**
- Remove the springguide tubeholder at the bottom from the support plate **8**
- Remove the square springguide tube **10**
- Remove all three springs together with the spring guides from the pulling bar
- Reassemble the attached springs and spring guides in the same manner to the pulling bar
- Slightly retighten the fixing screw to fix the system
- Lubricate the springs, the spring guides and the square springguide tube with grease
- Reassemble the square springguide tube **10** and fix it with the springguide tubeholder to the support plate **8**
- Adjust the spring adjusting screw **16** until the necessary spring force of the dancer is OK

### 3.7 Adjustments

In the following chapter the various adjustments are described considering the items:

**Dancer:**

- Spring force
- Tension direction
- Direction of action

**Motor:**

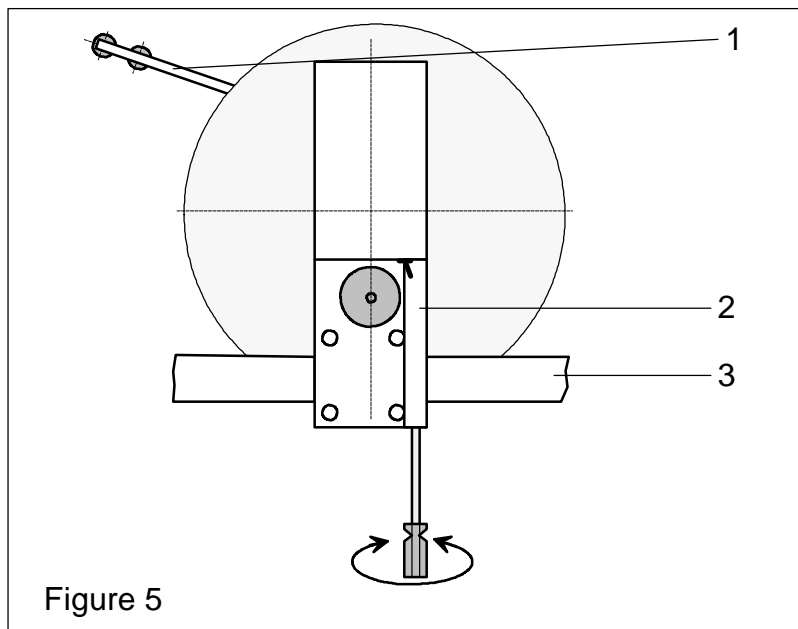
- Direction of rotation
- Tension force

**Brake:**

- Airgap  
see also chapter **Brake**

#### 3.7.1 Spring force of the dancer

Adjust the spring force of the dancer roller so that the retraction force of the dancer roller is not higher than required by the dancer roller to reset itself with threaded-in paper web.



- 1. Dancer
- 2. Dancer spring
- 3. Modulel rail

Winder rear view

For adjustment of the spring force, use a 5mm hex screw driver. The dancer spring **2** can be accessed from the bottom of the winder.

- To increase the dancer force tighten the dancer spring clockwise
- To decrease the dancer force loosen the dancer spring anti clockwise

### 3.7.2 Tension direction of the dancer

Rewinder and unwinder tension direction are different:

- The rewinder provides permanent traction force on the paper web
- The unwinder provides permanently a full paper loop

Depending on space, mounting of the winders may differ. In principle the dancer roller has to be mounted so that the paper web never can be stretched. This applies both for full and empty paper rolls.

At the rewinder, the direction of rotation of the motor must act against the spring force of the dancer roller allowing thus a finer adaptation of the dancer roller position with empty winder mandrel.

At the unwinder the direction of rotation of the motor has to be adjusted according to the label roll design: whether it is **inside** or **outside** wound.

### 3.7.3 Direction of action of the dancer

The direction of action of the dancer roller is set on the C9100 winder control **14** with the **DANCER** jumper. As a rule the jumper is already set in factory in the correct direction of action. It must be distinguished between rewinder and unwinder:

- The rewinder motor must start with free dancer
- The unwinder motor must stop with free dancer



**ATTENTION:**

**On the rewinder a free released dancer starts the free-wheel limitation which stops the winder mandrel after eight revolutions. Therefore either stop the winder or do not let swing out the dancer completely.**

### 3.7.4 Motor rotation direction

The toggle switch **15**, placed on the cover **13** of the winder allows to select the direction of rotation of the winder mandrel **6**.

### 3.7.5 Tension force of the motor

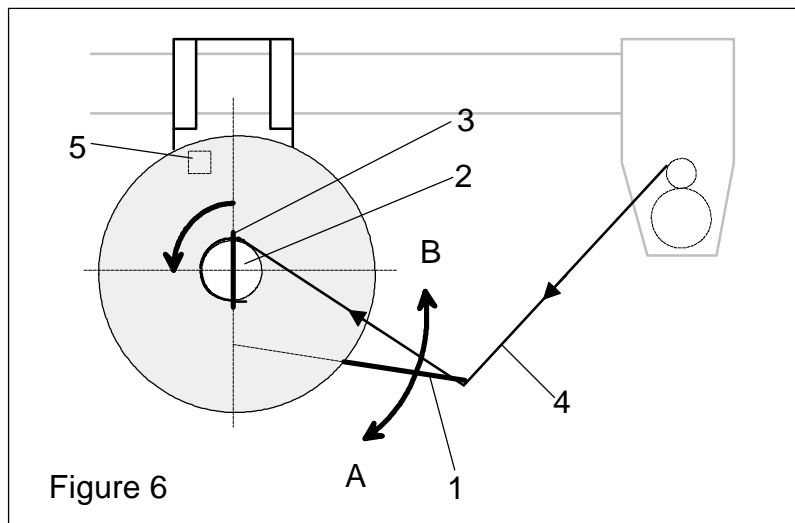
The tension force of the motor depends of:

- The rewinder must not produce high accelerations but provide a constant force on the paper web.
- The unwinder must be capable to rapidly produce high accelerations but after unwinding it must stop immediately.

The TORQUE and WIND jumper blocks on the C9100 winder control **14** are intended to set the tension force.

### 3.8 Arrangement and mechanical adjustment of the rewinder

The rewinder is placed behind the traction unit on the module rail.



#### Legend

1. Dancer
2. Rewinder mandrel
3. Clamping bow
4. Paper web
5. Direction of rotation toggle switch

The rewinder is fastened under the module rail. The dancer **1** pulls the paper web **4** from the traction unit downwards. The winder mandrel **2** turns counterclockwise. The spring force of the dancer is set with the dancer spring so that the force in the upper stop does not become too high. With high labelling speed, the dancer roller must not impact the paper web. The direction of action of the dancer **1** is the same as that of the spring force, i.e. if the dancer roller moves downward, the motor must start to rotate. The direction of rotation of the motor is set with the change-over switch **5** on the rear side of the rewinder cover.



**For LEFTHAND MACHINES, the above information applies reversely!**

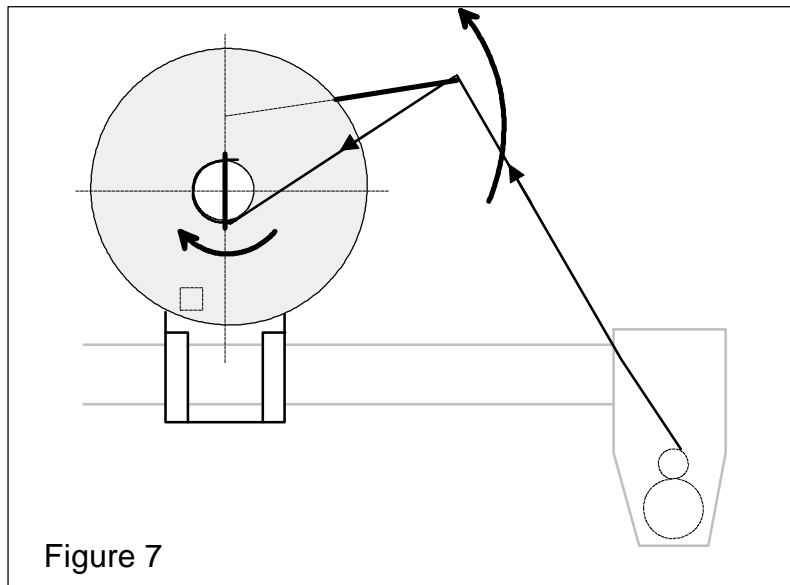


#### ATTENTION:

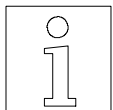
The upper position of the dancer roller must be so that the paper web is never fully stretched. Otherwise impacts on the traction unit may occur which open the closure.

The angle of paper web around the dancer between winder mandrel and traction unit must be an obtuse angle. See figure 6. In most cases a stretched paper web will cause faults !

Figure 7 shows the second mode to mount a rewinder. Here the rewinder is mounted **above** the module rail. But this mounting type should be used only when a mounting according to figure 6 is not possible for space reasons.



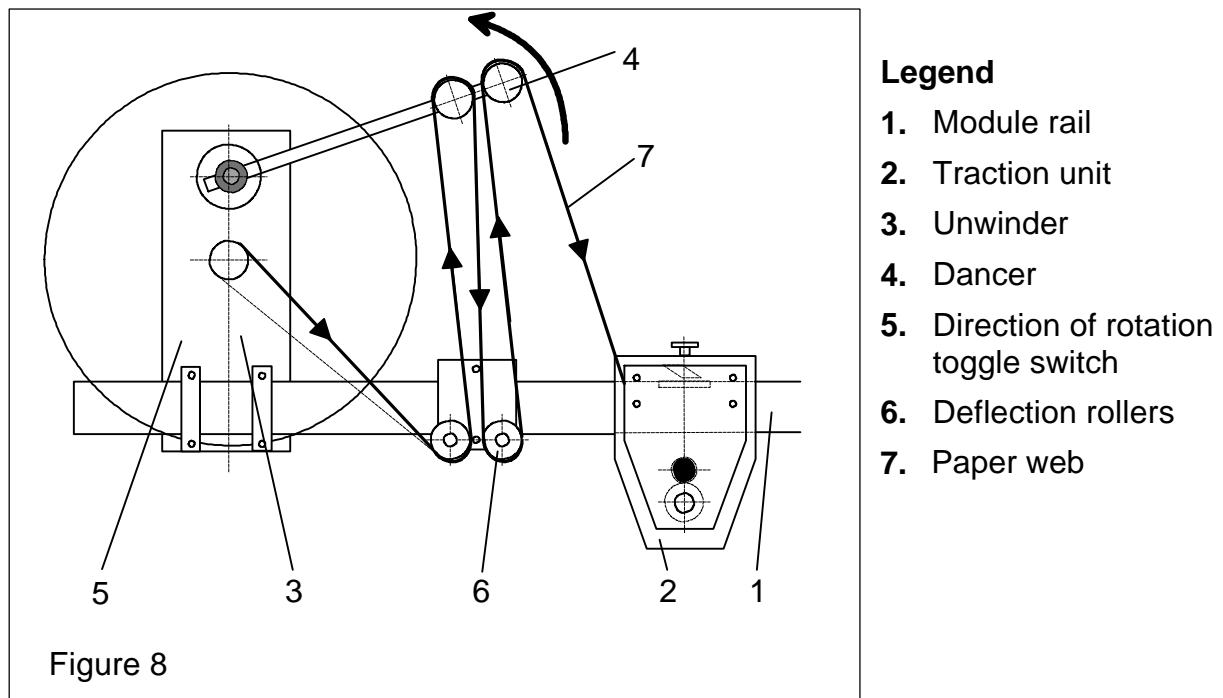
Set the spring force of the dancer roller so that the dancer roller can bear the paper web to the upper stop. The dancer roller must move independently fully upwards (lefthand stop) if there is no paper web to be wound. The winder mandrel must turn clockwise. Be carefully that the paper web is never stretched.



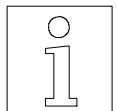
**For LEFTHAND MACHINES the above information applies reversely !  
Righthand stop = clockwise**

### 3.9 Arrangement and mechanical adjustment of the unwinder

The unwinder is placed, as shown in figure 8, on the top of the module rail.



The unwinder is fastened above the module rail 1. The dancer roller 4 pulls the paper web upwards. If the dancer is moved downwards the motor starts to rotate. The direction of rotation of the unwinder is set by the toggle switch 5. The resetting force of the dancer should be set as low as possible. But in operation the dancer roller must never touch the lower stop avoiding thus impacts to the label web and an inaccurate labelling.



**NOTE:**

**In the case of horizontal mounting position and lateral labelling special paper web guides are available which prevent that the paper web can slip down.**

### 3.10 Maintenance

The winder does not need maintenance to a large extent. Remove dirt with a cleaning agent free of solvents. No cleaning agent or humidity must penetrate into the winder. Otherwise there is the danger of damages to electrical components or bearings.

The brake of the winder mandrel and the motor brushes are liable to wear depending of use. They must be exchanged or readjusted depending of use and wear.



### 3.11 Brake

The brake **7** must brake the winder mandrel **10** when the dancer **1** is released to its rest position. It must not more be active when the motor **12** is powered. The brake force is controlled by the winder control **4**.

The optimum airgap of the break is 0.2mm when it is released. If the gap is wider (> 0.5mm) the break must be readjusted. This readjustment is also necessary when the breaking force is not sufficient.

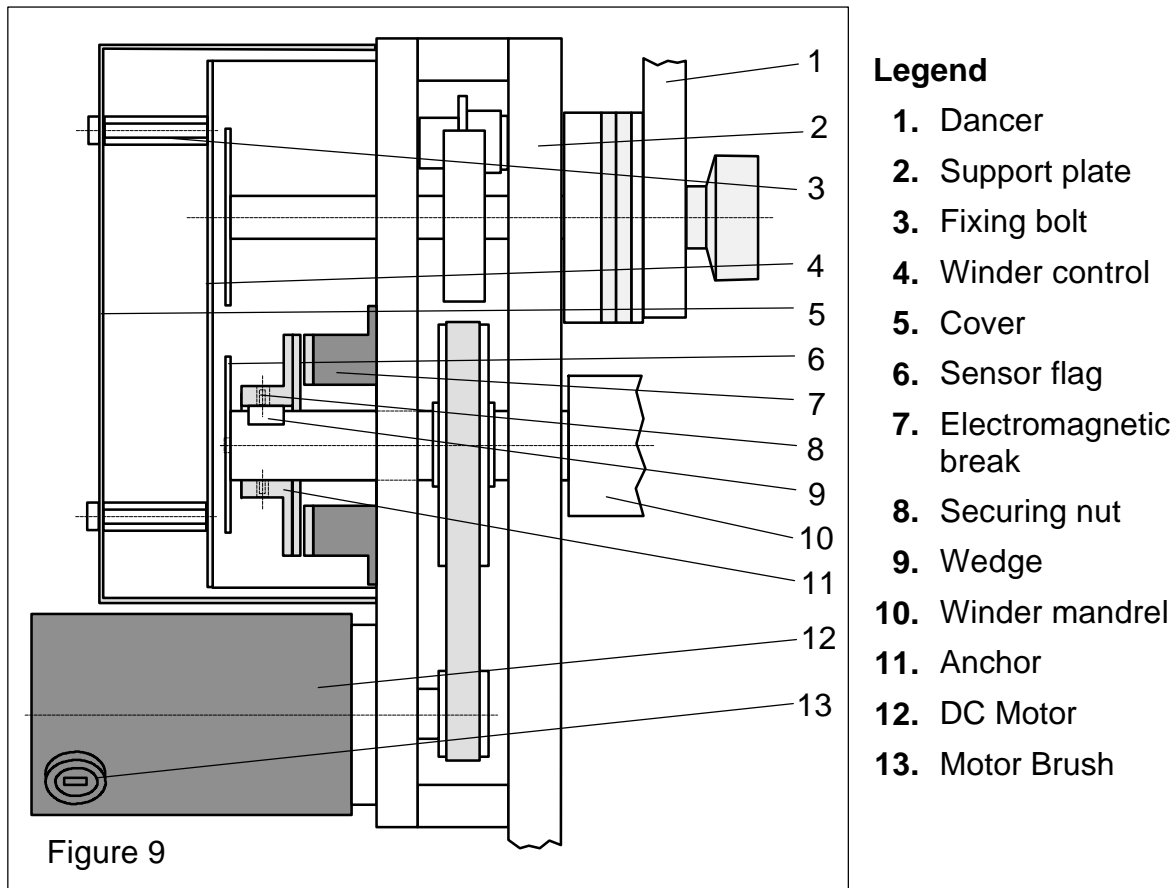


Figure 9

#### 3.11.1 Adjustment of brake

Remove the cover **5**. Open the fixing bolts **3** and remove the winder control **4**. Remove the sensor flag **6** on the winder mandrel **10**. Lock the mandrel. Adjust the brake while shifting the anchor **11** in or out until the gap is 0.2mm again. Fix the securing bolts **8** with Loctite. Reassemble all parts in reverse mode.



**ATTENTION:**

- Do not forget to retighten the powertransistors of the winder control to the heatsink (2 screws).
- While unpowered, the anchor must not touch the break magnet ! (Minimum 0.2mm airgap)

### 3.12 Motor brushes

In normal operation the brush life is approx. 2500 hours. During occasional maintenance works, check for abrasion. They should be exchanged only when the motor does not more rotate.

To exchange the motor brush, carefully loosen the brush holder since the brush is under spring pressure. With removed screw the brush can be removed. After check or exchange the brush can be reassembled in the holder and fixed with the screw.



**ATTENTION:**

**Only use genuine type brushes. Otherwise there will be the danger of permanent motor damage.**

## 4 Electrical settings

The winder control C9100 controls the winders motorcurrent and the breakcurrent depending on the dancers position. This position is sensed without contact in five steps with optical sensors placed at the rear side of the winder control p.c.board. Six connectors are used to connect the 24 volt supply voltage, the motor and break wires respectively. Figure 10 shows the component side of the p.c.board:

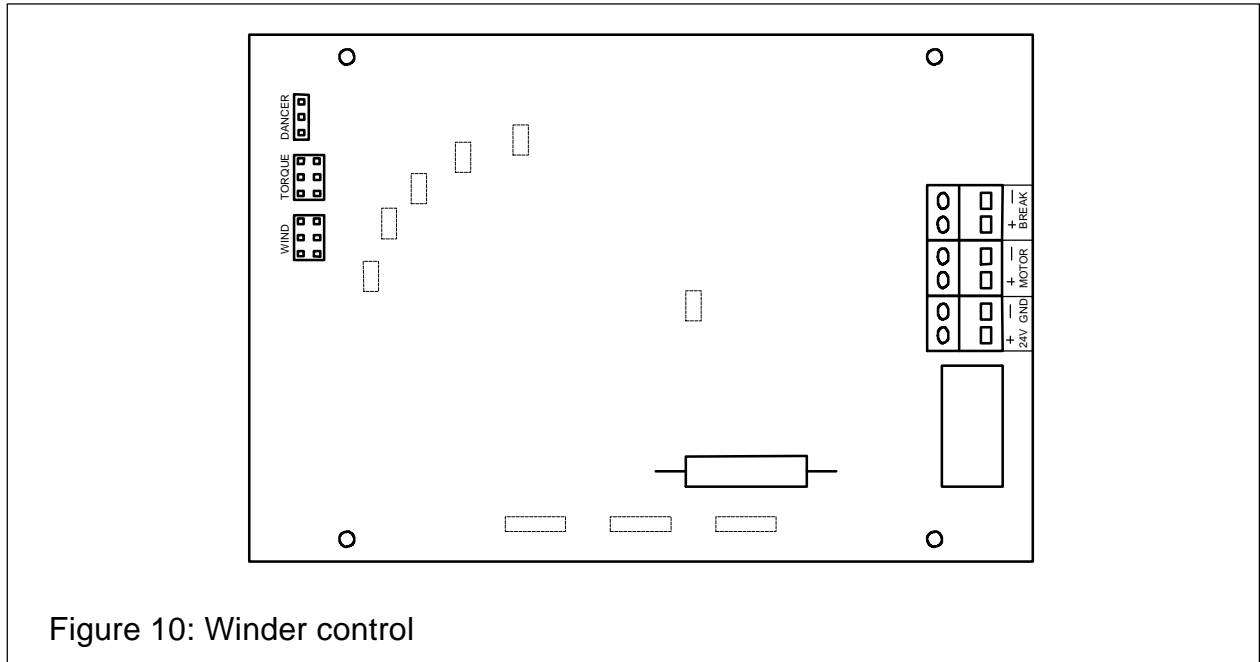


Figure 10: Winder control

The winder control board carries seven jumper blocks for the motor and break current adjustment. Three jumpers (**WIND**, **TORQUE** and **DANCER**) are used for the motor current. The following table shows the jumpers and their function.

Motor-jumpers	Function
DANCER	Direction of action of dancer roller
TORQUE	Torque
WIND	Rewinder/Unwinder

#### 4.0.1 Direction of action of dancer (DANCER)

The position of the dancer roller is sensed without contact by five optical sensors which are mounted mechanically in line so that depending to the dancer position the light beam of one or more sensors is detected.

The output signals of these light sensors are added and represent the signal to control the winder motor current. Since the same dancer is used for righthand and lefthand type winders, it must be only possible to switch over the characteristics of the deflection. This is set by means of the **DANCER** jumper.

If with **righthand stop** of the dancer roller the motor should rotate, the **DANCER** jumper must be plugged in the **left** (1) position, for **lefthand stop** in the **right** (3). See next figure 11.

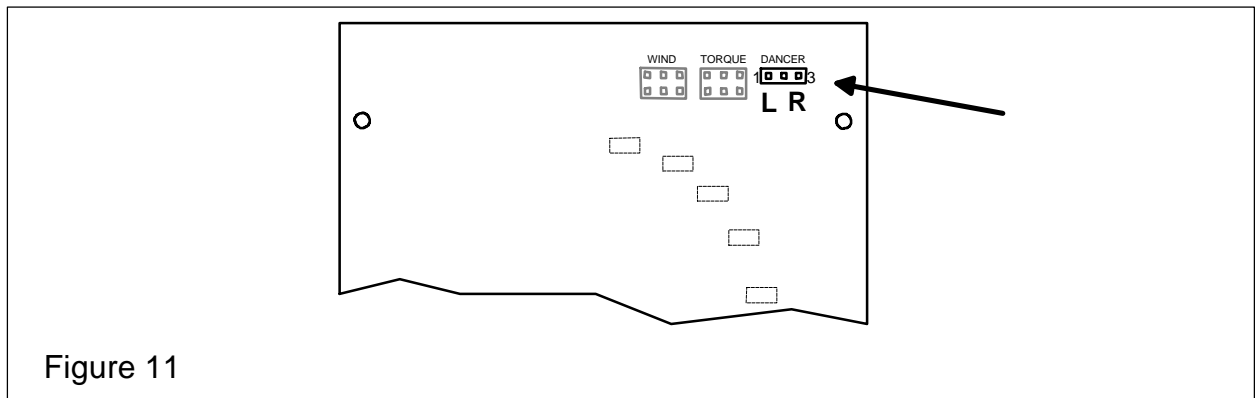
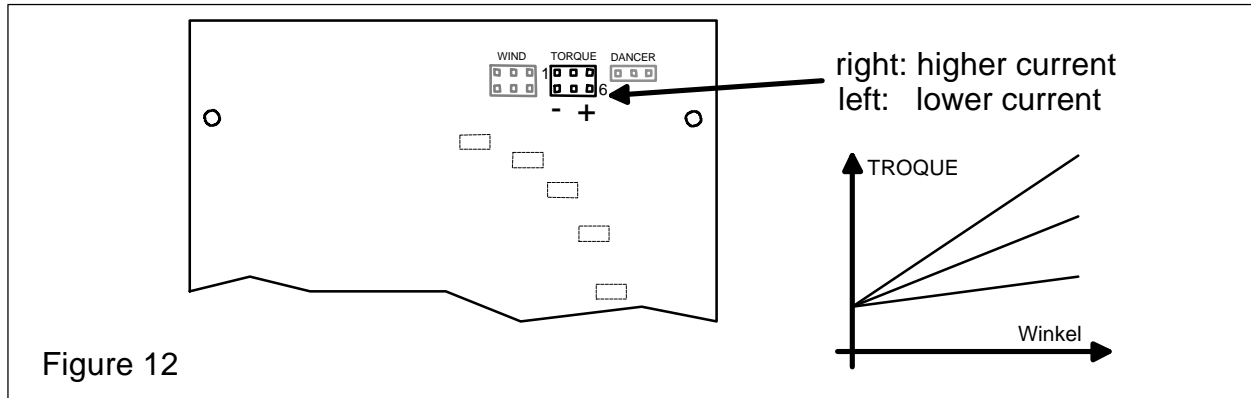


Figure 11

### 4.0.2 Motor force (TORQUE)

The motor torque in function of the dancer position is set with the **TORQUE** jumper. If the jumper is plugged in on the **right** side (6) the force is **higher**, if it is plugged in on the **left** side (1) the force is **lower**. Figure 12 shows the position of the **TORQUE** jumper.

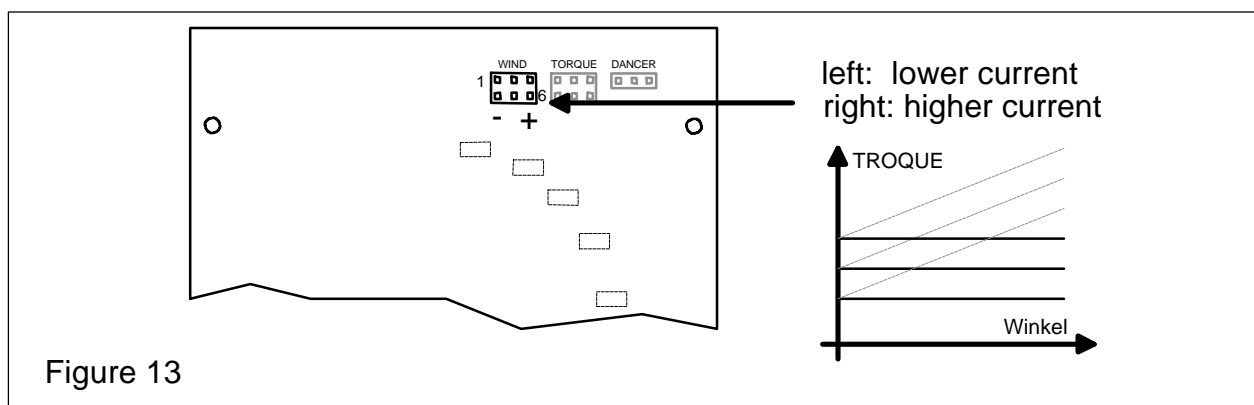


### 4.0.3 Winder (WIND)

The winder provides a constant tension on the paper web. The motor is always under current. The tension force must not be too high to avoid impacts on the paper web.

The unwinder must unwind the paper roll as a function of the dancer position. When unwinding the unwinder needs a high force to accelerate the paper roll.

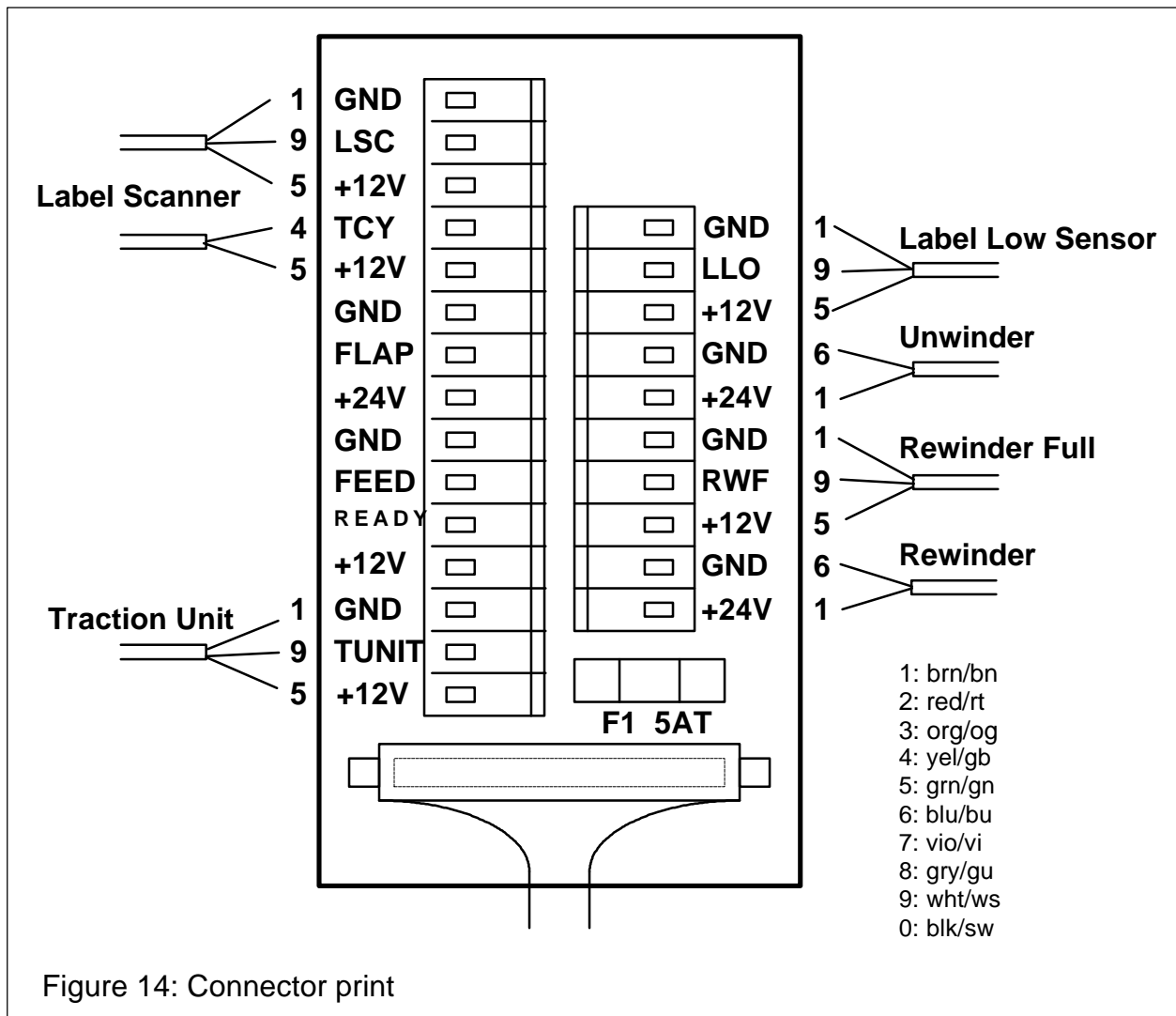
The **WIND** jumper is used to set the start force of rewriter or unwinder. When the jumper is plugged in on the **left** side (1), the force becomes **lower**, if it is plugged in on the **right** side (6), the force becomes **higher**. Figure 13 shows the position of the **WIND** jumper.



## 4.1 Electrical connection

### 4.1.1 The connector box 9100

The signals of the C9100 monitor are fed in one cable to the connector box on the labeller. There all electrical modules of the labeller with the exception of the stepper motor are connected. The following Figure 14 shows the position of the connector terminals in the connector box. On the connector p.c.board the wire colors are marked with the numbers of the resistor color code. These colors are valid for Collamat Stralforsperipherals. The connection cables of the modules are fed through the lateral conduit glands.

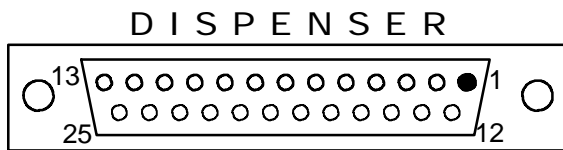


### 4.1.2 Fuse F1, 5A slow blowing

Fuse F1 protects the 24V power supply of the winders from short-circuit and overload. If one or both winders are dead, first check this fuse.

### 4.1.3 Pinassignment Monitor Connector DISPENSER

To this connector the control cable to the connector box is attached. The signals of this connector are used especially to control the dispenser and its units.



Type: 25 pole, D-Sub, female

Pin	Name	In/Out
1	GND	
2	LSC	I
3	GND	
4	TUNIT	I
5	GND	
6	READY	I
7	GND	
8	LLO	I
9	RWF	I
10	GND	
11	GND	
12	GND	
13	GND	

Pin	Name	In/Out
14	+12V	
15	TCY	O
16	+12V	
17	+12V	
18	FLAP	O
19	FEED	O
20	+12V	
21	+12V	
22	+24V	
23	+24V	
24	+24V	
25	+24V	

Pin assignment of the connector DISPENSER



**ATTENTION:**

For the connection of the dispenser signals a shielded cable must be used. Keep care that the cable is capable to lead the maximum current of the two connected winders. The cable must not be placed near power electronic devices. See also in chapter RMI protection.

## 4.2 Cabling

Electromagnetic interferences can lead to non repeatable and not obvious errors while labelling. Often misplaced layout of the cabling, RMI and ESD interferences disturb the labelling. Because of this the following rules must be observed for the cabling:

- Separated mains and signal cables
- Use shielded cables
- All units must be grounded
- Connect only devices which meet the RMI standards
- Use power filtering units in interfered environments and interfered mains supplies

## 4.3 Setting up

The setting up must be done carefully by trained personnel. The following items must be observed:

- Visual control of the control unit
  - Are all electrical and mechanical units correctly attached ?
  - Are all connectors accessible ?
- Connect the monitor to mains and switch it on
  - Is the display illuminated ?
  - Does the startup message appear ?
- Turn off the monitor and unplug it from mains
- Set up the winder and unwinder and connect it to the connector box
  - Are the jumpers inside of the winders set correctly ?
- Attach the goods scanner signals to the DISPENSER connector
- Connect the monitor to the mains voltage and turn it on
  - Do the winder turn the right way ?
- Turn off the monitor and unplug it from mains
- Connect the remaining units to the connector box of the Collamat®
- - Connect the monitor to the mains voltage and turn it on
  - Do the peripheral units work OK ?
- Turn off the monitor and unplug it from mains
- Attach the motorcable
- Connect the monitor to the mains voltage and turn it on
  - Does the motor work in the MOTORTTEST-menu ?
  - Is the turning direction OK ?
- Thread the paperweb and adjust the label scanner
- Dispense a label by the control panel
  - Is it dispensed correctly ?
- - Connect the goods scanners (and possible incremental encoder)
- Dispense a label by the goods scanner
  - Watch to the error messages on the display



## 5 Technical data

### Monitor

System	C9100
Mains voltage	110/120V AC, 220/230/240V AC, ±10%
Power consumption	480 VA
Main fuse	110V : 10 AT, 230V : 5 AT
Display	LCD, 4 lines, 20 characters each
Dimensions (LWH in mm)	375 * 305 * 155 mm
Ambient temperature	+5-40°C
Max. ambient humidity	15-90% non condensing
Type of protection	IP40
Weight	approx. 15.5 kg

### Motor driven rewinder and unwinder

System	Rewinder	Unwinder
Diameter of roll core	42 mm	
Max. diameter of roll	350 mm	
Drive	current controlled DC-motor, electromagnetic brake	
Electric power	24 V DC, 3A max.	24 V DC, 3A max.
Type of protection	IP42	
Ambient temperature	+5-40 °C	
Ambient humidity	15-90% non condensing	
Noise figure max.	70 dB(A) @ 1 m distance	
Weight	5 kg	

### 5.1 Fuses

Fuse	Rating	Part Number
Monitor	110/120V: 10 AT 220/230/240V: 5 AT	7403.0833 7403.0822
Interface F1	4 AT	7403.0800
Interface F2	10 AT	7403.0333
Connector box F1	5 AT	7403.1224

## 6 Troubleshooting

### 6.1 Unwinder

1. Unwinder troubleshooting		
SYMPTOM	DIAGNOSIS	ACTION
Labels peel off at the dancer roll	Dancer roll diameter is too small	Change the standard roll against a roll with enlarged diameter
		Use only one roll of both
Flange of the fixed disk breaks	Material defect, wrong type of aluminum	Replace flange against new series flange
Unwinder blocks	Disk touches the module rail	Shift the disk on the unwindershaft away from the module rail
Dancer roll gets shaky	Shaft screw is loose	Fix the screw (use perhaps Loctite)
Paperweb falls off inside the labeling applicator	Missing side labeling kit	Mount the side labeling kit to the Collamat
Paperend is never detected	End of paper is fixed to the core with an adhesive tape	Use unfixed paper rolls, the paperend must be free
Unwinder does not stop turning	Dancer is blocked	Unblock and remove the obstacle
	Dancer does not return to home position	Increase the dancer force Reduce paperweight
Labeler blocks and stalls at the end of a paper roll	End of paper is fixed to the core with an adhesive tape	Use unfixed paper rolls, the paperend must be free

## 6.2 Rewinder

4. Rewinder troubleshooting		
SYMPTOM	DIAGNOSIS	ACTION
Flange of the fixed disk breaks	Material defect, wrong type of aluminum	Replace flange against new series flange
Rewinder blocks	Disk touches the module rail	Shift the disk on the unwindershaft away from the obstacle
Dancer gets shaky	Shaft screw is loose	Fix the screw
Paperweb breaks behind the traction unit	Dancer hits too hard to the paperweb	Reduce the force of the dancer Reduce the motor force (change the DIL-switch WINDER inside the rewinder)
	The full waste paper roll is too heavy	Remove the waste paper roll more frequent
	Paperweb is very thin or small	In sidelabeling applications remove the screws fixing the disk to its flange, so the disk can turn free on the shaft
	Dancer arm is bent	Fix the dancer arm to 90°
	The edge of the paperweb was hurt along the paperpath	Remove the obstacle, increase the space of the paperguides
Rewinder does not stop turning after a break of the paperweb	Dancer is blocked	Unblock and remove the obstacle
	Dancer does not go to its home position	Increase the dancer force
Rewinder will not rewind again after a stop	Rewinder is not reset	Reset the rewinder by moving its dancer to full swing
Rewinder does not take all the paperweb from the traction unit	Motor power too weak	Increase the motor power inside the winder at the DIL-switch TORQUE and WINDER