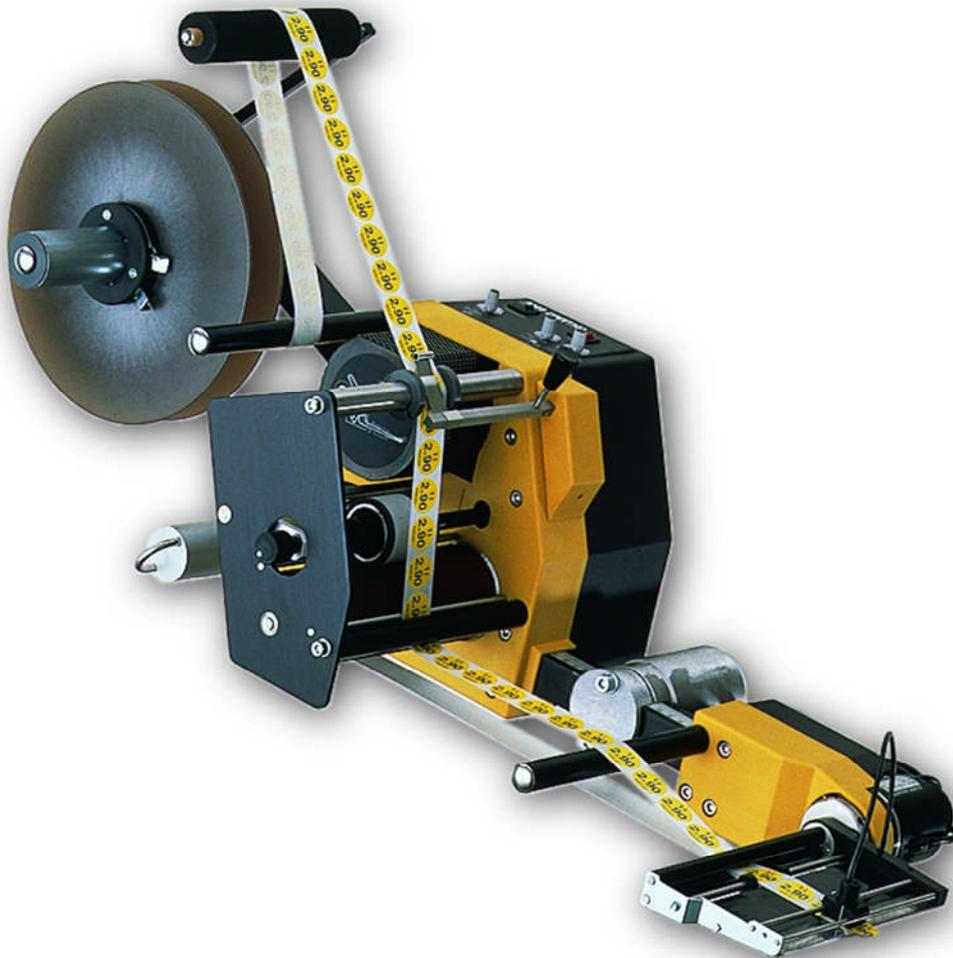


Technical Handbook

Collamat C4300- / C7300- Series



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This manual is a translated English version. The only mandatory Technical Handbook for this product is the German version – signed as the Original-/Reference-Version.

These Operating Instructions and the Technical Handbook have to be read before start up, and before any work are done on the machine.

Translated English version

Lawful direction:

This manual is a translated English version. The only mandatory Technical Handbook for this product is the German version – signed as the Original-/Reference-Version.

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1 General

1.1 Information to the Technical Handbook

These operating instructions provide important information about using the machine. The prerequisite for safe work is the observation of all the safety information and operating instructions given here.

In addition, for the use of the machine, the local accident prevention regulations and the general safety regulations are to be observed.

These operating instructions must be read carefully before all work! They are part of the product, and must be kept near to the machine and accessible to the personnel at all times.

If the machine is passed on to third parties, the operating instructions must also be passed on.

The illustrations in these instructions serve to provide better a demonstration of the circumstances. They are not necessarily to scale, and may be slightly different from the actual machine.

In addition to these operating instructions, the instructions in the Appendices for the installed components also apply. The information which they contain – in particular the safety information – must be observed!

1.2 Symbols in the instructions

Warnings

In these operating instructions, warnings are indicated by symbols. The warnings are introduced by words which indicate the extent of the hazard.

Observe the warnings and act carefully, in order to avoid accidents, personal injury or material damage.

**DANGER!**

... indicates a dangerous situation, which may cause death or serious injury if it is not avoided.

**WARNING!**

... indicates a possibly dangerous situation, which may cause death or serious injury if it is not avoided.

**ATTENTION!**

... indicates a possibly dangerous situation, which may cause slight injury if it is not avoided.

**BEWARE!**

... indicates a possibly dangerous situation, which may cause material damage if it is not avoided.

Hints and recommendations

**INFORMATION!**

... highlights useful hints and recommendations for the efficient and trouble-free operation of the machine.

1.3 Limitation of liability

All statements and information in these operating instructions were compiled by taking into account the valid standards and regulations, the state-of-the-art and our long years of expertise and experience.

The manufacturer accepts no liability for damages due to:

- Not observing these operating instructions
- Use of the machine for purposes for which it was not intended
- Employment of untrained personnel
- Unauthorized modifications
- Technical changes
- Use of unauthorized replacement and wearing parts

The actual scope of delivery may differ from the explanations and illustrations described here in the case of special constructions, additional ordering options, or due to the latest modifications.

As well as this, the obligations agreed in the Supply Contract, the General Conditions of Business and the manufacturer's conditions of Supply, and the statutory regulations valid at the time of conclusion of the contract apply.

Warranty

The manufacturer warrants the functionality of the process methods and the specified performance parameters.

The term of warranty begins at the time of delivery of the machine to the customer.

Wearing parts

Wearing parts are all components which come into direct contact with the processing material or the material to be processed.

These components are excluded from the warranty and from claims for defects, insofar as these concern wearing parts.

1.4 Copyright protection

The operating instructions are to be treated as confidential. They are exclusively intended for personnel involved with the machine. The transfer of the operating instructions to third parties without the written permission of the manufacturer is not permitted.



INFORMATION!

The contents, texts, drawings and other illustrations are protected by copyright and are subject to - commercial protective rights. Any misuse may be prosecuted.

Reproduction in any manner or means – even of excerpts – as well as the utilization and/or communication of the contents without the written permission of the manufacturer is not permitted. Offences will attract claims for compensation. We reserve the right to other claims.

1.5 Replacement parts

**WARNING!****Danger of injury due to incorrect replacement parts!**

Incorrect or faulty replacement parts may cause damage, faulty function or total breakdown, as well as impairing safety.

Therefore:

- Only use original replacement parts made by the manufacturer.

Obtain replacement parts from an authorized dealer or directly from the manufacturer. For addresses, see page 2.

The Appendix contains a list of replacement and wearing parts.

1.6 Conditions of warranty

The warranty conditions are contained as a separate document in the sales documents.

1.7 Customer service

Our customer service is available to provide technical information. Information about the contacts responsible can be obtained at any time by telephone, fax, e-mail or on the Internet. See the manufacturer's address on page 2.

In addition, our staff is always interested in receiving new information and experiences resulting from the application, and which can be valuable for the improvement of our products.

1.8 CE Declaration of Conformity

Manufacturer's declaration (as per EU Guideline for Machinery 2006/42/EG Appendix II): see Appendix.

2 Safety

This section gives an overview of all the important safety aspects for the optimum protection of personnel, and for safe and fault-free operation.

Considerable hazards may result from the non-observance of the instructions and safety information listed in these operating instructions.

2.1 Intended use

The machine is exclusively designed for the intended purpose described here.

The Collamat C4300/C7300 is a label dispensing unit for the application of labels, and is usually used in automated packaging lines for application of adhesive labels. The machine operates fully automatically. The working area of the machine should be protected against unauthorized access.



WARNING!

Danger due to incorrect use!

Any use which exceeds the intended use and/or different use of the machine, can lead to dangerous situations.

Therefore:

- The machine should only be used as intended.
- All instructions in the operating instructions should be strictly observed.
- In particular, do not use the machine for the following purposes, as these are considered to be not intended:
 - Use of the machine in unsecured areas.
 - Labeling with other than the products stated above.
 - Use of unsuitable labels.

Claims of any kind due to damage caused by incorrect use are excluded.

The operator is entirely liable for all damage due to incorrect use.

2.2 Responsibility of the operating company

The machine will be used in a commercial area. The company operating the machine is therefore subject to the statutory obligations of industrial safety.

In additions to the safety instructions for operation contained in these operating instructions, the valid regulations for safety, accident prevention and environmental protection for the area of use of the machine must be observed. In particular, the operator must:

- Obtain information concerning the valid industrial safety regulations.
- Determine the additional hazards resulting from the special conditions at the site of operation of operation of the machine, by means of a risk assessment.
- Implement the necessary regulations of conduct as instructions for the operation of the machine at the particular site.
- During the entire period of operation of the machine, examine whether the operating regulations which he has produced conform to the current status of the written regulations.
- Insofar as necessary adapt the operating regulations to the new regulations, standards and conditions of use.
 - Unambiguously regulate the responsibilities for the installation, operation, maintenance and cleaning of the machine.
 - Ensure that all employees involved on or with the machine have read and understood the operating instructions. In addition, he must train the personnel in the use of the machine at regular intervals, and inform them of the possible hazards.

In addition, the operator is responsible that the machine is

- always in a technically perfect condition.
- maintained according to the stated service intervals.
- all safety features are regularly inspected with regard to - completeness and functionality

2.3 Operating personnel

2.3.1 Requirements

**WARNING!****Danger of injury if insufficiently qualified!**

Incorrect use can cause considerable personal injury and material damage.

Therefore:

- All activities should only be carried out by the persons designated.

The following qualification requirements for the various areas of activity are designated in the operating instructions:

- **Instructed persons**
are those instructed by the operating company with regard to the task with which they are entrusted and the possible dangers of incorrect conduct.
- **Specialist personnel**
 - are in a position to carry out the tasks with which they are entrusted and to independently recognize possible hazards due to their specialist training, experience, and knowledge of the relevant regulations.
- **Qualified electricians**
are in a position to carry out work on electrical equipment and to independently recognize possible hazards due to their specialist training, experience, and knowledge of the relevant standards and regulations.
 - Qualified electricians are specially trained for the field of work in which they are active, and have knowledge of the relevant standards and regulations.
 - In Germany, a qualified electrician must fulfill the regulations of the accident prevention regulations BGV A3 (e.g. master electrical installation craftsman). In other countries, the corresponding regulations apply.

Only personnel may be employed, who can be expected to carry out their work in a reliable manner. Persons whose reactions are impaired, e.g. due to drugs, alcohol or medication are not permitted.

In addition, the specific regulations regarding age and profession applicable at the place of use are to be observed in the selection of personnel.

2.3.2 Unauthorized persons



WARNING! Danger to unauthorized persons!

Unauthorized persons are unaware of the dangers which may result from the machine.

Therefore:

- Unauthorized persons must be kept away from the working area.
- In case of doubt, speak to them and instruct them to leave the work area.
- Interrupt work as long as unauthorized persons are in the work area.

2.4 Personal protective equipment

For the use of the machine, it is necessary to wear personal - protective equipment in order to minimize hazards to health.

Therefore:

- For all work, correctly put on the stated personal protective equipment and wear it while working.
- In addition, signs in the work area concerning personal protective equipment must be observed.

To be worn

For all work, the following must be worn:



Industrial safety clothing

is closely fitting work clothing with low resistance to tearing, closely fitting sleeves and with no parts which hang out. This is primarily for protection against being caught by moving parts of the machine.

No rings, chains or other jewelers.



Protective gloves

for protection of the hands against contact with substances hazardous to health, or hot or cold surfaces.



Safety footwear

for protection against falling objects and slipping on slippery surfaces.



Protective goggles with side protection

to protect against hazardous substances and splashed liquids coming into contact with the eyes.

2.5 Industrial safety and special hazards

In the following section the residual risks will be stated, which result from the risk analysis.

Observe the safety information and the warnings in this and other chapters in order to reduce hazards to health and avoid hazardous situations.

Warning symbols on the machine

The particular danger areas on the machine are indicated by these symbols:



DANGER!

Danger of death due to electrical current!

... indicates situations with danger of death due to electrical current. If the safety information is not observed, there is danger of death or serious injury.

The work should only be performed by a qualified electrician.



WARNING!

Danger of crushing!

During operation, moving components and objects may cause crushing with very serious injuries and permanent physical damage.

Therefore:

- Do not enter the danger area while the machine is in operation.
- Adjustment and maintenance work, as well as - measures to remedy faults must always be carried out with particular care and attention with regard to crushing.
- Personal protective equipment for protection against crushing must be worn for all work.

Danger symbols in the operating instruction

In the operating instructions the following symbols are used in connection with safety information:

Electrical current**DANGER!****Danger of death due to electrical current!**

There is direct danger of death on touching live components.

Damage to the insulation or individual components may cause danger of death.

Therefore:

- In case of damage to the insulation, switch off the power supply immediately, and have repairs carried out.
- Only have work on electrical equipment carried out by qualified electricians.
- Switch off the power before undertaking any work on electrical equipment. Check that no voltage is present!
- Before carrying out regular maintenance, cleaning and repair work, switch off the power supply and secure against switching on again.
- Never bypass fuses or put them out of action.
- Observe the correct current rating when replacing fuses.
- Keep dampness away from live components, as this may cause short circuits.

Sharp edges and pointed corners**BEWARE!****Danger of injury on edges and corners!**

Sharp edges and pointed corners can cause cuts and grazes to the skin.

Therefore:

- Always take care when working near sharp edges and pointed corners.
- Wear gloves in case of doubt.

Moving parts



WARNING!

Danger of injury due to moving parts!

Driven, rotating or linearly moving components can cause extremely serious injuries!

Therefore, during operation:

- The presence of persons in the danger area or the immediate vicinity is strictly forbidden!
- Covers such as flaps, doors, hatches or maintenance covers must not be removed.
- Safety devices and/or functions must not be put out of action, made unusable, or bypassed.
- Never operate the machine without the covers closed or without functioning safety devices.
- Never reach into the moving equipment.

Before entering the danger area:

- Switch off the power supply and secure against switching on again.
- Wait until moving parts have come to a standstill.
- Wait for the self-acting reduction and/or discharge of residual energy.

Pneumatic system



WARNING!

Danger of injury due to pneumatic energy (compressed air)!

Pneumatic energy can cause very serious injuries.

Pneumatically driven components may move without warning.

In case of damage to individual components, air may escape under high pressure and e.g. cause damage to the eyes.

Therefore:

- Only have work on the pneumatic system carried out by trained specialist personnel.
- Release the pressure before starting work on the pneumatic equipment. Beware of pressure reservoirs. These must also be fully depressurized.
- Do not adjust the pressure beyond the maximum values.

Sharp paper edges**BEWARE!****Danger of injury due to sharp paper edges!**

Sharp paper edges can cause slight to moderate cuts.

Therefore:

- For all work, the prescribed personal protective equipment must be worn.
- Always perform work with particular care and attention.

Falling objects**WARNING!****Danger of injury due to falling objects!**

During operation, objects in the work area may drop without warning and cause injuries.

Therefore:

- Do not enter the danger area while the machine is in operation.
- For adjustment and maintenance work, or remedying faults, personal protective equipment should be worn.

Dirt and scattered objects**BEWARE!****Danger of tripping due to dirt and scattered - objects**

Dirt and scattered objects can be the cause of slips and trips, which may cause considerable injuries.

Therefore:

- Always keep the work area clean.
- Remove objects which are no longer needed.
- Indicate sources of tripping with yellow - black warning tape.

Signs**WARNING!****Danger of injury due to illegible symbols!**

Stickers and signs may get dirty or become illegible in the course of time.

Therefore:

- Always keep warning and operating signs in a legible condition.
- Replace damaged or illegible signs and stickers immediately.

2.6 Conduct in emergencies and accidents

Preventive measures

- Always be prepared for accidents or fires!
- Keep first-aid equipment (first aid box, blankets etc.) and fire extinguishers so that they can easily be reached.
- Familiarize the personnel with first-aid and rescue equipment
- Keep access for emergency vehicles clear.

In case of emergency: Act correctly

- Trigger the emergency stop (if available)
- Begin with first-aid measures.
- Remove people from the danger area.
- Inform those responsible at the site of the emergency.
- Call a doctor and/or the fire brigade.
- Clear access routes for emergency vehicles.

2.7 Safety equipment



WARNING!

Danger of death due to non-functioning safety devices!

Safety devices ensure that the operation is as safe as possible. Even if work processes are made more complicated by safety devices, under no circumstances may they be put out of action. Safety is only ensured by intact safety devices.

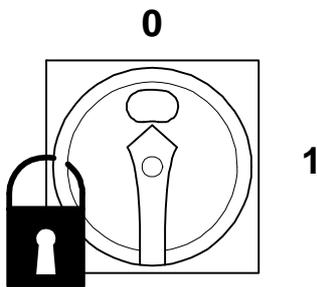
Therefore:

- Before starting work, check that the safety devices are functional and correctly installed
- Safety devices must never be put out of action.
- Do not hinder access to safety devices such as emergency stop buttons, lanyards etc.

The following safety devices must be installed by the company operating the machine:

- Emergency stop button in the vicinity of the labeling device or the entire machine
- Main valve

2.8 Assure against power on



Lock main control switch in position „0“

Lock main control switch

The main switch should be locked with a padlock to avoid an unwanted (unauthorized) power on - if there is a main switch within the safety chain.



WARNING!

Danger of life caused by unauthorized power on!

Only with the mains control switch in position „0“ and locked, individuals are allowed to be in the area of danger.

A not authorized switching on of a locked mains control switch can bring individuals into serious danger of life.

Therefore:

- Never remove a lock without authorization.
- Be sure no individuals are in the area of danger before removing the lock.

<p>Mains switch locked</p> <p>Date: Time:</p> <p>do NOT switch-on</p> <p>Permission to remove the padlock is given to:</p> <p style="color: blue;">Mr. Muster</p> <p>Switch-on procedure:</p> <p>Check the area of danger before switching on the machine!</p>

Safety tag 1

Protection against unauthorized power on:

1. Switch off mains power.
2. If possible lock mains switch with a padlock and mark the switch with an eye-catching tag (see left side: Safety tag 1).
3. The key of the padlock has to be kept in a save place by the person having permission to switch-on the machine.
4. If there is no possibility to lock the mains switch with a padlock, mark the switch with an eye-catching tag (see left side: Safety tag 2).
5. After all work has been done in the area of danger, check the area of danger again before starting the switch-on procedure. All individuals have to leave the area of danger!
6. Be sure all safety facilities are installed and are working properly.
7. Remove the safety tag and switch on the machine.

<p>Switched OFF</p> <p>Date: Time:</p> <p>do NOT switch-on</p> <p>Permission to switch-on the machine is given to:</p> <p style="color: blue;">Mr. Muster</p> <p>Switch-on procedure:</p> <p>Check the area of danger before switching on the machine!</p>

Safety tag 2

3 Technical specifications

3.1 Dimensions of Collamat C4300-C7300-Series

C4310 P / C7310 P:

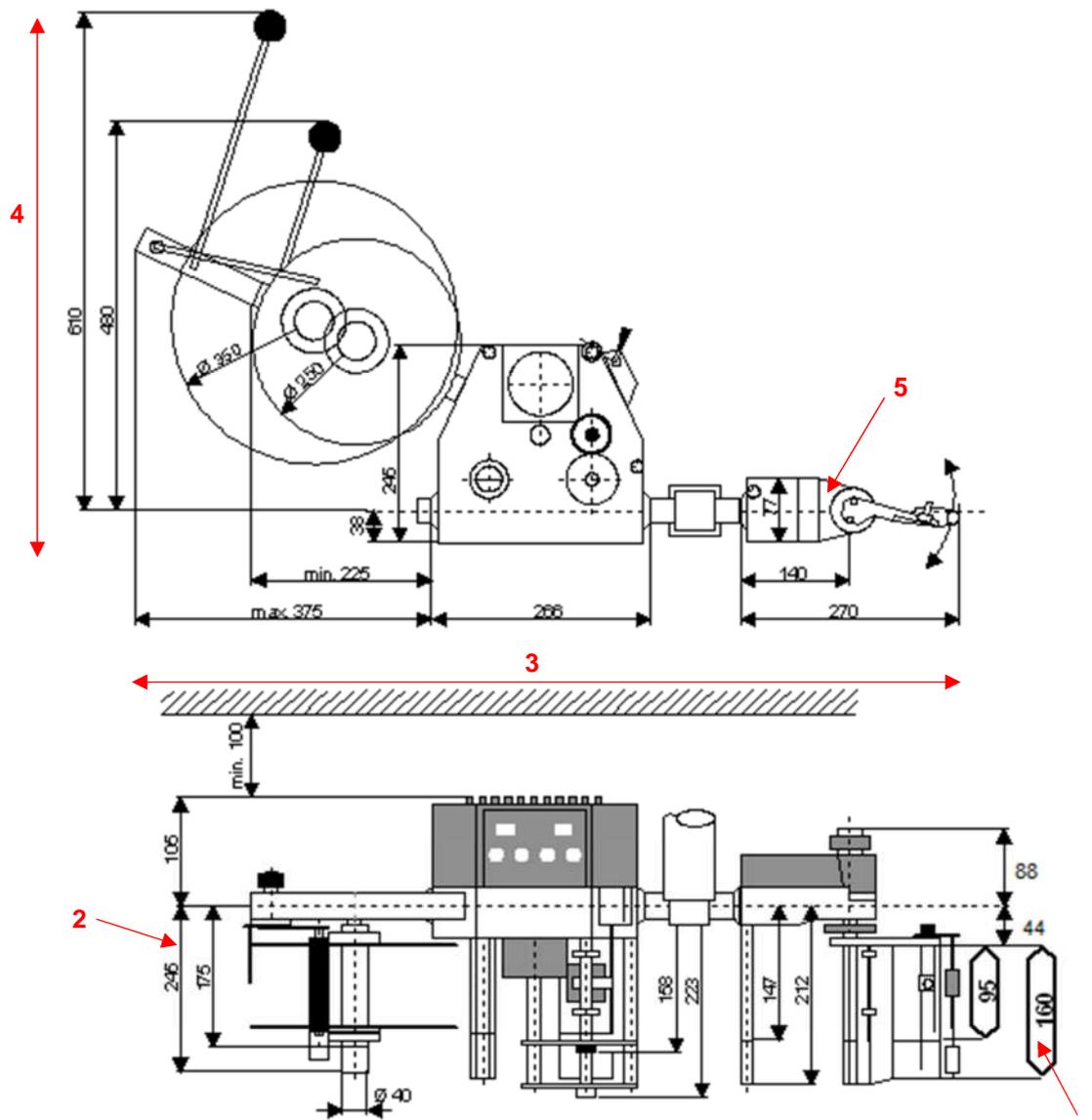
- 1 = 95 mm
- 2 = 305 mm
- 3 = 965 ... 1315 mm
- 4 = 518 ... 648 mm

C4320 P / C 7320 P:

- 1 = 160mm
- 2 = 350 mm
- 3 = 965 ... 1315 mm
- 4 = 518 ... 648 mm

for **P = R**
= right version
(see picture)

for **P = L**
= left version



Measurements Collamat C4300/C7300 with 250/350mm –unwinder disks and short modular rail.

Technical specifications

- 1 Max. paper width can vary – depending on specifications (W= 95 or 160mm)
- 2 Max. width can vary – depending on specifications (W= 305 or 370mm)
- 3 Max. length depends on length of modular rail and size of unwinder discs (96.5 – 131.5mm)
- 4 Max. height dependent on size of rewinder disk size (518 or 648mm)
- 5 Standard - applicator (Applicator depends on specification)

3.2 Condition at delivery

Type designation	Collamat Csxww D	
	(according to Collamat AG „New classification 2008 - 2009 documentation,“)	
C4310 / C4320	Collamat C4300 Series	
C7310 / C7320	Collamat C7300 Series	
s	Nominal Speed / Dispensing speed	
	s = 4	=> speed = 25m/min.
	s = 7	=> speed = 50m/min.
ww	Width: max paper width	
	ww = 95mm	
	ww = 160mm	
x	x = 3	low cost version
D (optional)	Direction:	Labeling direction:
	L = Left	- Left Collamat version
	R = Right	- Right Collamat version
Explanation	Depending on the mounting version of the labeling unit (horizontal, vertical,...) and the corresponding width version (95/160mm), the side labeling set and/or the stabilization set has to be used to reach the desired labeling speed and device stability - see also performance sheet in chapter x.xx)	
Example	Collamat C4310 L : - for maximal labeling speed of 25m/min (C4310) - in low cost version (C4310) - in small version (95mm) make: C4310 - in „left“ version (C4310 L) = dispensing direction all other customer specific specialties/versions are listed in the corresponding order- and/or delivery-papers.	

Mains connection (standard)

The mains voltage can be set to 115VAC or 230VAC.
Please check the voltage wiring on the transformer connector X3 on the main board.
A C4300-/C7300-unit leaving the factory is set to 230VAC or to 115VAC - depending on the country of destination or depending on the specification in the order-
/production-paper - meaning:
230V = 230VAC / 50Hz
115V = 115VAC / 60Hz
Ask a skilled labor to change the voltage wiring (and the corresponding primary fuses) if necessary.



INFORMATION!

Changing the mains voltage requires the replacement of the mains fuse (primary fuse F1) on the main board (PCB).

For 230VAC mains voltage: micro-fuse 5x20mm – 2.5AT

For 115VAC mains voltage: micro-fuse 5x20mm – 5.0AT

Good sensor (standard)

The M8 good sensor plug „GSC“ on the side connection plate „SIGNALS“ is set by default to PNP-Sensors. The optional control line (Pin 2) is not connected (open). Please – only - use original good sensors from Collamat AG or ask a skilled labor how to connect another product/brand to your labeler.

Future-Bus (standard)

The 14-pin connector (left and right – near the main connection terminals on the main board) will be used if an adapter with future bus cable has to be connected. Always use the connector on the adapter side (Labeler version right: use left connector / labeler version left: use right connector on the main board).

Applicator + Modular rail

The applicator unit and the modular rail will be delivered pre wired and pre mounted (see also chapter “Mounting” in this manual).

- Conduct flat ribbon cable(s) + PE-wire through the modular rail
- Fix modular rail on traction unit housing (4 screws)
- Slide applicator unit onto modular rail
- Connect flat ribbon cable (applicator cable 10-pin) to X1 connector (applicator board)
- Connect flat ribbon cable (optional applicator cable 20-pin) to X3 connector (applicator board) – if available
- Connect PE-wire (green/yellow) to PE blade terminal (applicator board)
- Fix applicator housing on modular rail (4 screws)
- Screw cover to applicator housing (4 screw)

3.2.1 Options

Side labeling set (optional)

The optional „Lying Down Set“ will be used for installation where the product has to be labeled on the side.

The optional „Side labeling set“ is made up of:

- Rewinder disc Ø150mm
- Unwinder dancer ring
- Pressure bearing for unwinder core
- Stabilization set for unwinder

Pressure roller open sensor (optional)

(TUO = Traction Unit Open) – Checks the position of the pressure roller located on the traction roller. If the pressure roller has been lifted (manually or by paper jam) the labeler will stop immediately (and the ERR-output will be set).

Paper break Sensor (optional)

(OOL = Out Of Label) – The paper break can (optionally) be configured to act as paper break sensor. This sensor checks the paper path. In case of empty paper roll (OOL = Out Of Label) or in case of a paper break (no paper/label between paper brake spring and paper break axle) the labeler will stop immediately (and the ERR-output will be set).

Magnetic flap adapter (MFA) (optional)

Labeling of light products or labeling into hollow products. The adapter will be controlled with the FEED signal. The pressing down time extension can be adjusted (potentiometer DELAY) on the adapter board GS070D.

CP21 Wrap around unit (optional)

The optional wrap around unit CP21 will be used, if we have to wrap a label around a round body. A magnetic flap adapter will be used (MFA) to do this job. The extension of the wrap around time is adjustable (see MFA).

CP21-BUDGET (optional)

Similar function like CP21 (see above) – but without magnetic flap adapter function. The pressure to the dispensing edge will be controlled by a simple hand lever – activated and hold down by the user.

3.3 Technical data

Connected load

Description	Value	Unit
Supply voltage (AC)	115 / 230	VAC
Phases	1~	Ph
Frequency	60 / 50	Hz
Maximum energy input	138/198	VA
Internal mains fuse	5.0/2.5	AT
External mains fuse	10	AT
Protection type (digit 1 – 3) (explanation see below)	standard 402	IP
Compressed air (optional maintenance unit)	6	bar
Compressed air quality class as per ISO 8573-1	Class 5	Oil-free and dry



Caution: Only well trained labor are allowed to do the rewiring of the main power connections!

* C4300 / C7300

Explanation - IP protection 1st. digit:

Protection against touching and
against intrusion of foreign particle

Description	Value	Unit
Protection against mass. foreign particle >1mm	4	IP

Explanation - IP protection 2nd. digit:

Protection against intrusion of water

Description	Value	Unit
No particular protection	0	IP

Explanation - IP protection 3rd. digit:

Mechanical protection

Description	Value	Unit
Power of impact: 0.375 Joule (Test: 250g – 15cm)	2	IP

Operating conditions

Description	Value	Unit
Temperature range	+5 ... +40	°C
Temperature fluctuation, max.	10	°C/h
Storage temperature	-10 ... +60	°C
Relative humidity, max. non-condensing	15 - 95	%
Environment	avoid direct sunlight, dampness and dust	

3.4 Weight

Component	Value	Unit
Traction unit (c4300)	10.9	kg
with unwinder, modular rail + applicator	+4.2	
wide version (C4320)	+0.8	
Fast version (C7300)	+1.2	kg

3.5 Emissions

Description	Value	Unit
Noise level, max.	≤ 70	dB(A)

3.6 Performance values

Description	Value	Unit
max. labeling speed (s)	25 / 50*	m/min
max. predisensing value	100	mm
Stop tolerance	+/- 0.5	mm
max. paper width	95 / 160	mm
min. paper width	10	mm
min. label length	10	mm
max. label length	2000	mm

* C4300 / C7300

3.7 Label material

Description	Value	Unit
Carrier strip roll (max. Ø)	250 or 350	mm
Carrier strip roll core (Ø)	(inside) min. 42	mm
Unwinder core (Ø)	min. 40	
Label width (max.)	95 or 160	mm

3.8 Mounting

Description		
Clamp unit	project specific	

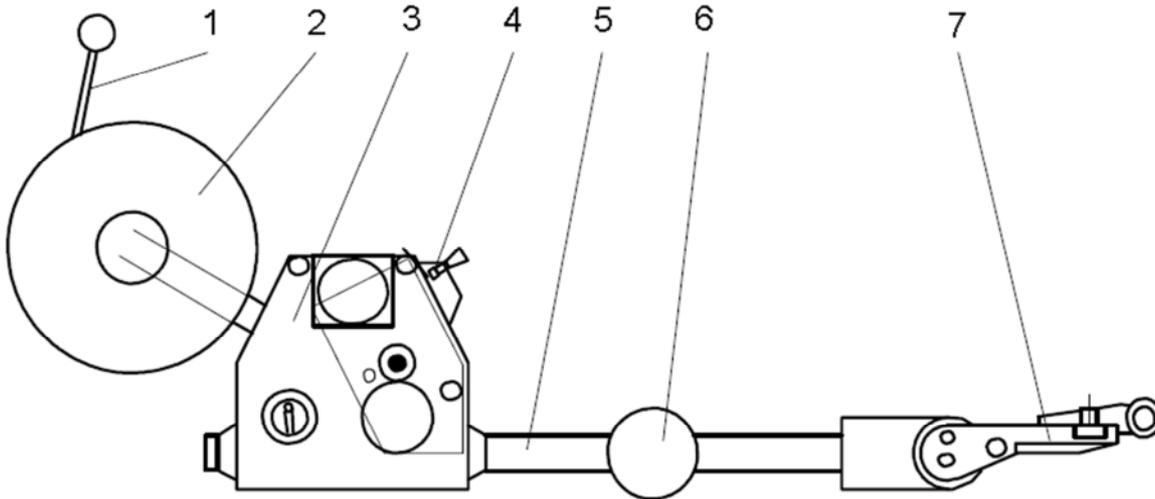
3.9 Identification plate

Description	Value	Unit
Type	Cs3ww D*	
Year	10/2012	
Voltage	115 / 230	VAC
Fuse	5.0/2.5	AT
C4300 / C7300	138/198	VA
S/N (Serial-Number)	00001	

* see chapter 3.2.

4 Construction and function

4.1 Overview of components



- | | | | |
|---|----------------------|---|---------------------------------------------|
| 1 | Dancer unwinder unit | 2 | Unwinder disk (250/350mm) |
| 3 | Traction unit | 4 | Paper break (+ optional paper break sensor) |
| 5 | Modular rail 30x30 | 6 | Modular rail clamp 30x30 |
| 7 | Applicator / Adapter | | |

4.1.1 Side labeling - optional –

Option:
“Side labeling set” (optional)



- 1 – Unwinder dancer – holding disc
- 2 – Unwinder disc
- 3 - Rewinder – holding disc
- 4 – Stabilization set for unwinder

4.2 Variations

The Collamat C4300/C7300 is available in the following variations:
(see also type name Collamat [C43ww / C73ww P B](#))

Parameters	type	value	unit
Collamat Series	C	s3ww D	
max. speed	s	25 / 50	m/min
max. paper width	ww	10=95 / 20=160	mm
Direction	D	L / R	
Branch	B	P,F,C	

The Collamat C43ww / C73ww are available with the following applicator types:

The different types of applicators are available in left or right completion (make).

Applicator	type	Description
Applicator - fix	FXA	Fixed dispensing edge
Applicator - spring loaded	SLA	Spring loaded disp.edge
Air-Vacuum Applicator	AVA	Suction plate + piston(s)
Magnet-Flap-Applicator	MFA	Magnet driven applicator
Blow-Applicator	BLA	Blow label to product

The mounting (fixation) of the Collamat C4300/C7300 unit can be done with different clamps on different places:

Clamp	type	description
on modular rail – front fix	KFX	Modular rail to applicator
on modular rail – front rotatable	KVA	Modular rail to applicator
on modular rail – back fix	KFX	Modular rail below unwinder
on modular rail – back rotatable	KVA	Modular rail below unwinder

4.3 Assembly of the unit

Description The central point of a Collamat C4300/C7300 unit is the traction unit housing. All peripheral equipment's are connected to the traction unit housing (flange connectors).
 All peripheral parts are protected against corrosion (powder-coated / anodized).
 The traction roller is coated with a special sand paper like surface allowing a non-slippery transport of the paper web.
 The torque of the passive rewinder is adjustable (friction clutch).
 The strength of the dancer arm of the rewinder is adjustable.
 The traction roller is easy turn able (by hand) - in the switch off state of the labeler.
 The Collamat C4300/C7300 can be mounted to an adjustable stand (vertical and/or horizontal position adjustment).

4.4 Function

Description The Collamat C4300/C7300 is a label dispenser used to dispense /apply labels to products.
 The paper web will be feed from the unwinder - across different deflection rollers - to the dispensing edge – controlled by a special dancer arm – to the products. The unwinder can unwind paper web rolls with a max. diameter of 350 or 250mm. The brake and the strength of the dancer arm can be adjusted.
 The dispensing edge is the place where the label will be stripped from the backing paper. This is done by pulling the backing paper around the dispensing edge. A controlled stepper motor is fulfilling this job. The backing paper is then guided to the rewinder unit where the waste of the paper web (backing paper) is spooling winding to the rewinder core.
 The rewinder is a ribbon driven drive with friction clutch – powered by the traction unit stepper motor.
 Dispensing a label:
 The product triggers the good sensor (!GSC-input) which starts the dispensing sequence. The paper web will be guided over a sharp dispensing edge. The label on the dispensing edge will be removed (peeled off) from the backing paper and will be pushed/guided to the applicator pressure roller. As soon as this label reaches the pressure roller, the label will be caught by the product. The pressure roller's main function is to gently wipe/roll on the label to the product surface. The backing paper is pulled by the traction roller und guided to the rewinder (see above). The following label on the top of the dispensing edge will be pushed forward until the leading edge of the label reaches the so called predispensing distance (end of labeling sequence).

4.5 Operator panel + indicators

Description Operating controls of the C4300/C7300 are found on the operator panel, operator panel

- Potentiometer SPEED - C4300: 1...25m/Min / - C7300: 1... 50m/Min.
- Potentiometer LABEL PREDISPENSING - 0 ... 10 (0 ... 100mm)
- Potentiometer LABEL SCANNER - 1 ... 10 (1 ... 100mA)
- FEED-key
- Main switch POWER ON / OFF

There are more control inputs/outputs on the main terminals (inside – on main board – bottom terminals).

5 Transport, packaging and storage

5.1 Safety information for transport

Incorrect transport



DANGER!

Danger of the machine falling down or tipping over!

The weight of the machine can cause injury and severe crushing!

Therefore:

- According to the size and weight of the machine, use a pallet on which the machine can be moved with a forklift truck.
- Use suitable lifting equipment for lifting the machine (straps etc.) which is designed for the weight of the machine.
- When placing the straps, take care that individual components are not unduly loaded.



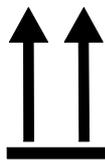
BEWARE!

Damage due to incorrect transport!

Incorrect transport may cause considerable damage. Therefore:

- When unloading the packages and transporting them on site, always proceed with the greatest care and caution.
- Observe the symbols on the packaging.
- Only use the attachment points provided.
- Only remove the packaging immediately before assembly.

5.2 Symbols on the packaging



Up

The arrowheads indicate the top of the package. They must always point upwards. Otherwise the contents could be damaged.

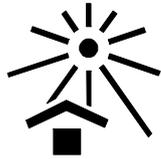


Fragile

Indicates packages with fragile or sensitive contents. Treat the package with care. Do not drop or subject to impact.

**Protect against moisture**

Protect the package against moisture and keep dry.

**Protect against heat**

Protect packages from heat or direct sunlight.

5.3 Transport inspection

Inspect the delivery for completeness and transport damage on receipt.

In case of externally visible damage, proceed as follows:

- Do not accept the delivery, or only accept it provisionally.
- Note the extent of the damage on the transport documents or on the delivery note of the transport company.
- Initiate complaint.

**INFORMATION!**

Complain of all faults, as soon as they are apparent. Only in this way can claims for compensation be made within the applicable periods.

5.4 Transport

Transport of the Collamat C4300/C7300 must be performed with a forklift truck or suitable straps. The lifting equipment must be designed for the weight of the machine.

For future transport:

- Close all open connections with protective caps (to prevent entry of dirt and water)
- Secure loose cables
- Protect against vibrations
- Blow out all process and operating media
- Secure the machine before transport (e.g. screw onto a pallet)
- Transport the machine with a forklift truck and set down, or secure with straps and lift with suitable lifting equipment.

5.5 Packaging

Packaging

The individual packages are packed according the transport conditions to be expected. Only environmentally compatible packaging material is used for packaging.

The packaging should protect the individual components from transport damage, corrosion etc. until they are assembled. Therefore, do not destroy the packaging and only remove it shortly before assembly.

Handling of packaging materials

If no agreement has been made for the return of the packaging, separate the materials according to type and size, and re-use or recycle them.



BEWARE! **Environmental damage through incorrect disposal!**

Packaging materials are valuable raw materials, and in many cases can be re-used or processed and recycled.

Therefore:

- Dispose of packaging materials in an environmentally-friendly manner
- Observe local regulations for disposal. If necessary commission a specialist company with disposal.

5.6 Storage

Storing the packages

Store the packages under the following conditions:

- Do not store in the open.
- Store in a dry dust-free place.
- Do not expose to aggressive media.
- Protect from sunlight.
- Avoid mechanical shocks.
- Storage temperature: -10 to +60 °C
- Relative humidity: 95% not condensing
- For storage of longer than 3 months, check the general condition of all components and packaging. If necessary refresh or renew the conservation.



INFORMATION!

In some circumstances the packaging has information on storage, which exceeds the requirements stated here. These are to be observed accordingly.

6 Installation and assembly

6.1 Safety

Basics



WARNING!

Danger of injury due to incorrect installation!

Incorrect installation can cause serious injury or damage.

Therefore:

- All installation work may only be carried out by qualified personnel authorized and instructed by the operator.
- Before starting work, sufficient space for assembly should be made.
- Pay attention to tidiness and cleanliness at the assembly site! Loose, stacked or scattered components and tools are a source of accidents.
- During assembly:
 - take care that all components are in the correct location and are correctly seated.
 - Install all fixing elements correctly.
 - Observe the correct screw-tightening torques.
- Before switching on, ensure that all covers and safety devices are correctly installed and function correctly.

Electrical equipment



DANGER!

Danger of death due to electrical current!

Contact with live components can cause danger of death.

Electrically driven components can start to move without warning and cause extremely serious injuries.

Therefore:

- Before starting work, disconnect the power - supply and secure it against being switched on again.
- All work on the electrical equipment, on individual electrical components and on the connections may only be performed by qualified electricians.

Personnel

- The installation may only be performed by trained specialist personnel.
- Work on electrical equipment may only be carried out by qualified electricians.

Personal protective equipment

For all work during installation and start-up, the following personal protective equipment should be worn:

- Industrial safety clothing
- Protective gloves
- Safety footwear
- Eye protection

Securing against switching on again



DANGER!

Danger of death due to unauthorized power-on!

During installation, there is a danger that the power supply will be switched on again without authorization. This causes danger of death for those in the danger area.

Therefore:

- Before starting work, disconnect all power supplies and secure them against being switched on again.

6.2 Preparation

Before starting assembly, check:

- that the local power supply corresponds to the details on the identification plate and the specifications in the technical data.
- that the installment conditions are complied with (→Requirements of the installation location).
- that the local ambient conditions are complied with (→Operating conditions)
- the assignment of responsibilities for installation and start-up.
- that all the necessary documents are available.
- the completeness and good condition of all the required tools and aids.
- compliance with local safety regulations

6.3 Requirements of the installation location

Foundations

The surface where the machine is installed must:

- be sufficiently load-bearing
- have a non-slip surface
- be level

Installation conditions

The machine must be installed so that:

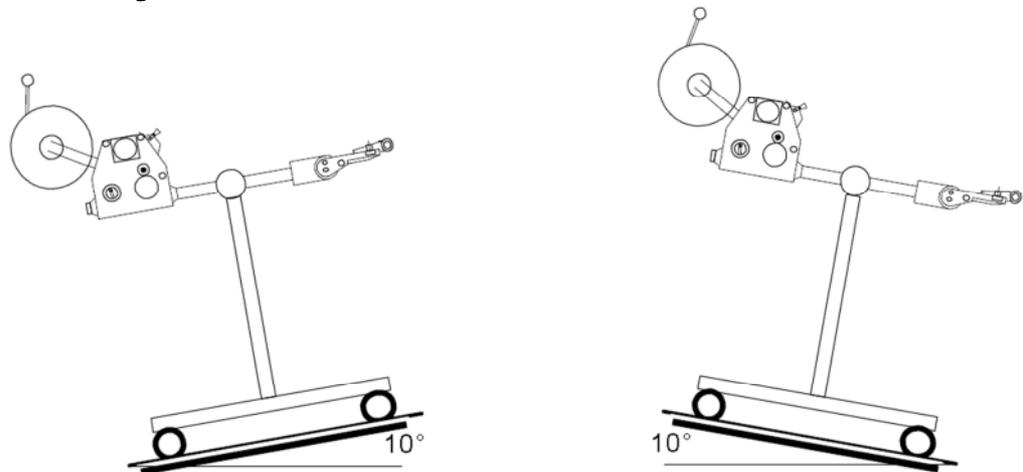
- it stands securely.
- the safety of personnel is ensured.
- adequate illumination is available.
- all parts of the machine are freely accessible, and sufficient space is available for maintenance work and measures to remedy faults.

With regard to the space for movement and the escape routes, the regional or national regulations for the installation site must be observed.

Stability

A Collamat C4300/C7300 mounted on a movable stand (adjustable or fix) has to be stable.

The stability of the complete unit has to be guaranteed for an inclination of +/- 10° - see drawing below.



Stability of a CollamatC4300/7300 unit mounted on a mobile column

6.4 Assembly

The Collamat C4300/C7300 is - by default – not shipped in a complete assembled condition – depending on the type of packaging and the order volume.

The different sub-assemblies have to be attached to the traction unit housing at the operating company. This is normally done by the Collamat dealer of your region.

Unwinder unit

Screw the unwinder unit to the traction unit housing. Use the attached four mounting screws (M4x16).

The unwinder flange is located just above the side connection plate „POWER“.

Modular rail and applicator

If not already done - screw the square flange to the modular rail. Use the attached four mounting screws (M6x25).

Screw the square flange (see above) to the traction unit housing. Use the attached mounting screws (M6x16). The place of installation is the flange located just below the side connection plate „SIGNALS“.

Before fixing the modular rail to the traction unit housing, the different cables and wires going to the applicator unit have to be feed through the modular rail. This are:

Applicator cable - flat ribbon cable (10-pin with connector)

Grounding wire - green/yellow (PE)

Special applicator cable - flat ribbon (20-pin w. connector) – optional

Slide mounting clamp to the modular rail (if the mounting point for the labeling unit is the modular rail).

Connecting the applicator unit to the modular rail:

The applicator unit is already pre-mounted.

Connect the applicator cable (10-pin connector) to the X1 plug (on the applicator board).

Connect the special applicator cable (20-pin connector) to the X3 plug on the applicator board (optional).

Connect the grounding wire (green/yellow) to the blade terminal (PE mark) on the applicator board.

Do not twist the flat ribbon cables!

Now - fit the applicator unit to the modular rail. Push the applicator unit against the end of the modular rail. If the cables and wires are too long to fit into the applicator housing, fold the cables and push them into the modular rail. Be careful not to injure / squash any cable/wire.

Fix the applicator with the tensioning piece to the modular rail. Use the four attached mounting screws. Screw the applicator cover (yellow) to the applicator housing.

**INFORMATION!**

The maximum load an operator of a Collamat C4300/C7300 unit is allowed to lift has been regulated in the corresponding directives EG 90/269/EWG respective 89/391/EWG.

Label rolls - depending on outer diameter and paper width - can reach a total weight of up to 28kg.

The operating company is responsible for the health of their operators.

Please use lift equipment or use optional paper deflection tools - if the weight of the used paper roll exceeds **15kg**.

To ensure the stability of the labeling unit, the unwinder unit has to be fixed / supported with a special reinforcement set - if the weight of the used paper roll exceeds **15kg**.

(see attachment in the Technical Manual).

6.5 Mounting

**INFORMATION!****Directives / Standards / References:**

According to the machine directives 2006/42/EG:

- a machine is a „**not complete machine**“, if the unit is not able to fulfill all functions the unit has been built for. This are - by default - units designated as part of a bigger unit. Mounting parts, controlling parts, safety devices and all the other parts combining the “bigger unit” are normally delivered by the operator or a commissioner of the operator. Collamat AG is responsible **only** for the delivered parts of the „bigger unit“ (see also the corresponding [EG-Declaration of Incorporation](#) of this unit – you will find an example of this declaration in the attachment of this manual).

- a machine is a “**machine**”, if the unit is able to fulfill all functions the unit has been built for - without attaching additional devices to the unit (see also the corresponding [CE-Declaration of Conformity](#) of this unit – you will find an example of this declaration in the attachment of this manual).

Mounting – step by step

1. Remove all transportation safety devices/locks and tapes.
2. Bring unit to the designated location.
3. Mount unit on the designated support (column, frame of another unit). Be sure the unit is aligned in parallel to the other units – like conveyor belt, pick&place devices, frames, ...).
4. Be sure moving are not blocked by other parts.
5. Install a safety fence (if required → Safety equipment).
6. Install a pressure air line (if required). Make sure the line is save (tripping hazards).

**INFORMATION!**

The safety equipment (optional) makes sure no labeling sequence can be triggered without explicit permission.

This can be done with the following technical and/or organizational sanction:

- A safety switch in the safety chain disables the carriage of goods (conveyor belt).
- The carriage of goods can only be enabled after a specific acknowledge command has been given.
- The location where a acknowledge command can be triggered is a location outside of the safety area.
- Before triggering the acknowledge command - be sure no person is in the safety area.

6.6 Electrical connections

Mains power

1. Check the voltage selector on the power inlet module (side connection plate „POWER“). If you have to change the voltage selector, the two primary fuses in the power inlet module have to be replaced too.

Please use ONLY slow blow fuses with the correct value. Slow blow fuses are marked with a “T” - for example 6.3AT.

The fuses are located underneath the voltage selector cover. Use a screwdriver to open the cover. Remove the red fuse holder. Replace the fuses. Slide in the fuse holder. Close the cover.

2. The power outlet plug is designated to connect Collamat C4300/C7300 peripherals ONLY!
3. Plug in power cord (line cord) into a local power outlet. The power outlet has to be secured with 10A.

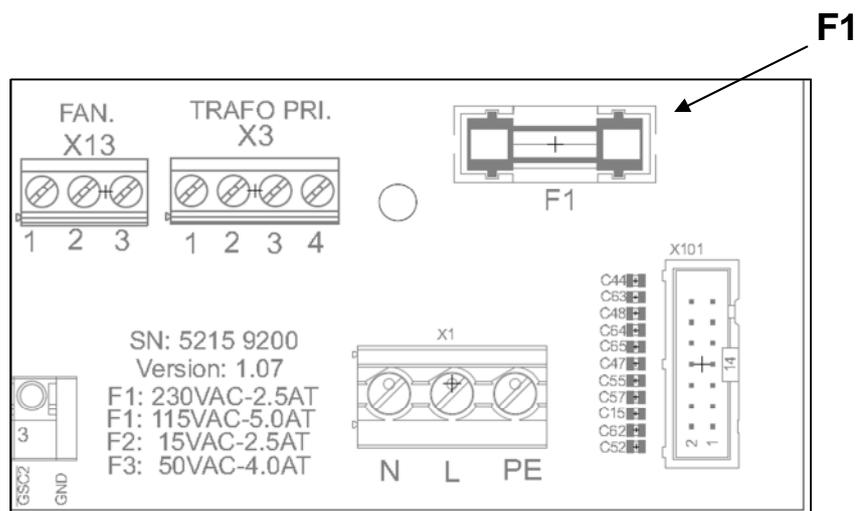
Don't create stumble traps with the line cord!

The two main fuses are located behind the voltage selector drawer – see picture on left side (open drawer with a small screwdriver). Fuses: see table below.

4. Connect control lines, good scanner cable and (optional) incremental encoder cable to the side connection plate and/or to the (optional) connection box/module.

Don't create stumble traps with the cables!

Supply voltage	Fuse	Type
115 VAC (50/60 Hz)	5.0 A	Slow blow (T)
230 VAC (50/60 Hz)	2.5 A	Slow blow (T)



Position of the main fuse F1 on the main board

6.7 Wiring

For a fail-safe operation of the Collamat C4300/C7300 a few important points have to be remembered:

- Installation only by skilled labor.
- Ambient air temperature, dirt, dust, splash water
- Respect the specific mounting directions of the optional conveying equipment and other user specific subassemblies.
- Respect the Collamat C4300/C7300 installation- and mounting - directions
- Electromagnetic/electrostatic interfering fields
- Directives of the safety chain

Electromagnetic/electrostatic interfering fields can lead to unexpected errors in the unit. Clumsy wiring during the installation phase or while servicing a unit is often the cause of an unstable unit.

Therefore - the following points have to be observed while working on the wiring:

- Separate installation of control- and power- lines
- Use shielded cables
- Ground all peripherals (PE)
- Use peripherals which fulfill the EMC directives
- Use additional power filters (dirty power line)
- Connection of good scanner and optional incremental encoder – see chapter 9 – Connections + buildup



6.8 Inspection on conclusion of installation work

- Check that the installation is correct.
- Check the operator's own safety devices for completeness, condition and safe functioning.
- Instruct operating personnel and establish the place on the machine where the operating instructions are to be kept.
- After complete installation and checking of the machine and instruction of the operating personnel, the machine is ready for start-up.

7 Start-up and operation

7.1 Safety

Basics



WARNING!

Danger due to incorrect start-up!

The start-up requires trained specialist personnel. Errors in start-up can cause dangerous situations or considerable damage.

Therefore:

- Only have start-up work performed by the manufacturer's employees or his representatives, or by trained personnel.



WARNING!

Danger of injury due to incorrect operation!

Incorrect operation can cause serious injury or damage.

Therefore:

- Operation may only be carried out by sufficiently qualified personnel authorized and instructed by the operating company.
- All operating steps must be performed according to these operating instructions
- Before starting work, ensure that all covers and safety devices are correctly installed and function correctly.
- Safety devices must never be put out of action during operation.
- Pay attention to tidiness and cleanliness in the work area! Loose, stacked or scattered components and tools are a source of accidents.

After start-up and performance of test operation by the manufacturer, the machine is handed over to the operating company.

After this, the intended use by the operating company with the observation of these operating instructions is permissible.

Personal protective equipment

For all work during operation, the following must be worn:

- Industrial safety clothing
- Protective gloves
- Safety footwear
- Eye protection

7.2 Adjustments

Safety

**WARNING!****Danger caused by „powered ON“ labeling unit!**

Before you do all the necessary mechanical adjustments on the labeling unit, the unit has to be “switched off”. Remove the power cord to prohibit an unauthorized “power ON” of the unit!

Before you turn the mains power switch, check the following items:

- Visual check of the traction unit and all peripherals
- Adjust the height of the unit (distance between dispensing edge (and pressure roller) and expected good surface)
- Thread up the labels (paper web)
- Adjust the declination of the dispensing edge and the applicator unit
- Adjust the pressure roller (applicator)
- Align the label sensor receiver head
- Power-on the Collamat C4300/C7300 (mains switch)

Adjustment of the height of the dispensing edge above the product

To get a perfect placement of the label on the good, the correct adjustment of the height of the dispensing edge has an important influence.

- Dispensing edge too high (above good): the label tends to glide on the good or generates bubbles.
- Dispensing edge too low (below good): dispensing edge tends to scratch on the good or/and tends to hold back the moving goods.

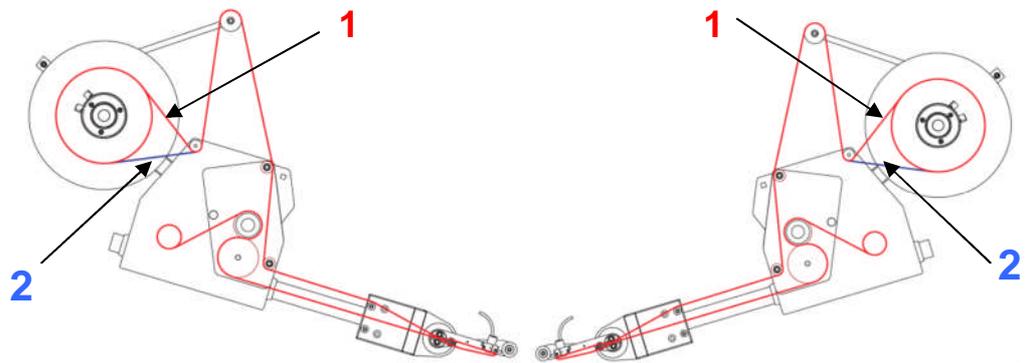
The correct height adjustment of the dispensing edge (and the pressure roller) has to be checked with a test run.

7.2.1 Thread up the labels

Thread up:

Load the labeler with the required paper web (see drawing below):

- Unwind the paper web from the paper roll (a short distance).
- Remove all labels on this piece.
- Lift up the pressure roller from the traction roller by turning the button
- Wind the backing paper around the dispensing, traction roller and pressure roller to the rewinder core (see drawing below).
- Secure the paper in its position with the rewinder clamp.
- Press down the pressure roller (turning the button on the pressure roller axle).
- Adjust the unwinder disc(s) and the paper guide rings (slide to the outer edge of the paper web).



Labeler Version right (R)
C4300/C7300 – **R**

Labeler Version left (L)
C4300/C7300 – **L**

- 1 - paper web:** outside labels
- 2 - paper web:** inside labels

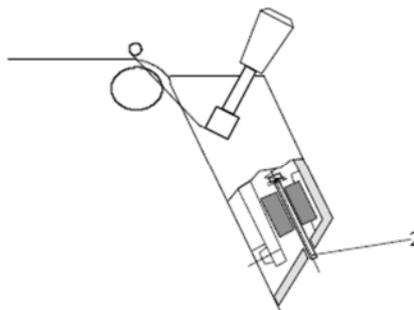
7.3 The most important mechanical adjustments

7.3.1 Force of the paper break

Adjustment

The factory has set the paper break to an optimal value. If you have to change the adjustment – use the M3-screw (2) in the paper break housing on the outside of the labeler:

- Turn out the screw = increase break force
- Turn in the screw = reduce break force



7.3.2 Rewinder clutch adjustment

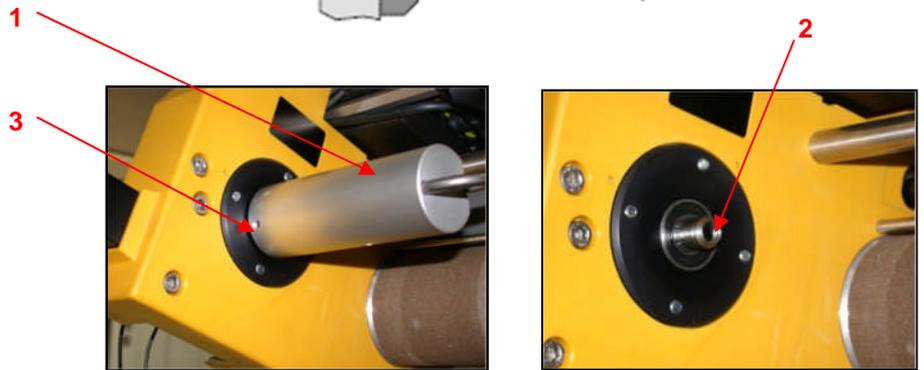
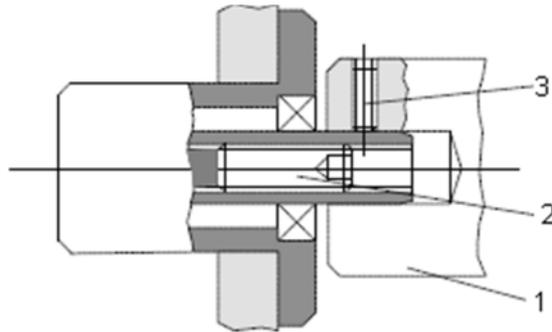
Clutch power adjustment

The rewinder clutch power has been factory adjusted. The readjustment of the clutch has to be done as following:

Remove the rewinder core **1** after unscrewing the M5-screw **3**.

Adjust M8-screw **2** corresponding:

- screw in = firmer clutch
- screw out = weaker clutch



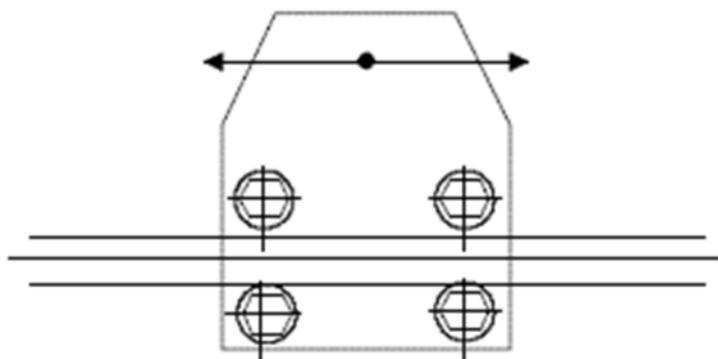
7.3.3 Modular rail

Vertical adjustment

Open 4 screws (½ turn) with special tool (Torx TX30 screw driver) - (Adapter only 2 screws).

Move unit - observe scale on modular rail.

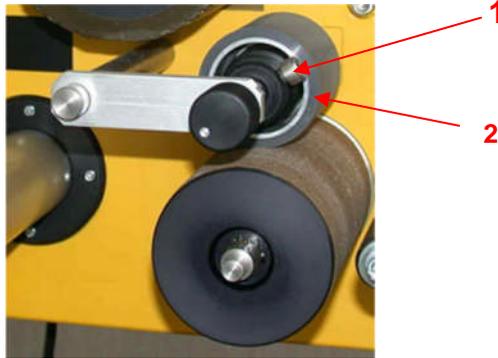
Equally tighten the screws.



Start-up and operation

7.3.4 Pressure roller

Adjust position



- 1 Locking screw
- 2 Pressure roller



REMARKS!

The pressure roller includes a self aligning ball bearing – it's therefore very important to set the pressure roller centric on the paper path.

7.3.5 Adapter tilt angle

Adjust tilt of flap adapter

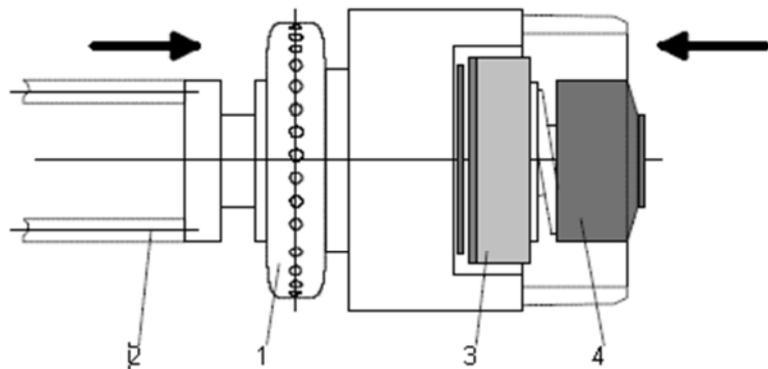
The tilt of the flap adapter in reference to the module-bar can be changed accordingly:

Loosen nut (1) (see illustration), using special hexagon socket spanner (included in supply) with two rotations.

Push adapter in direction of arrow (2) and turn into the desired position on ring (3). Tighten nut (1).

The strength of the pressure of the flap adapter spring mounted or with magnet, respectively, can be altered:

Press button (4) in the direction of the arrow, turn until right resilience is reached and click into nearest screen position.



CAUTION!

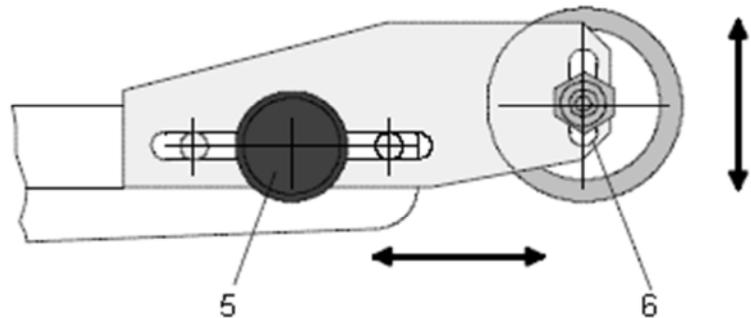
In case of a very large tilt angle – where the two paper paths are touching each other, the leaving paper path has to be guided below the second redirection roller....

7.3.6 Adapter front pressure roller

Adjustment

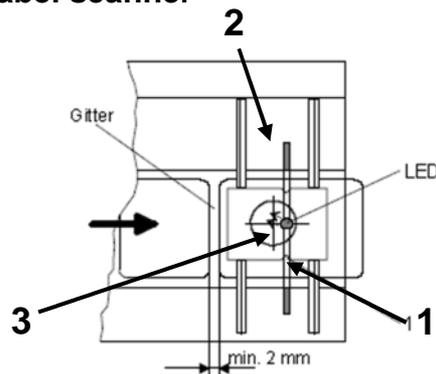
The front pressure roller of the flap adapter can be adjusted according to label and goods:

- Horizontal adjustment with knurl nut (5).
- Vertical adjustment with hexagon nut (6).



7.3.7 Adapter – optical label scanner

Adjustment



The optical label scanner is built into the dispensing edge. The scanner head (1) can be manipulated diagonally thanks to a broad optical light guide (2) inside the dispensing edge. The manipulation lengthwise is not necessary as this is done electronically.

1. Receiver head
2. Transmitter (light tube - inside dispensing edge)
3. Marking on receiver head

Setting:

Switch ON traction unit (Power ON), main switch lights up.
 Set potentiometer LABEL SCANNER for optical label scanning to zero.
 LED lamp on receiver (1) lights up. Move label gap (label web) right underneath marking (3) of the receiver head (1). Turn potentiometer LABEL SCANNER until LED lamp on receiver (1) goes off.
 Please note figure on potentiometer scale.
 Move label right underneath marking (3), the LED lamp on the receiver head (1) lights up again.

Setting:

Switch ON traction unit (Power ON), main switch lights up.
 Set potentiometer LABEL SCANNER for optical label scanning to zero.
 LED lamp on receiver (1) lights up. Move label gap (label web) right underneath marking (3) of the receiver head (1). Turn potentiometer LABEL SCANNER until LED lamp on receiver (1) goes off.
 Please note figure on potentiometer scale.
 Move label right underneath marking (3), the LED lamp on the receiver head (1) lights up again.

Example:**Setting of the potentiometer on label gap:**

LED lamp switches off at 5,5

Setting of potentiometer on label:

LED switches off at 6

Therefore, the optimal setting of the potentiometer is at 5,75.

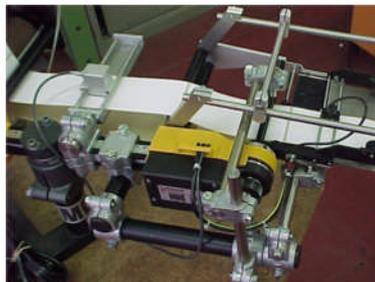
**REMARKS!**

The gap between two labels may not be recognized with a bad adjustment of the optical label scanner! The labeler will stop after 2000mm forward feeding (after start signal) and the ERR-output will be set for a short time - if the scanner does not see a gap! For transparent labels (clear view) use a mechanical or capacitive label sensor (fork sensor) – see below!

7.3.8 Adapter – alternative label sensors

Remarks

In case of clear few (transparent) labels and backing paper - the standard optical label scanner is not able to scan the gap (between two labels). Therefore an alternative sensor has to be used to work with these types of labels/backing paper. Very good alternative sensors for these type of labels could be mechanical sensors (see right picture below) or a capacitive fork sensors – mounted on an attachment unit. The attachment unit will be fixed to the modular rail (see picture left below). The adjustment of these sensors is done directly on the sensor itself – the potentiometer adjustment “LABEL SCANNER” on the operator plate cannot be used for these sensors.



Mechanical- and optical sensor



Attachment unit „mechanical- or optical scanner“

7.3.9 Unwinder - adjustments

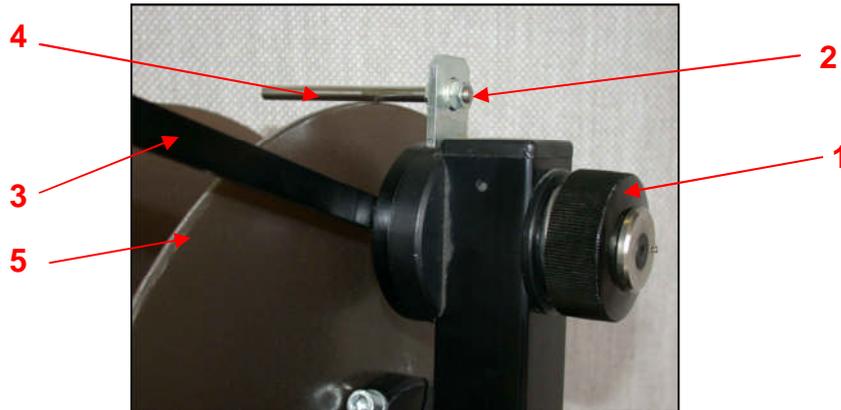
Dancer – spring force

The spring force of the unwinder dancer arm can be easily adjusted.

Don't apply too much force to the dancer arm – just enough to bring the arm in its release position (top).

Adjustment procedure:

Press the turning-button (1) and turn it into the desired position (hold the dancer arm with the other hand during this procedure to feel the force applied to the arm). By releasing the turning button now, the new position will be locked.



Dancer – break force

Released dancer arm: no paper is pulling on the dancer arm – the dancer is in the waiting position = **maximum brake force** – the unwinder is stopped by the break.

Dancer arm forced down by the paper web: the traction unit is pulling on the paper web – asking for paper from the unwinder. As soon as the dancer arm leaves the waiting position (released position), the break has to open – enabling the unwinder to supply paper to the traction unit. **Adjustment:**

- Open the two fixing screws (2) on the break lever (use an open-end wrench nbr. 8).
- Place dancer arm (3) in to the release position (top arrester)
- Strongly press brake lever (4) to the rear unwinder disc (5)
- Fasten the two fixing screws (2)
- Check the break function

7.4 Operation

Operator panel

The operator panel of the Collamat C4300/C7300 is used to adjust the labeling parameters. Use the potentiometers to adjust the speed, predispensing and label sensor, the main switch for power on/off and the feed key to eject a (test) label.

3 Potentiometer, 1 main power switch and a FEED-key.



7.4.1 Adjusting the labeler on the operator panel

The Collamat C4300/C7300 will be controlled/adjusted via operator panel. Depending on the material and shape of product and label – the good scanner and/or the label scanner has to be adjusted after a product or label change. The meaning of the different adjusting parameter will be explained in a separate chapter.

Important adjustments:

- POWER ON/OFF main power switch of the labeler
- FEED: FEED-key
- SPEED: Dispensing speed (m/min)
- LABEL PREDISPENSING: Label predispensing (mm)
- LABEL SCANNER: Label sensor (sender current)

The following part describes the most important parameters (short form):

POWER ON/OFF **Switch on/off main power**

The „POWER ON/OFF“ switch will be used to switch the main power (AC) to the labeler. The red lamp in the switch will illuminate if the switch is in it's ON state (main power present and fuse F1 ok).

FEED - key **Eject a label**

This key is wired parallel to the good scanner input. Use this key function to simulate a good scanner trigger signal (!GSC-input) or check the potentiometer adjustments.

SPEED

Adjust dispensing speed

The dispensing speed of the Collamat C4300/C7300 has to be equal to the speed of the conveyor belt (product flow speed).

The speed adjustment will be done with the potentiometer „SPEED“ on the operator plate.

The max. dispensing speed depends on the Collamat type. Collamat C4300 = max. speed is 25m/Min. Collamat C7300: max. speed is 50m/Min.

Be sure to have a long enough product to product gap (possible product separation necessary).

LABEL PREDISPENSING

Adjust label predispensing

The label predispensing value indicates the distance (length) of the label part from the label scanner to the leading edge of the label (stop-position).

The adjustment of this value will be done with the potentiometer „LABEL PREDISPENSING“ on the operator plate.

Check: press the FEED-key on the operator plate and measure the predispensing distance.

LABEL SCANNER

Adjust label scanner

The label scanner will be used to detect the leading edge of the label on the dispensing edge – allowing to stop the labels always on the same (stop) position on the dispensing edge.

The potentiometer „LABEL SCANNER“ on the operator plate is used to control the current flow to the label scanner sender diodes = controlling the amount of transmitted light (from sender to receiver).

7.5 Parameter - explanatory notes

7.5.1 Labeling parameter - speed

SPEED

Adjust the dispensing speed

The dispensing speed of a labeler – here specially for the C4300/C7300 – has to be equal to the conveyor belt speed of the products/goods.

- If the dispensing speed is too low, the labels could stick on the products/goods or the labels will be torn off from the dispensing edge – thereby the backing could be ruptured. This will probably result in wrong placement of the label on the product.
- If the dispensing speed is too fast, the labels on the product could get bubbles or wrinkles. This will also result in bad or inaccurate labeling.

The dispensing speed adjustment is done with the „SPEED“ potentiometer on the operator plate.

The max. dispensing speed for a C4300 is 25m/Min and for a C7300 is 50m/Min.

Be sure to have a big enough gap between products.

7.5.2 Labeling parameter - Predisensing

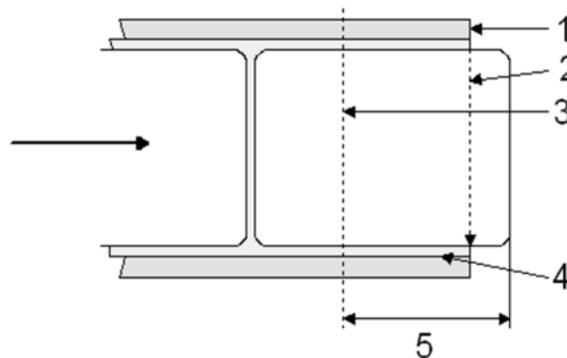
**LABEL
PREDISENSING**

Adjust the predisensing distance

This function is used to adjust the predisensing parameter. The predisensing length (5) is the length between label sensor (3) and the leading edge of the label - placed on the dispensing edge (1).

Adjustment: use the potentiometer "LABEL PREDISENSING" on the operator panel.

Check: press the FEED-key on the operator panel to check the desired Position of the front edge of the label on the dispensing edge.



- | | |
|------------------------------|-----------------|
| 1 dispensing edge | 4 backing paper |
| 2 label (on dispensing edge) | 5 predisensing |
| 3 label sensor line | |



HINWEIS!

Wenn die Vorspendung grösser als die Etikettenlänge eingestellt wird, kann dies zu Fehlverhalten des Etikettierers führen!

7.5.3 Labeling parameter – label scanner

**LABEL SCANNER
Adjust the label
sensor
(sender current)**

The C4300/C7300 standard label scanner is an optical sensor with current controled sender unit and movable receiver head. This constuction allows the user to move the receiver head accross the label width.

The label scanner (abbreviation: LSC) is used to detect the label start-/end-edge (starting- / tailinnng edge). The label scanner sender part consist of a sender print with four sender diodes and a light tube – mounted inside of the so called dispensing plate.

The LSC sender transmits a bundled light beam (trough the above light tube and trough the backing paper resp. trough the backing paper and the label) to the LSC receiver head.

The amount of sender light transmitted can be controlled by the potentiometer „LABEL SENSOR“ on the operator panel.

Status LED

The LSC receiver will be activated / deactivated by the corresponding light beam transmitting through the light tube, through the backing paper resp. through the backing paper and the label. The red LED on the receiver head indicates the output state of the LSC receiver.

Red LED illuminating:

The receiver does see little light = backing paper and led between sender and receiver.

Red LED does NOT illuminate:

The receiver does see a lot of light = only backing paper between sender and Receiver (gap).

7.6 Jumper Adjustments



WARNING!

The jumper adjustment has to be done while the labeler is in **POWER OFF** state only!

Jumpers on the main board (PCB)

There are several jumpers on the main board:

- Polarity IFEED (normal / inverse)
- Turning direction of stepper motor (right/left)
- Test function (1 – 3 or off)

See all the details in the following chapters:

7.6.1 Jumper - Turning direction of the motor

Stepper motor



This jumper is used to set the correct turning direction of the stepper motor.

- Right – the labels will be pulled over the dispensing edge ->from left to right (view to front of labeler – jumper below)
- Left – the labels will be pulled over the dispensing edge ->from right to left (view to front of labeler – jumper up)

7.6.2 Jumper - IFEED polarity

Polarity IFEED



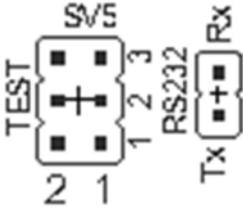
This jumper is used to set the polarity of the IFEED output:

- Active if the motor is moving (NORM – jumper up)
- Active if the motor is NOT moving (INV. - jumper below)

IFEED = isolated FEED-signal).

7.6.3 Jumper – Test functions

Test run 1 – 3



These two jumpers are used to activate the test functions.

- Jumper 1 and 2: Position 2-3:
normal labeling run (no test run)
- Jumper 1: Position 1-2 / Jumper 2: Position 2-3:
Test function 1 activated
- Jumper 1: Position 2-3 / Jumper 2: Position 1-2:
Test function 2 activated
- Jumper 1 und 2: Position 1-2:
Test function 3 activated

7.7 Placing into operation

Step by Step procedure to place the unit into operation:

- Mount unit with paper (unwinder)
- Thread up the labels as shown in 7.2.1
- Main power switch to on position: „I“ (POWER ON)
- Check the settings of the labeling-parameters according to chapter 7.5..

7.8 Switching off

Stop the labeling operation (e.g. stop the conveyor belt) and switch off the main switch on the operator plate (POWER OFF).

8 Connections + buildup [electronic]

8.1 Mainboard

8.1.1 Safety

Basic



WARNING!

Take care while connecting sensors/actors to the Collamat C4300/C7300 inputs and outputs!

Inappropriate handling on the Collamat C4300/C7300 electronic parts can destroy delicate components.

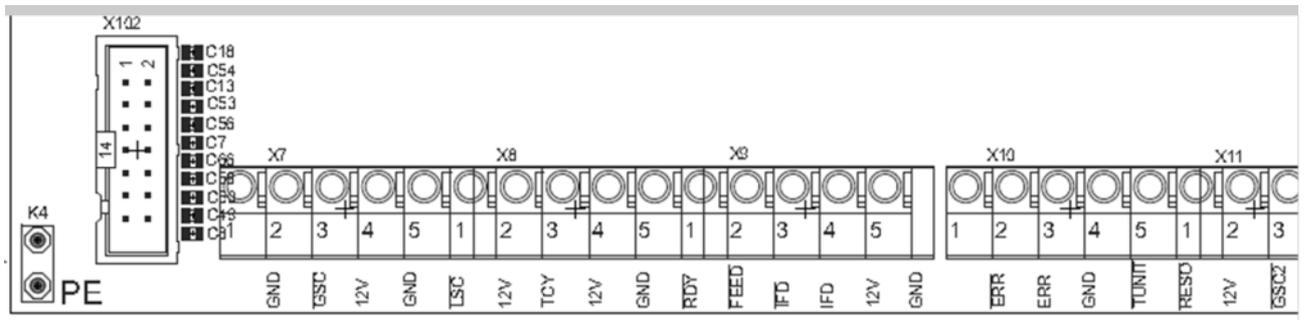
Wiring jobs and repairs should be carried out by the persons designated (see 3. Safety – 3.3.1 Requirements).

Organize and take care of your working environment – is there enough room to fulfill your job?

Always look out for a clean and organized mounting area. A messy place is always a place of danger (cause of accident).

Open collector- und power-connections have to be current limited – according to the specified max. values (see Technical Manual).

8.1.2 Connections „main-connecting terminals“



Terminal	Function (signal name)	Terminal number
!GSC	NPN-good scanner (GND, signal, 12V)	X7-1, X7-2, X7-3
!LSC	Label sensor receiver (GND, signal, 12V)	X7-4, X7-5, X8-1
TCY	Label sensor sender (signal, 12V)	X8-2, X8-3
!RDY	Ready input (GND, signal)	X8-4, X8-5
!FEED	Feed output (internal signal)	X9-1
!IFD, IFD	Isolated Feed output (!IFD, IFD) - Open collector	X9-2, X9-3
12V + GND	Power supply for sensors, (12V, GND)	X9-4, X9-5
!ERR, ERR	Error output (!ERR, ERR) - Open collector	X10-1, X10-2

Connections + buildup [electronic]

Terminal	Function (signal name)	Terminal number
!TUNIT	Pressure roller open / Paper break (GND, signal)	X10-3, X10-4
!RESO	Reserve output (signal)	X10-5
!GSC2	Not used for C4300/C7300 (12V, signal, GND)	X11-1, X11-2, X11-3

GOOD-SCANNER [!GSC]

All C4300-/C7300-inputs are NPN inputs!
Use the standard good sensor from Collamat AG – or another NPN-sensor with open collector- or push-pull-output.
!GSC = signal, 12V = voltage (10-30V), GND = ground potential

LABEL-SCANNER [!LSC]

This is the standard label scanner (receiver) input (from Collamat AG), if the fix adapter (without adapter board) is used – or if a non Collamat AG NPN-sensor will be connected (foreign product).
!LSC = signal, 12V = voltage (10-30V), GND = ground potential

LABEL_SCANNER [TCY]

This is the sender-current output for the standard label scanner (from Collamat AG), if the fix adapter (without adapter board) is used.
TCY = signal output, 12V = voltage for current source.

NOT-READY-input [!RDY]

Status of external connected peripheral devices. It's not allowed to start the labeler (via good scanner) as long as this input is activated (GND-level). If the good scanner tries to start the labeler anyway – the error-output (ERR, !ERR) will be set (short error pulse)!
!RDY = signal, GND = ground-level

FEED-output [!FEED]

This output stays active (ground-level) as long as the stepper motor is turning. This (internal) signal is guided through the FUTURE-bus cable to the adapter-/applicator-board.

IFEED-output [!IFD, IFD]

This galvanic isolated output (opto coupler) stays active as long as the stepper motor is turning. This output can be inverted by setting the IFEED polarity jumper to inverse.
!IFD = open collector (collector) , IFD = open collector (emitter) *

12V, GND

12V = voltage, GND = ground level
Can be used to power sensors, opto coupler, relays,.....

ERROR-output [!ERR, ERR]

This galvanic isolated (opto coupler) output will be activated if:

- a label scanner-error has been detected (no gap (distance between labels) has been detected within 2000mm forward feeding of the labels),
- motor controller – error (voltage error, over temperature, motor error,)
- Paper break (optional paper break sensor)
- Pressure roller lifted = open (optional TUO-sensor)

TUNIT-input [!TUNIT]

!ERR = open collector (collector) , ERR = open collector (emitter)*
This is the terminal where the optional paper break sensor and/or the TUA-sensor will be connected (see above)
!TUNIT = signal, GND = ground level

RESO-output [!RESO]

This galvanic isolated (opto coupler) output !RESO/RESO will be used for debugging purposes (N.U.)

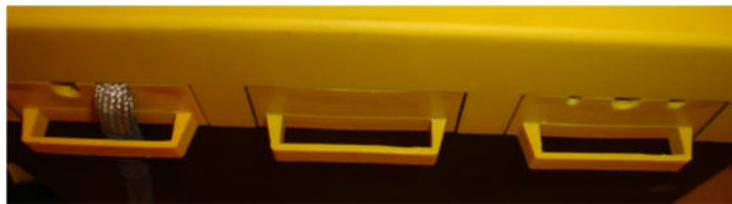
GSC2-input [!GSC2]

This input will not be used (N.U.)
!GSC2 = signal, 12V = voltage (10-30V), GND = ground potential.

8.1.3 Cable input - Traction unit

Description

All cables going to / coming from the traction unit are guided through the special cable claps (bottom of housing) – except the future bus cable which is going through the modular rail opening to the applicator (in the back of the modular rail).



8.1.4 Connection „FUTURE-BUS“

Function

The FUTURE-BUS (connector X101 and X102) will be used to connect peripheral devices to the labeler (via flat cable to the main board X101 or X102).

Depending on the labeler version (dispensing direction left or right) the connector (X102 (right) or the connector X101 (left) will be used.

Pin assignment for X101 see below. The connector X102 has the reverse pin order (pin 14 ... pin1).

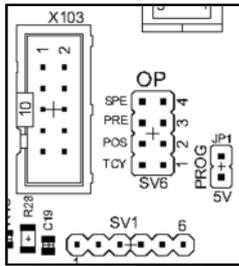
Pin assignment

Connector positions: see picture in 8.1.1.

X101		X102	
■ Pin 1:	GND	Pin 14:	
■ Pin 2:	GND	Pin 13:	
■ Pin 3:	N.C.		
■ Pin 4:	!TUNIT		
■ Pin 5:	!CLK		
■ Pin 6:	!RESO		
■ Pin 7:	!GSC2		
■ Pin 8:	TCY		
■ Pin 9:	!GSC		
■ Pin 10:	!LSC		
■ Pin 11:	!FEED		
■ Pin 12:	!RDY		
■ Pin 13:	+12V	Pin 2:	
■ Pin 14:	+12V	Pin 1:	

Connections + buildup [electronic]

8.1.5 Connection „Programming port“



The port SV1 is used to program the microcontroller on the main board (specialist authorized by operating company).

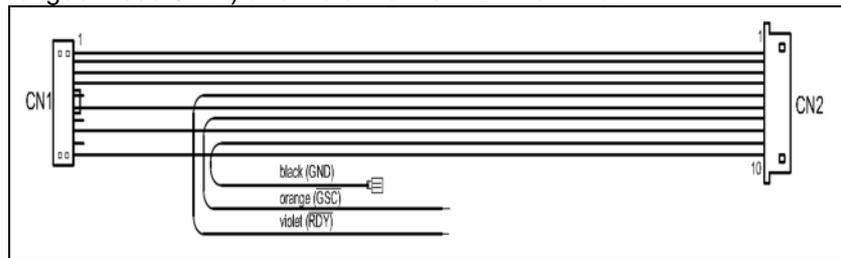
8.1.6 Connection „external operator panel“



The port X103 is used to connect an external operator panel (in place of the original “potentiometer operator panel”) to the labeler.

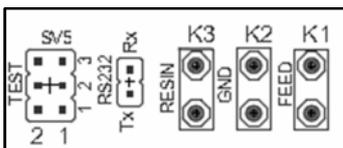
The cable „C-OG-Term-Cable-C“ Nr. 52159201 connects the labeler (X103) with the external operator panel – whereas the three loose cables have to be connected to the following terminals on the main-connecting terminals (see 8.1.2):

Black to the GND-terminal, orange to the !GSC-terminal (or to the K1 tongue – see 8.1.7) and violet to the !RDY-terminal.



The four OP jumpers (SV6) have to be removed (1-4 vertical).

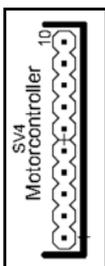
8.1.7 Connection „FEED-key“



The two wires from the FEED-key (on the operator panel) have to be connected to „FEED“ (K1) and „GND“ (K2)

(Polarity does not matter).

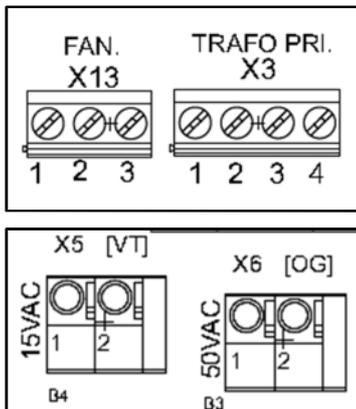
8.1.8 Connection „motor controller“



This is the 10-pin connector SV4 for the Motorcontroller control cable – going to the stepper motor controller unit HGD05.

Motorcontroller Control cable S/N: 52159203

8.1.9 Connection „Transformer“



Transformer for the labeler C4300: 138VA S/N: xxxx.xxxx

Transformer for the labeler C7300: 198VA S/N: xxxx.xxxx

Primary connection wires (wire colors):

230VAC:

X3-1:white, X3-2:yellow, X3-3:green, X3-4:gray

115VAC:

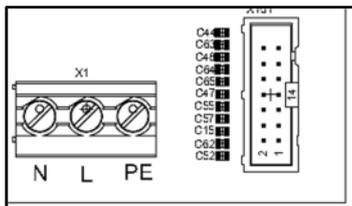
X3-1:white + green, X3-2: --- , X3-3:--- , X3-4:grey + yellow

Secondary connection wire (wire colors):

15VAC: violet wires on terminal X5

49/70VAC: orange wires on terminal X6

8.1.10 Connectoion „POWER input line“



The POWER input line will be connected to the terminal X1.

POWER line cable with Schuko connector: S/N: xxxx.xxxx

POWER line cable with Swiss connector: S/N: xxxx.xxxx

POWER line cable with USA connector: S/N: xxxx.xxxx

Please use ONLY power cables from Collamat AG (with integrated ferrite core)!

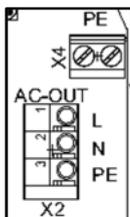
Cable color:

Neutral (N): blue on X1-1-terminal (left)

Phase (L): brown on X1-2-terminal (in the middle)

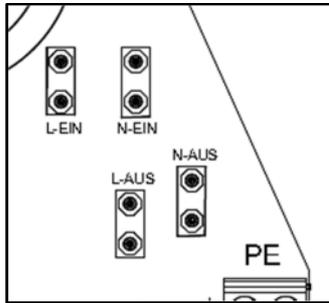
PE-conductor (PE): green/yellow on X1-3-terminal (right)

8.1.11 Connection „AC-Power output“



This is the power output terminal AC-OUT (X2) used to connect e.g. a magnet flap applicator to the labeler. The voltage on the terminal is switched by the POWER main switch. The AC-OUT voltage is equal to the input voltage (230VAC or 115VAC).

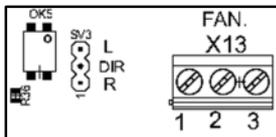
8.1.12 Connection „Main Power switch“



The four cables from the POWER main switch (on the operator panel) will be connected on these terminals:

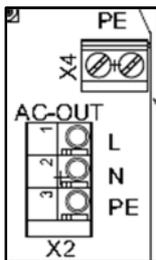
Connection:	Wire color:
L-EIN	brown
N-EIN	blue
L-AUS	brown-white
N-AUS	blue-white

8.1.13 Connection „FAN-output“



Optional terminal FAN (X13) – will not be used on this units
 X13-1 Neutral (N), X13-2 PE-conductor (PE), X13-3 Phase (L)

8.1.14 „PE“Connection



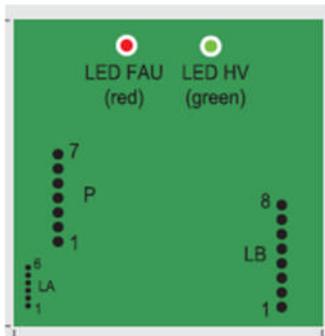
PE (protective earth)

The PE terminal X4 (above the AC-OUT terminal X2) is used to connect the PE cables (green/yellow cables).

PE-cable from applicator **S/N: xxxx.xxxx**

PE-cable from heath sink S/N: 5215.9206

8.2 Motor controller HGD05



The **Status** of the stepper motor controller is shown with the two LED's LED FAU and LED HV – on the HGD05 board:

LED-HV: - on = voltage ok

- off = voltage to high / low

LED-FAU: - on = thermal over load or voltage to high/low
(see LED-HV)

- off = controller has no error = active

Connection LA: Logic-input and error output

This is the place where the „Motorcontroller Control Cable“ is connected

(from SV4 on the main board)

S/N: 5215.9203

Connection LB: Configuration inputs

Connector for the Configuration connector (short cut connector)
(Adjustment of: max. current, step resolution, damping, current reduction,)

S/N: xxxx.xxxx configuration connector for C4300

(Pins 1,2,3,4,6 and 7 connected together)

S/N: xxxx.xxxx configuration connector for C7300

(Pins 1,3,4,6 and 7 connected together)

Connector P: Power inputs / outputs

P1 - Power in (positive) - red wire (from X12-2)

P2- Power in (negative) Ø- black wire (from X12-1)

P3 - Motor terminal B- - yellow wire

P4 - Motor terminal B - red wire

P5 - Motor terminal A- - blue wire

P6 - Motor terminal A - pink wire

P7 - Motor cable shield

8.3 Applicator / Adapter

8.3.1 Applicator- / Adapter-Types

Applicator- / Adapter - Versions

There are several different applicator types available for the Collamat C4300/C7300. Depending on the labeling job you have the choice of the following applicator types:

The table below shows the applicator types and the matching applicator boards (electronics).

nbr.	applicator	short	applicator board name	description
1	Spring loaded applicator	SLA**	Air vacuum applicator board	GS070B (empty)*
2	Fixed applicator	FXA	Air vacuum applicator board	GS070B (empty)*
3	Magnet flap applicator	MFA	Magnet flap applicator board	GS070D
4	Air vacuum applicator	AVA***	Air vacuum applicator board	GS085B
5	Blow applicator	BLA****	Air vacuum applicator board	GS085B
6	Budget applicator	BUA (!!)	NO applicator board	-----

Explanation

- (*) empty board – except connectors
- (**) standard version (Spring Loaded Applicator - SLA)
- (***) controlling the Air Vacuum Applicator
- (****) controlling the BLow Applicator
- (!!) **C4300-BUDGET:** the label scanner will be connected directly on the labeler main board (bottom terminals)!

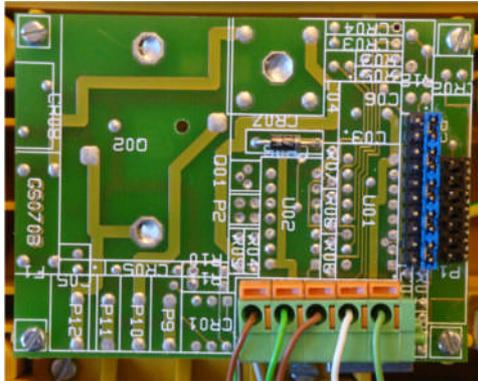
8.3.2 Connection „FUTURE-bus“

Pin assignment “Future Bus”

The 14-pin flat cable connects the main board electronic (connector X101 or X102) with the applicator board. The cable is wired behind the modular rail.

The pin assignment of the cable/connectors corresponds to the Collamat C4300-/C7300-future bus standard (see above).

8.3.3 Connections „applicator terminals“



GS070B (empty)

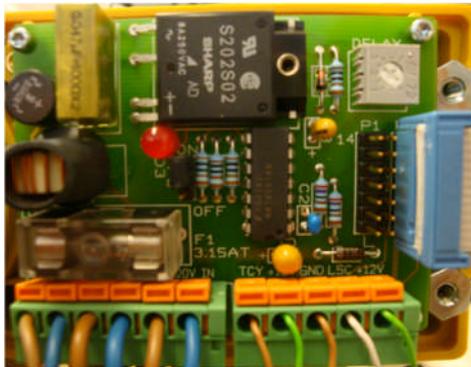
Standard applicator board **GS070B**: for all applicators – except:
Magnet flap applicator (MFA), Air-Vacuum-Applicator (AVA),
Blow applicator (BLA)

Bus connection with the main board (inside of the traction unit):

- P1 - FUTURE-Bus (14-pin) connector
- P3 - blue shortcut bridge right (labeler right* – see picture)
- blue shortcut bridge left (labeler left*)

Label scanner connectors (terminals) (from left to right):

- P8 - TCY (brown)
- P7 - 12V (green)
- P6 - GND (brown)
- P5 - !LSC (white)
- P4 - 12V (green)



GS070D

Applicator board **GS070D** - for magnet flap applicator:

Bus connections with the main board (traction unit):

- P1 - FUTURE-Bus (14-pin) connector (labeler left*)
- P2 - FUTURE-Bus (14-pin) connector (labeler right* – see picture)

Label scanner connectors (terminals) (from left to right):

- P8 P4 – see above

Power connections:

- P14 - Magnet - (brown) - to magnet (- line)
- P13 - Magnet + (blue) - to magnet (+ line)
- P12 - CP21 - N (blue) - to CP21 connector
- P11 - CP21 - L (brown) - to CP21 connector
- P10 - 230VAC – L (brown) - from X2-1 (AC-OUT) connector
- P9 - 230VAC – N (blue) - from X2-2 (AC-OUT) connector

The AC part on this applicator board is protected with a fuse **F1 = 2.5AT** (3.15AT).

Jumper (Magnet function on/off:

P3-Jumper placed on upper two pins = function on (ON) – on lower two pins = function off (OFF)

Potentiometer DELAY:

The time delay potentiometer is set to minimum (factory setting). This potentiometer is used to time delay the applicator down time (FEED signal).

Attention: Connecting the FUTURE bus cable the wrong way around can damage the applicator board.

*) see also: 7.2.1 – labeler in right or left version

GS085B

Optional Air Vacuum Adapter board **GS085B** (AVA)

See separate operator manual: **Air adapter 95/160**

.... for optional Air-Vacuum-Adapter (AVA)

.... for BLow Adapter (BLA)

8.3.4 Connection „Applicator PE“

PE Connection(s)

[all applicator types]

This PE connection is identical for all applicator boards:

The PE screw terminal below the applicator board will be used to connect:

- the PE cable from the dispensing edge
- the PE cable from the main board (X4) - or
- the PE wire - from the AC-OUT terminal X2-3 via magnet-flap applicator power cable (if a magnet flap applicator is mounted).

8.3.5 Label scanner (explanation)

Label sensor

Sender-part

[all standard applicator-versions]

The sender part of the label scanner is mounted inside of the peel off plate. The sender part is composed of:

- Sender print
- Light tube

Label sensor

Receiver-part

[all standard applicator-versions]

The label scanner receiver part is placed in a small round housing. The so called receiver head is placed on top of the sender light tube and can be easily moved across the label. Also the distance between light tube and receiver head can be adjusted (booklets). The sensor cables are special cables and should not be replaced with others.

8.3.6 Cable inputs/outputs

Cable inputs/outputs

[all applicator-versions]

All cables/wires „not“ going through the modular rail (backside) to the applicator are guided through the cable input/output clamps (bottom of the traction unit and applicator).



Special case **C4300-BUDGET**: the label scanner for this type of labeler will be connected directly to the main terminals on the main board (bottom). The label scanner cables are guided through the modular rail to the main board (entry of modular rail).

9 Software

9.1 Normal run

Application flow

Step by step: Power on the labeler, read the setting of the test jumpers, determine the corresponding application mode -> normal run or test run.
Normal run:

A low active GSC-signal on the !GSC input triggers the feeding of one label (GSC = good scanner. The RDY input has to be in active (12V) to enable the start of the labeling. The label stop will be reached after the label scanner (LSC) has detected the leading edge of the label and the adjusted predisensing distance (step numbers) have been feeded.

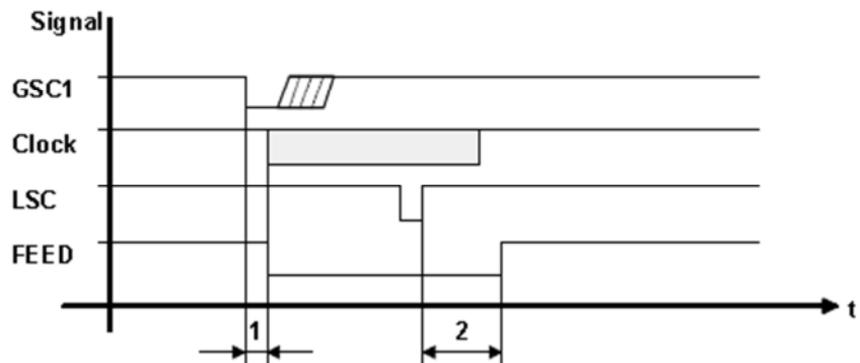


Figure: Timing of GSC1 (!GSC), !LSC and FEED

1. speed dependable position delay (not applied for C4300 and C7300)
2. Predisensing length

To keep the dispensing motor in minimum holding torque - in stop state - the motor will stay under reduced power while not turning (stop state).

The maximum feed length is set to 2000mm. If the label scanner does not encounter a „high to low“ edge (negative flank on LSC line), the labeler will stop immediately and the error output will be activated for a short time period (!ERR / ERR).

The stepper motor controller is set to microstep mode (800steps/revolution). The slowest dispensing speed is 1m/Min (max. left turn on potentiometer „SPEED“). The maximum dispensing speed is 25m/Min (C4300) or 50m/Min (C7300) = max. left turn on „SPEED“ potentiometer.

9.2 Test runs

Details

Test-jumper: (see also chapter 7.6.3)
 These functions use the start-up- and break-ramps of a normal dispensing run (depending on the potentiometer adjustments). The test runs will be used to check the stepper motor, motor controller and the microcontroller.
 Caution: change test jumper settings only in power OFF mode!

9.2.1 Test run 1**Application flow**

Interval test run with adjusted dispensing speed (from SPEED-Potentiometer resp.from external operator panel).

Feeding distance: 2000mm

Pause: 1500 ms

9.2.2 Test run 2**Application flow**

Interval test run with adjusted dispensing speed (from SPEED-Potentiometer resp.from external operator panel).

Feeding distance: 2000mm

Pause: 500 ms

9.2.3 Test run 3**Application flow**

Nonstop test run with adjusted dispensing speed (from SPEED-Potentiometer resp.from external operator panel).

Feeding distance: endless

Pause: no

10 Maintenance

10.1 Safety

Basics

**WARNING!****Danger of injury due to incorrectly performed maintenance work!**

Incorrect maintenance can cause serious injury or damage.

Therefore:

- All maintenance work may only be carried out by qualified personnel authorized and instructed by the operator.
- Inform the operating personnel before starting maintenance and repair work.
- Before starting work, sufficient space for assembly should be made.
- Pay attention to tidiness and cleanliness at the assembly site! Loose, stacked or scattered components and tools are a source of accidents.
- If components are replaced:
 - Pay attention to correct fitting of replacement parts.
 - Replace all fixing elements correctly
 - Observe the correct screw-tightening torques.
- Before switching on, ensure that all covers and safety devices are correctly installed and function correctly.
- After finishing maintenance work, check that the safety devices function correctly.

Pneumatic system

**WARNING!****Danger of injury due to compressed air!**

The compressed air in the pneumatic system can escape without warning and set pneumatically driven components in motion, causing serious injuries.

Therefore, before starting any work:

- Switch off the pneumatic system and secure against switching on.
- Depressurize all components which are under pressure.

Maintenance

Electrical equipment



DANGER!

Danger of death due to electrical current!

Contact with live components can cause danger of death.

Electrically driven components can start to move without warning and cause extremely serious injuries.

Therefore:

- Before starting work, disconnect the power - supply and secure it against being switched on again.
- All work on the electrical equipment, on individual electrical components and on the connections may only be performed by qualified electricians.

Personal protective equipment

For all maintenance work, the following must be worn:

- Industrial safety clothing
- Protective gloves
- Safety footwear
- Goggles

Securing against switching on again



DANGER!

Danger of death through unauthorized switching on!

During maintenance, there is a danger that the power supply will be switched on again without authorization. This causes danger of death for those in the danger area.

Therefore:

- Before starting work, disconnect all power supplies and secure them against being switched on again.

Environmental protection

Observe the following environmental protection instructions when carrying out maintenance:

- At all lubrication points which are provided with lubricant manually, remove escaping, used, or surplus grease and dispose of this according to the local regulations.
- Collect drained oil in suitable containers and dispose of according to the local regulations.

10.2 Maintenance

The following sections describe the maintenance work necessary for optimum and fault-free operation. The maintenance intervals are to be observed.

If the regular checks show increased wear of individual components or functional assemblies, the operator must shorten the maintenance intervals according to the actual wear.

Changes compared with normal operation (higher power consumption, temperatures, vibrations, noise etc., or the triggering of monitoring devices) are signs that the functions are impaired. To avoid faults which could cause direct or indirect injuries or damage, the maintenance personnel must be informed immediately.

In case of queries regarding maintenance work and intervals: contact the manufacturer (service address → page 2).

In addition to these operating instructions, the instructions in the Appendices for the installed components also apply. The information which they contain – in particular the safety information must be observed!

Interval	Maintenance work	To be performed by
Daily	Clean dirt, dust and adhesive deposits from traction roller, pressure roller, guide roller and dispensing edge. Check ease of movement of moving parts. Visual inspection of condition and damage to the machine	Operator
Monthly	Clean dirt from entire machine Check condition and correct function of electric cables, switches and safety devices (see Technical Manual) Check pneumatic components and hoses for correct connection and function (units with special applicator only)	Operator
Every 6 months	Check all fixing screws for tightness. Tighten if necessary. Check/adjust rewriter clutch and paper break!	Specialist
Annually	Remove heat sink and motor controller – properly remove thermal heat paste from surface, then use new thermal heat paste before reassembling the motor controller and heat sink.	well trained specialist

10.3 Cleaning

On occurrence of superficial dirt, proceed as follows:

1. Switch off the machine and secure against switching on again.
2. Remove dirt correctly. Note:
 - Do not use aggressive cleaning agents.
 - Absorb oil deposits with oil-absorbing materials (e.g. sawdust).
 - Observe local regulations to dispose of cleaning cloths and processing residues in an environmentally friendly manner.
 - After cleaning work, check that all opened covers and safety devices are closed and function correctly.

**BEWARE!**

The device can be damaged by incorrect cleaning!

Aggressive cleaning and auxiliary agents can damage or destroy the guide rollers/guide plates, compressed air hoses, electrical cables and nearby components.

Therefore:

- Do not use cleaning agents with aggressive ingredients.
- Never remove adhesive residues with sharp-edged or pointed objects, knives or similar tools.

11 Faults, repair and maintenance work

This chapter describes the possible causes of faults, and the work needed to remedy these.

If there is an increase of similar faults due to greater than average use, the maintenance intervals must be shortened according to the actual use.

Contact the manufacturer in case of faults which cannot be remedied with the aid of the following information (→ S. 2)!

11.1 Safety – Warnings

Remarks See safety aspects in chapter 9. Maintenance

11.2 Restarting after remedy of faults

After remedy of the fault or removal of the cause of interruption:

1. Reset the emergency stop device.
2. Acknowledge the error message or fault on the control unit.
3. Ensure that no-one is in the danger area.
4. Start the machine according to the instructions in the chapter "Start-up".

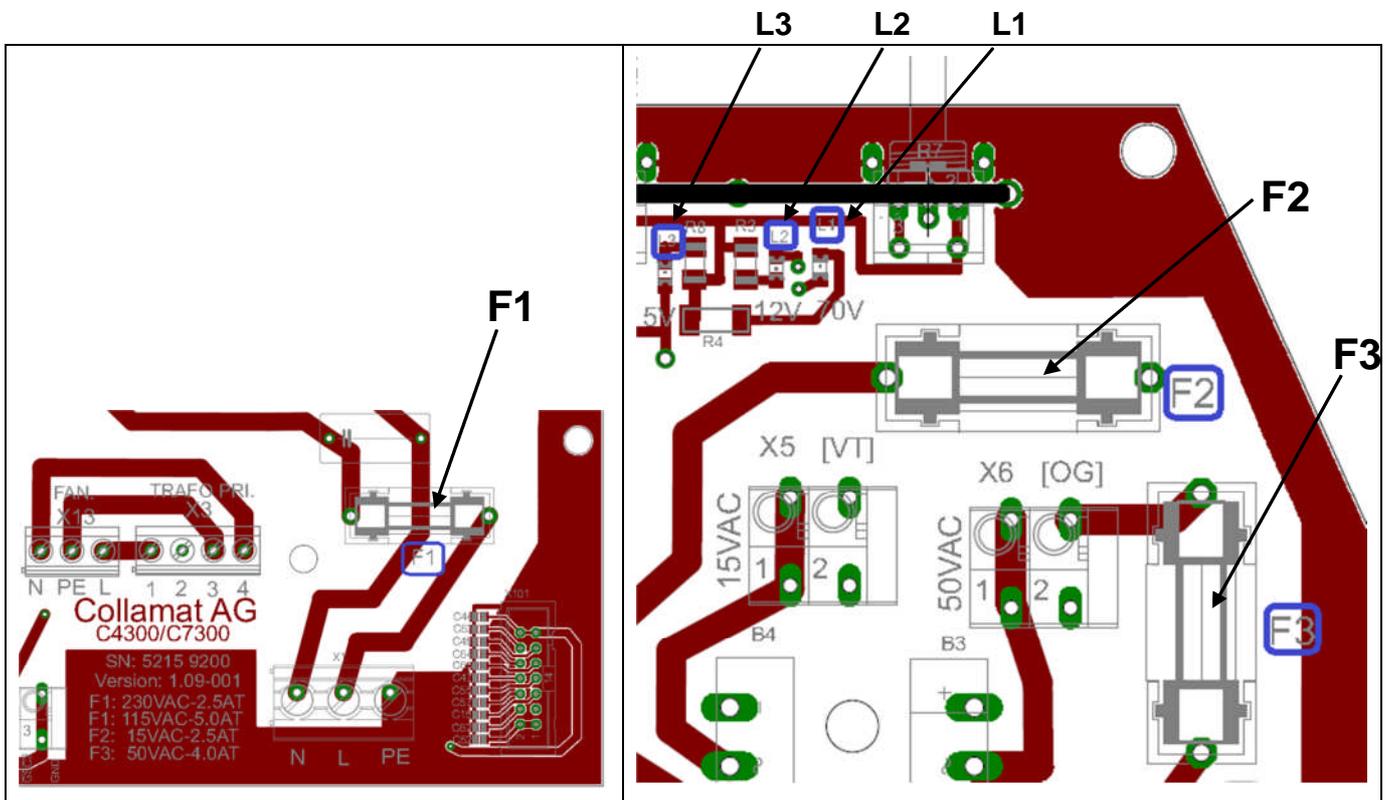
11.3 Check fuses

Fuse	Voltage	Value	Part.Nbr.
F1 115VAC 230VAC	Voltage	5.0AT 5*20mm	74030822
	Voltage	2.5AT 5*20mm	74030277
F2	Logic 12V, 5V	2.5AT 5*20mm	74030277
F3	Motor- Voltage (77VDC - C7300)	4.0AT 5*20mm	74030800
	Motor-Voltage (49VDC - C4300)	4.0AT 5*20mm	74030800

Remarks Remove the back cover of the labeler to get access to the fuses. Check the main fuse F1 if the red lamp in the power main switch is not illuminating (while in power on state). If an adapted peripheral unit is working correct (e.g. sensor, printer, flat printing unit, ...) and the labeler itself is not labeling – then the fuse F3 is probably blown (motorcontroller voltage)!? Apply the same safety rules as already described in chapter 9. You could use the error-checklist for troubleshooting (see at the end of this manual).

11.4 Status LED

LED	Function	Error
5V (L3)	Illuminates if +5V for logic is in range (ok)	Fuse F2 (F1)
12V (L2)	Illuminates if +12V for sensors is in range (ok)	Fuse F2 (F1)
70V (L1)	Illuminates if 77V for motor controller (C7300) is in range (ok) Illuminates if 49V for motor controller (C4300) is in range (ok)	Fuse F3 (F1)
MC-ERR (L6)	Illuminates if the motor controller is ok.	Overheat, shortcut, overvoltage; fuse F3 (F1)



F1 = Fuse F1

L1 = LED1, L2 = LED2, L3 = LED3, 2 = Fuse F2 and F3 = Fuse F3

11.5 Error-output

Problem	Possible cause	Troubleshooting	Person
No labels	No labels on label roll (end of paper)	Change label roll	Operator
	The paper break is not on the paper web (Option paper break sensor)	Position paper break	Operator
LSC problem	Faulty adjustment of the label sensor. The label sensor did not see a label gap (backing paper to label transition) during a distance of 2m paper feed!	Adjust label sensor	Specialist or operator
Motor controller error	The motor controller signaling a hardware - or status error.	Check motor controller voltage and temperature (heat sink)	Specialist
Peripheral device(s) not ready	A connected peripheral device signals its NOT READY state (via !RDY – input) if the labeler is not allowed to dispense labels. The error output will be set ONLY- if NOT READY is signaled and the good scanner tries to start the labeling process!	The labeling process can be started – ONLY – if the !RDY signal is not set!	Specialist or operator

11.6 Table of faults

Fault	Possible cause	Remedy	Execution by
- No power	No mains power	Check power line	Operator
	Blown fuse F1	Check main fuses Check fuses on mainboard	Specialist
	Fault in electrical system (cable or board)	Establish and remedy fault	Qualified electrician or manufacturer
Power on - but NO labeling	Operator's safety device blocked or faulty	Determine cause and remedy. Then ensure that no-one is in the danger area of the device , and acknowledge the interruption	By specialist authorized by operating company
	Fault in the safety chain of the entire plant		
	Pressure roller open		
	!READY-signal set		
	Paper break		
	Motor controller hardware error		
Power ON - no correct labeling	Erroneous parameter adjustment (potentiometer)	Check parameter settings SPEED,PREDISP,SENSOR	Operator

Faults, repair and maintenance work

Fault	Possible cause	Remedy	Execution by
Incorrect or poor positioning of the labels	Collamat C4300/C7300 is not correctly aligned with the goods conveyor	Correctly align Collamat. Observe correct height adjustment.	Specialist
	Poor label quality	Try with new label roll	
Motor error	Motor overloaded	Check paper web path – too much friction (dirt, glue,...)	Specialist
	Ambient air temperature too high	Check air temperature (see specification)	
Wrong turning direction of motor	Check jumper Motor Direction (left/right)	Change jumper setting	Specialist
Product sensor does not work	Broken cable	Check connecting cable	Specialist
	Position and alignment not correctly adjusted	Adjust position and alignment	
	Sensor not adjusted	Adjust sensor	
Product sensor reacting on the falling edge of the sensor signal	Check control line of the good scanner (bright/dark switching) Setting depends on the make and type of the sensor and/or on the surface of the product	Check sensor control line: (e.g. for the Sick Sensor WT150-P460 – the control line has to be set to V++ (12V) – see sensor data sheet !	Specialist
Motor blocked	Too much friction on the paper web path (dirt, glue,...)	Check paper break Check Rewinder adjustment Clean paper path (rolls, paper break, dispensing edge,	Operator Specialist

11.7 Maintenance- and Repair- works

Only well skilled labor is allowed to do maintenance- and repair-works on the Collamat C4300 / C7300!

(see also C4300- / C7300 - Spare Part Book)

11.8 Taking out of service and disposal

A Collamat C4300/C7300 which can no longer be used should not be disposed of as an entire unit, but rather, should be dismantled into its component parts and recycled according to the type of materials. Materials which cannot be recycled should be disposed of in an environmentally friendly manner.

- Before the Collamat C4300/C7300 is taken out of service and disposed of, it must be completely disconnected from the power supply and the compressed air network.
- The dismantling and disposal of the Collamat C4300/C7300 may only be carried out by specialist personnel.
- If hazardous or poisonous materials have been labeled, the Collamat C4300/C7300 must be decontaminated before disposal.
- The Collamat C4300/C7300 must be disposed of according to the applicable national regulations.

12 Abbreviations, signals, terms,...

12.1 Abbreviations - general

ESD	E lectro S tatic D ischarge
EMC	E lectro M agnetic C ompatibility
GND	G rou N D (shield)
LCD	L iquid C rystal D isplay
LED	L ight E mitting D iode
nc / NC	not connected

12.2 Signal names

ERR	Error signal – will be set in case of any labeler error condition (labeler in stop)
ERRIN	ERR or input – from external peripherals
FEED	FEED -signal, active while traction motor is moving
FLAP	Magnet flap applicator control signal
GND	G rou N D (shield)
GSC	G oods S canner input
IFD	galvanic isolated (photo coupler) FEED signal (feed = paper is moving)
nc	N ot C onected
NOK	N ot O K
OOL	O ut O f L abel input
READY	IRDY = not ready input from external peripherals
DIR	Motor turning direction (output to motor controller)
STEP	Puls output to motor controller
TUNIT	Traction UNIT , traction roller open (lift up)

12.3 Terms - explanations

Acceleration:	Motor parameter. – steepness of the ramp up course (speed increment)
Applicator:	Part of the labeler where the label will be stripped from the backing paper and moved to the product (good) - by moving the backing paper over the (sharp) dispensing edge. There are several special applicators available: see air vacuum applicator: AVA see magnet flap applicator: MFA
AVA:	Air Vacuum Adapter /Applicator
Air-Vacuum Applicator – 1:	- Label is moved to vacuum plate. - the product (good) triggers the start of the application - the label on the suction (vacuum) plate is pushed to the surface of the product (by pneumatic piston(s)) a special adapter board is used to control the applicator.
Board:	An assembled control unit will be called print or PCB in this document
CE-Sign:	Product certificate - Conformity European
Collamat:	Brand name for the labeler unit from Collamat AG

Collamat C4300/C7300:	Type identification of the Collamat C4300-serie and the Collamat C7300-serie
Dancer:	moving part of the unwinder controlling the paper flow
Deceleration:	Motor parameter. – steepness of the ramp down course (speed decrement) (negative acceleration)
EMC	ElectroMagnetic Compatibility (EMV – german)
Ext. operator panel:	The operator panel will be removed from the original position and moved to a better place close to the labeler (better access of the operator panel for lying down mounting or for overhead mounting). Use the ext. operator panel mounting set
Flap applicator:	see MFA
FXA	Fixed applicator – the dispensing edge is fixed to the applicator housing. see also SLA, MFA or AVA
Galvanic isolation:	electrical NOT conductive connection
GSC:	GoodScanner – Product sensor (optical, capacitive, ultrasound,) Type and brand depending on product shape and material.....
Head open:	see TUO
IP:	Protection class (e.g. IP40)
Label sensor:	see LSC
Labeling speed:	speed of the product (good) on the conveyor belt = labeling speed
LC-Display, LCD:	Liquid Cristal Display – see (optional) operator panel
Left version:	paper will be drawn (dispensed) from right to left (view to the front of the labeling unit)
LSC:	Label Scanner – part of the applicator. The LSC includes two parts: Label sensor sender unit (LSC sender) Label sensor receiver unit (LSC head)
Magnet Flap Applicator: MFA:	1- waiting position: dispensing edge is pulled up by a torsion spring 2- label is moving: the dispensing edge will be pushed down to the product (activated electromagnet) 3- label stop: the electromagnet will be deactivated – the dispensing edge moves back to the waiting position The GS070D MFA Board will be used
Modular rail:	modular rail 300x30mm, 500 or 700mm in length - or user defined
Mounting stand:	several mounting stands are available (with corresponding clamping piece) I
C4310 R:	labeling unit type: Collamat C4300-serie with a max. paper width of 95mm in R = right version

Abbreviations, signals, terms,...

OOL:	Out Of Label - see paper break / paper break check
Operator Panel:	used to controlled the labeling unit, used to set the system parameter like Labeling speed, label predispensing and label sensor.
Paper break:	the paper break is used to controlled break the paper moving (paper path from unwinder to dispensing edge) The (optional) paper break control is able to sense a paper break situation (OOL = Out Of Label) = control unit (see also optional OOL) – integrated in the paper break
Position:	Position of the label on the product
Predispensing:	Predispensing of the label on the dispensing edge. Section (mm) of the l label on the dispensing edge overlapping the dispensing edge.
Rewinder:	Passive rewinder: the rewinder will be driven by the main stepper motor (belt driven) – a friction clutch is used to control the movement.
Right version:	paper will be drawn (dispensed) from left to right (view to the front of the labeling unit)
Start frequency:	max. allowed stepper motor frequency (start from stop to start frequency – without ramp up function)
Step distance:	is the distance the paper is moving forward while moving the stepper motor one step forward – also called step resolution
SLA	Spring Loaded Applicator – the dispensing edge will be pushed down toward the product (spring force)
Stop accuracy:	accuracy of the label position on the dispensing edge
Stop frequency:	max. allowed stepper motor frequency (stop motor from stop frequency to motor stop – without ramp down function)
TUO:	Traction Unit Open – the pressure roller is NOT pressing on to the traction roller (lift up position of the pressure roller)
Traction unit:	part of the labeler – stepper motor moving the paper (backing paper) over the dispensing edge
Good sensor:	we can offer/recommend different good sensors - depending on the constitution of the product (good): ask for Sick WT150-P460, Sick WL150-P430 or others – see also GSC

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14 APPENDIXES

Register	Description	details
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B	CE – Declaration of incorporation	
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D	UL- / CSA - Conformity	
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Register A

CE Declaration of Conformity

The manufacturer: **Collamat AG**
Bodenmattstrasse 34
CH-4153 Reinach – Switzerland

declares that the product:

Series: **Collamat C4300- / C7300-Serie**
Serial numbers: **C4300: from 0003 to**
C7300: from 0003 to
Year of manufacture: **from 10/2012 to**

relates to all basic requirements of the below-mentioned directives (including there changes and extensions):

2006/42/EG - directive on machinery
2004/108/EG - electromagnetic compatibility (EMC)

Authorized person to compile the complete technical documentation for this unit according to appendix VII - chapter A of the machinery directive 2006/42/EG is:

Collamat AG, Paul Schneider, Bodenmattstrasse 34, CH-4153 Reinach, Switzerland

Applied harmonized standards, in particular are:

- EN ISO 60204-1 Safety of Machinery - Electrical Equipment of Machines – Part 1: General Requirements-IEC 60204-1: 1997;
- EN ISO 12100-1 Safety of machinery -- Basic concepts, general principles for design – Part 1: Basic terminology, methodology
- EN ISO 12100-2 Safety of machinery -- Basic concepts, general principles for design – Part 2: Technical principles
- EN ISO 141121-1 Safety of machinery, Risk assessment. Principles.

Remark: **The CE-Declaration of Conformity is valid only – if the Collamat C4300/C7300 is safely mounted on a (Collamat AG) approved rack/stand.**



Issued in Reinach: 01. October 2012

by:

Collamat AG – Bodenmattstrasse 34, CH-4153 Reinach, Switzerland

Authorized person: CEO - Frank Ankersen

Register B

CE – Declaration of incorporation

The manufacturer: **Collamat AG**
Bodenmattstrasse 34
CH-4153 Reinach - Switzerland

declares, that the machinery / machinery component named below as:

Series: **Collamat C4300- / C7300-Serie**
 Serial number: **C4300: from 0003 to**
C7300: from 0003 to
 Year of manufacture: **from 10/2012 to**

is intended to be assembled with other machinery / machinery components to constitute machinery , witch shall not be put into service until the assembled machinery has been declared in conformity with the provisions of the EC Council Directive on Machinery **2006/42/EG** (including there changes and extensions):
Appendix I: article: 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.3.4 and 1.5.1.

The above mentioned machinery relates furthermore to the regulations and directives of:
2006/95/EG (low voltage directive) and **2004/108/EG** (electromagnetic compatibility directive - EMC).

Applied harmonized standards, in particular are:

EN ISO 12100-1	Safety of machinery -- Basic concepts, general principles for design Part 1: Basic terminology, methodology
EN ISO 12100-2	Safety of machinery -- Basic concepts, general principles for design Part 2: Technical principles
EN ISO 60204-1	Safety of Machinery - Electrical Equipment of Machines Part 1: General Requirements-IEC 60204-1: 1997;
EN ISO14121-1	Safety of machinery. Risk assessment. Principles

A technical documentation set of this piece of machinery is available on demand - in electronic form (for governmental use only). The corresponding documentation to this piece of machinery has been issued according to appendix VII part B.

Responsible person for the composition of all technical documents according to Appendix VII – chapter B of the Directive on Machinery 2006/42/EG is:

Collamat AG, Paul Schneider, Bodenmattstrasse 34, CH-4153 Reinach, Switzerland

Issued in Reinach: 01. October 2012

by:



Collamat AG – Bodenmattstrasse 34, CH-4153 Reinach, Switzerland

Authorized person: CEO - Frank Ankersen

Register C



C4300/C7300 RoHS-/RoHS2- Conformity Declaration



The EU Directive 2002/95/EC (RoHS) and new the EU Directive 2011/65/EU (RoHS2) prohibits the use of the substances listed below (regarding limitation of use of certain dangerous substances in electric and electronic devices).

Definition of RoHS conformity:

RoHS-/RoHS2- conformity means that the product does not contain any of the prohibited substances above the limit levels, as described by the directive and (for components) the product may be processed at higher temperatures as required for a lead-free soldering process.

The prohibited substances and the maximum allowed limit levels per homogeneous substance are:

Substance	Limit level
Lead	0.1%
Mercury	0.1%
Chrome VI	0.1%
Polybromated biphenyl (PBB)	0.1%
Polybromated diphenylether (PBDE)	0.1%
Cadmium	0.01%

All part suppliers for this product/device (see product details below) have confirmed that their components/component groups are **RoHS/RoHS** and **WEEE2** conform.

Recycling

Please also consider the EU Directive 2002/96/EG **WEEE2** (Waste Electrical and Electronic Equipment) about the redemption and the disposal of electric- and electronic waste (equipment). Mission of the WEEE2 is always: Reduction of the electric / electronic waste and the environmental burden as well as the conservation of the natural resources.

Several countries (out of Switzerland) require from the manufacturer or from its abroad reseller a so called "old (waste) electric equipment registration" (e.g. for B2C-products) – e.g. for Germany - this would be the public trust „ear“. Collamat AG is obligated to withdraw all used Collamat devices (B2B-products -delivery date after February 2nd. 2003), if a „local“ professional waste management by the abroad reseller - according to WEEE2 – is not available.

Collamat AG has taken all necessary steps to ensure the accuracy of this statement. The declaration is only binding for Collamat products that are purchased after the production date 13.02.2003.

Product details

Order number: C4300 = 5215.9200 / C7300 = 52159211
 Description/Manufacturer/Brand: Labeling-System / Collamat AG / Collamat C4300- / C7300-Serie
 Manufacturer Identification: Collamat-Cs3ww D
 whereas: s = max. speed, ww = width, D = turning direction
 4 = max. 25m/Min 10 = max.95mm R = right
 5 = max. 50m/Min. 20 = max.160mm L = left

Date: Reinach, October 10th. 2012

Collamat AG, Bodenmattstrasse 34, CH4153 Reinach, Switzerland

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Register D

UL- CSA- Conformity

Concerning: **UL- / CSA- approval** for the Collamat Labeling series: **C4300 and C7300**

The manufacturer: **Collamat AG**
Bodenmattstrasse 34
CH 4153 Reinach
Switzerland

General:

Together with the clarifications for the “CE-declaration” the potential to reach the “UL- /CSA-approval” standard has been checked. Many of our distributors have already declared the UL- (CSA) status of the concerning parts / assemblies sold to Collamat AG (for the C4300-/C7300-serie with UL-CSA- approval). A number of inquiries are still pending – but we hang in there until we have checked the entire part-list of the HMC06-serie. We also tend to use alternative parts/assemblies for those units requiring the “UL- /CSA-approval” standard.

Cables:

UL approved cables/wires are particularly not easy available in Europe. There are a few cables required (especially for the Label Sensor (LSC) which we do not get in the corresponding UL specification (cable diameter, flexibility,). The cables used for the Collamat C4300/C7300-serie are (easy available European) standard cables/wires – which are OK to comply with the CE- conformity / declaration. We will prepare a separate cable set with UL approved cables only (this will be done together with our main cable assembler).

PCB's:

UL- / CSA- approval:

Print materials according to fire protection class UL 94 / V0 (category QMZS2)

Production / assembly of PCB according to UL accredited production process (ZPMV2)

UL94 = „Tests for Flammability of Plastic Materials for Parts in Devices and Applications“

Equal to IEC/DIN EN 60695-11-10 and -20 and equal to CSA C 22.2

Our PCB manufacturers and the board assemblers have to prove (individually) their conformity to the above rules and regulations.

Where/what:

The status of this inquiry will be listed and continuous updated in the internal electronic part-list of the Collamat C4300-/C7300-series. The non electronic parts of the Collamat C4300/C7300-series are not covered in this study!

Reinach, den 1. Oktober 2012

Collamat AG, Bodenmattstrasse 34, CH4153 Reinach, Switzerland

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Register E

Lifting of loads

Heavy lifting and/or heavy labor are relative terms, as individual capabilities are very different. Work that could be performed easily by a young, strong man may be unacceptable exertion for a weaker man, an older man, or for a woman or child.

The EC Directive 90/269/EWR and the Load Handling Regulation make clear statements regarding limit levels and frequencies for load handling (LASI Publication LV 9). The German Federal Ministry recommends that acceptable loads be based on age, lifting frequency and gender. For occasional lifting and carrying, women older than fifteen years of age may move loads of 15 kg; for frequent lifting and carrying, loads of 10 kg are acceptable (occasional = less than twice hourly, max. three or four steps; frequent = more than twice or three times hourly and more than four steps).

For pregnant or nursing female employees, the Mother Protection Laws are valid. In Par. 4 Sect. 1 and Sect. 2 of the Mother Protection Law, general work prohibitions are clarified, including lifting and carrying of loads. Pregnant or nursing female employees may not lift loads of more than 5 kg frequently or 10 kg occasionally by hand.

See also EC Directive 89/391/EWR.

Working with a label dispenser (Collamat C4300/C7300):

The unwinder of the Collamat C4300/C7300 can accept label rolls that have the following maximum dimensions:

- Roll diameter: 350mm
- Roll width: 160mm

Depending on the type of paper and carrier material, a label roll with these maximum diameters may weight up to 1 kg.

For this reason, label rolls that exceed a weight of 15 kg must be moved with a lifting system onto the unwinder unit or

..... an alternative assembly of the unwinder unit must be selected, such as in which the label rolls can be loaded onto the unwinder unit near the ground with a forklift. For this, a paper guide unit is generally needed, which moves the label paper from the unwinder unit (near the ground) to the label dispenser Collamat C4300/C7300 (generally at working height / conveyor belt height).

If label rolls of more than 15 kg are loaded onto a standard Collamat C4300/C7300 the unwinder unit must be supported with a stabilization set.

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Register F

Error Checklist

Unit identification:	Labeler Serial Nbr:	Collamat Typ:		
	Nbr.	C4310 R C4320 R C7310 R C7320 R	C4310 L C4320 L C7310 L C7320 L	
Environment:	Supply voltage (power):	Supply frequency Hz:	Temperature °C:	
	Relative humidity %:	Degree of radio interference EMC (Burst):	Degree of radio interference ESD (Static):	
Labels::	Width:	Length:	Gap:	
	Thickness:	Transparency:	Material:	
Backing paper:	Width:	Thickness:	Transparency:	
Good (product):	Type:	Material:	Form:	
	Length:	width:	Height:	
	Speed: m/min	Length in transport direction:	Gap between two goods:	
Labeler:	Speed: m/min	Cadence (pcs/min):		
Adjustment:	Predispensing mm:			
	Sensor (1...100)			
Specials:				
Machine – Environment:	Good transportation:	In-feed unit:	Out-feed unit:	
	Other units involved in this process:			
Peripherals:	1	2	3	
Shielding:	Power lines:	Sensor lines:		
ESD-behavior:	Description of problem:			
Description of disturbance reaction:	Frequency of error occurrence:	constantly: periodically: sporadically:	each	sec. min.
Date + Time of error:				
Remarks:				
Error registered by:	Name:			
	Date:			