

the team to trust ■ ■ ■

operation manual ■ ■ ■

Cimjet 300®



FOR INFORMATION



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SECTION 1

GENERAL INFORMATION

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1 General Information

1.1 Introduction

This Manual along with the Cimjet 300 Quick Start Guide set out to explain how to safely install, operate and service your Cimjet 300.

The Operator Manual is available in PDF form in various languages on the Cimjet 300 CD.

The manual format is designed to be printed onto 8" x 11" (203mm x 279.5mm) paper, but can also be printed onto 8.5" x 11" (216mm x 279.5) (Previous Markem-Imaje manual paper size) or A4 (210mm x 297mm)

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SECTION 1 - GENERAL INFORMATION

1.2 Copyright Notice

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Reproduction of any or part of this manual in any form whatsoever without the expressed written permission of Markem-Imaje is forbidden. The contents of this manual are subject to revision without notice.

All efforts have been made to ensure the accuracy of the contents of this manual. However, should any errors be detected, Markem-Imaje would greatly appreciate being notified.

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The use of non genuine Markem-Imaje consumables and spare parts may adversely affect the performance of the product and could invalidate the warranty.

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1.2.1 Contacting Markem-Imaje

Thank you for choosing Markem-Imaje to provide printing solutions. If questions should arise, please contact the local business centre that assisted with your purchase.

1.2.2 Related Documentation

Below is a list of documents in the Cimjet 300 related documentation set.

- CoLOS Create Pro
- CoLOS Control
- CimComms Protocol
- Ethernet
- Customer Configurable I/O

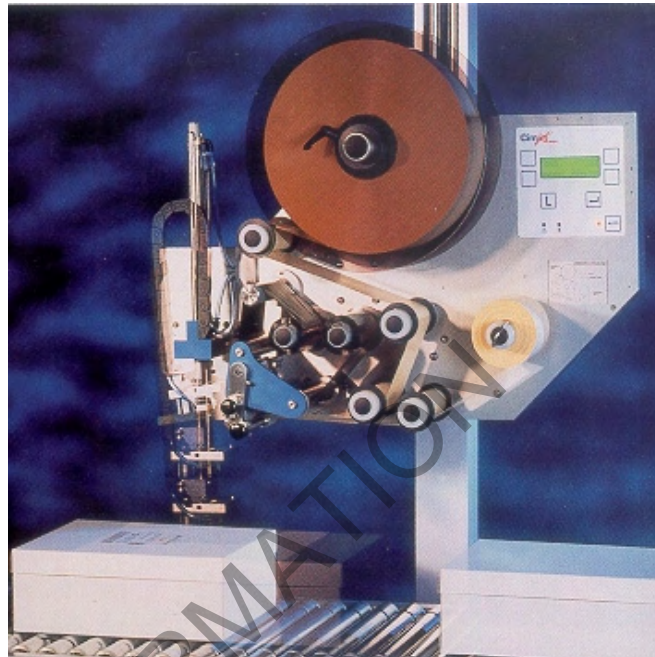
Useful Web Sites

www.MARKEM.com

www.myMARKEM.com

1.3 Description

The Cimjet 300 is a high speed compact label printer and applicator. It uses a high resolution, high speed, thermal printhead combined with thermal ribbon or chemi-thermal labels to print on plain or pre-printed labels.



SECTION 1 - GENERAL INFORMATION

1.4 Options

1.4.1 Stand

A purpose built adjustable height stand is available to mount your Cimjet 300. The base of the stand has wheels fitted for easy repositioning of the machine. The stand provides for three different orientations of the machine to be utilised along with a mounting position for the air regulator.

1.4.2 Beacon Light

The beacon light can be mounted in a fixed position on the Cimjet 300 stand, or in a prominent position on the production line.

The beacon has a three light system: Red, Orange and Green.

- When the red light is on, the Cimjet 300 has switched out of Auto mode (to Set Mode) or there is a fault on the machine.
- When the Orange light is on, Cimjet 300 will still work normally, and warning messages are displayed, e.g. 'low paper', 'remove labels' etc.
- When the Green light is on, Cimjet 300 is ready to carry out the print and apply process or is awaiting a signal to start printing.

1.4.3 Wipe Down Roller

An optional wipe down roller can be provided to assist with the secure application of the label. This should be mounted on the conveyor after the label has been applied to the product.

1.4.4 Ethernet

An optional Ethernet card can be fitted to the Cimjet 300. This can be configured to communicate on the site LAN. Ethernet provides a much faster download times.

1.4.5 ASCII Comms

The Cimjet 300 ASCII comms function, allows system integration engineers to update image information or receive status information.

1.4.6 Networking

Cimjet 300 provides options for communicating with PCs and other Mainframe computers.

The methods available are:

- A single RS-232 serial link to a PC or Mainframe computer.
- Two separate Multi-drop (RS-485) serial links.
- The PC must be fitted with two RS-485 Network cards. Each serial link can have up to 31 printers connected plus a single PC connection.
- Optional Ethernet link.

1.4.7 Bar code Scanners

Cimjet 300 provides an option to use a bar code verification laser scanner.

Markem-Imaje recommends:

- Data Logic DS2100
- Sick CLV 431

Upon installation, the scanner is preset to read bar codes until they are verified. If for any reason the bar code cannot be read, the machine will fault out after consecutive fails have been reached. The number of consecutive fails is user-defined and set in Laser Parameters

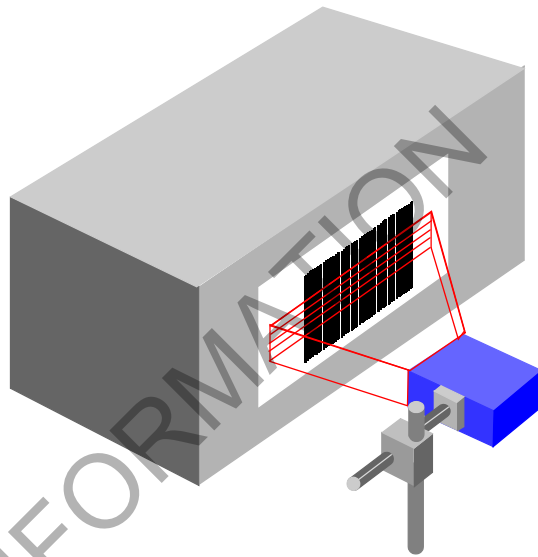


Figure 1-1: Bar code Verification Laser Scanner

Note: Make sure that the maximum light emission power and classification for any /all laser(s) used on this machine, do not exceed those specifications stated in the appropriate laser safety standards IEC825. When irregularities are detected in the laser beam generation, internal protective devices must switch the laser beam off.

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1.5 Specification

Table 1- 1: Specification

Max Print Area	Width - Dependant on the printhead type fitted. Length - 400 mm.
Label Size	Applicator dependant.
Print Speed	8 dot/mm printhead - 150 mm/sec (6 inches/sec) 12 dot/mm printhead - 300 mm/sec (12 inches/sec) 12 dot/mm corner edge printhead - 400 mm/sec (15.75 inches/sec)
Printhead Resolution	8 dots/mm (200 DPI) or 12 dots/mm (300 dpi)
Print Method	Thermal Transfer or Direct Thermal
Apply	Applicator dependant.
Cycle Rate	Applicator dependant.
Power Supply	~ 115 / 230V, 50 - 60 Hz, 2.6 / 1.3A
Air Supply	6 bar/90 psi (maximum) dry, uncontaminated.
Air Consumption	Applicator dependant.
Environmental	Operating environment of: 39° F to 104° F (4° C to 40° C)
Dimensions	508 mm x 520 mm x 350/395 mm (+ applicator) See Dimensional Drawings
Weight	22 kg. (48.4 lbs)
Ribbon Grades	Grade: 3100 (Standard wax) or Grade: 5100 (Economy)
Ribbon Sizes	50 mm x 450 mm 70 mm x 450 mm 90 mm x 450 mm 110 mm x 450 mm
Colours	Black

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Table 1– 1: Specification

Font Styles	More than 1,000 bitmap and scalable font styles are available including non Roman Characters, both resident and downloadable, plus use of the True Type fonts as bitmap data.
Font Sizes	Independent height / width text magnification (limited only be the maximum print area and printhead resolution.
Orientation	Any mix of orientation.
Bar codes	ITF, Code 39, Code 128, EAN 8, EAN 13, EAN 128, UPC A and UPC E, UCC 128 Linear Reduced Space Symbology (RSS) PDF 417, QR Code, Data Matrix
Graphics	Any symbols and logos, 300 dpi and any size up to the maximum print area, or 64kB image size (*.bmp format).
Special Functions	Automatic Real Time, Date, Batch and Shift Information. Automatic 'Best Before End' offset calculation and coding. Incremental alphanumeric text and bar codes.
Local Memory	512 kB
Machine Interface	Inputs: 'Print' input signal status. Outputs: Interlock Output
Operator Interface	80 character (2 x 20) backlit LCD display with six hard buttons. and Wipe Clean Key Panel for local entry of variable information, complete with Full Diagnostics capability.
Computer Interface	RS-232, RS-422, RS-485 (2,400 to 57,600 baud rate). For more Communication Options see 'Options' below.
Design Software	Markem-Image CoLOS Create Pro for Windows design package, for IBM compatible PC Operation.
Network Software	Markem-Image CoLOS Control for Windows network - for data transfer, remote operation and machine monitor / data logging operations on for IBM-compatible PCs.
Options	Ethernet, ASCII communication is available as an option to be ordered at point of sale.

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1.6 Machine Dimensions

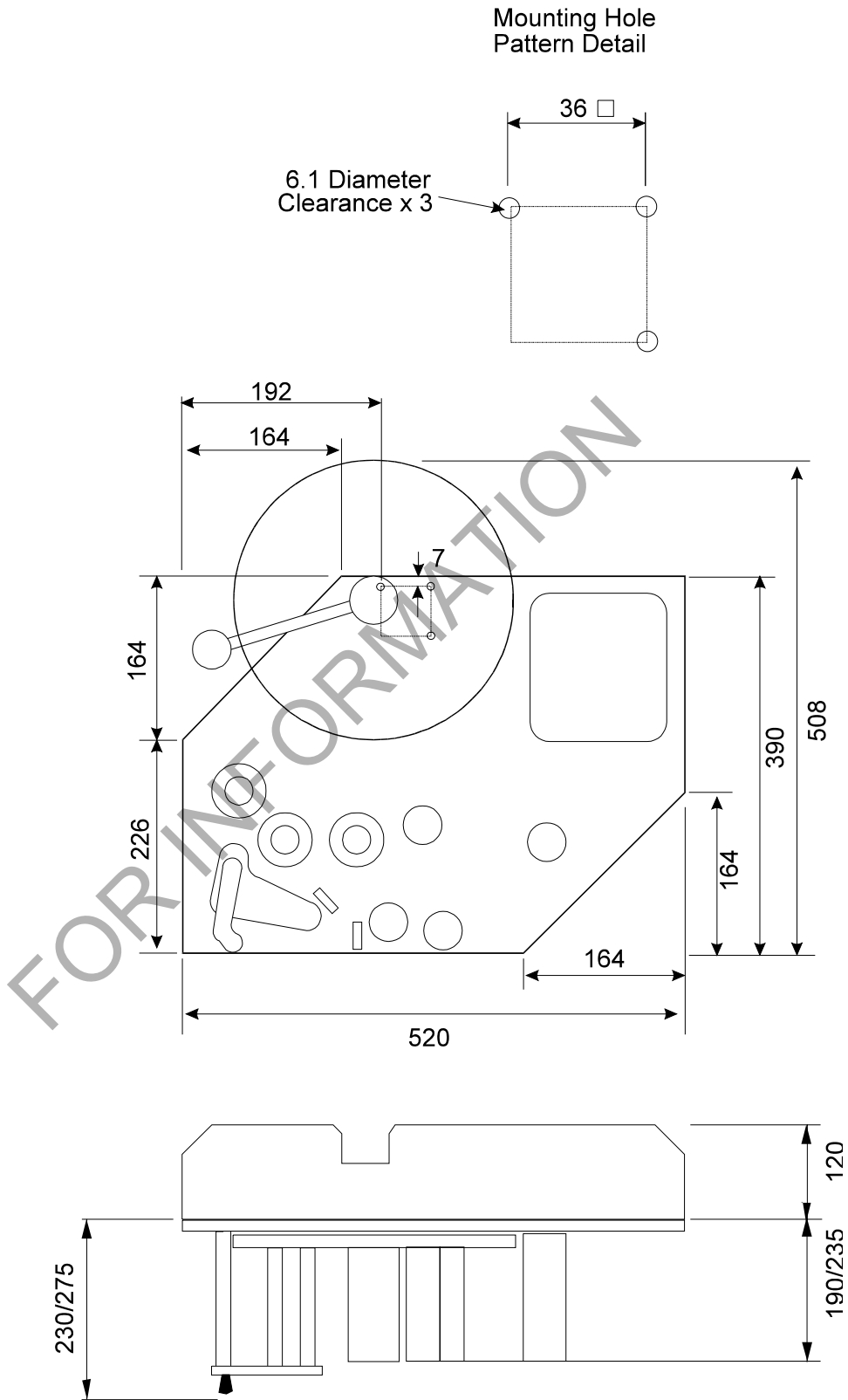


Figure 1-2: Dispenser Dimensions

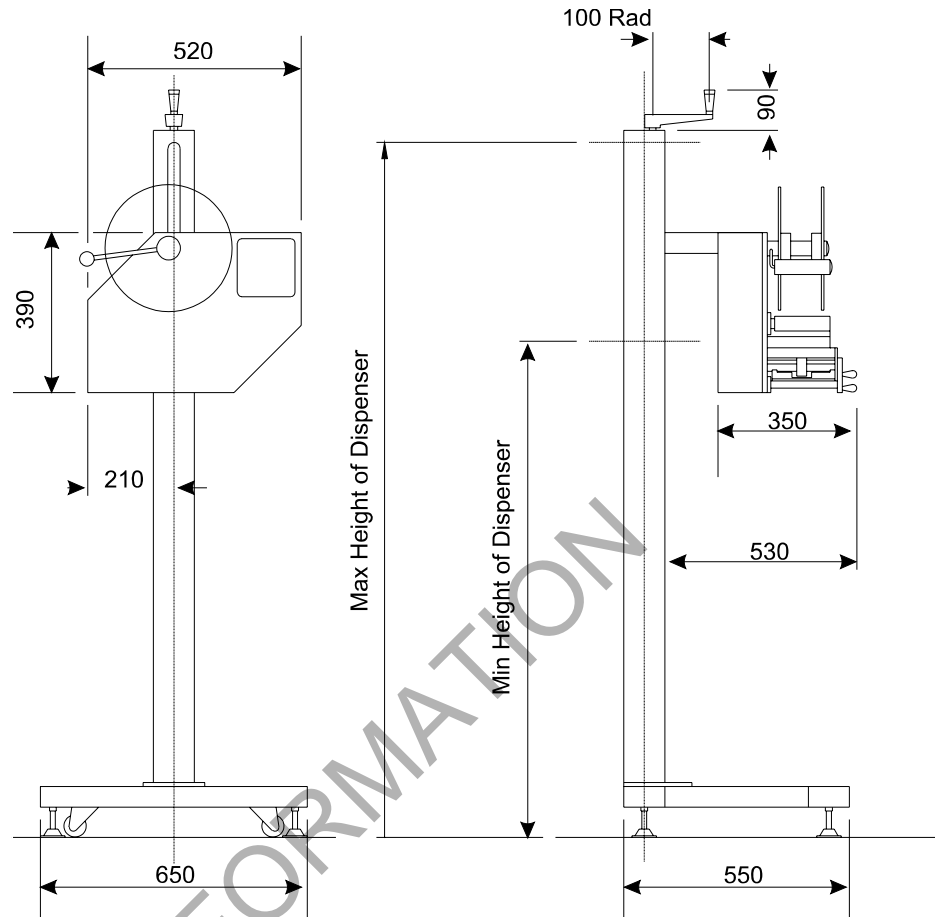


Figure 1-3: Dispenser Stand

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SECTION 2

SAFETY

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2 Safety

2.1 Machine Safety

The product is designed to conform to all current Machine Safety Regulations.

All relevant Safety Procedures must be followed.

Failure to do so may invalidate warranty.

Please read through this section before any operation of the machine is undertaken.

2.2 Applicable Safety Regulations

EN292 Parts 1 and 2: 1991, Safety of Machinery - Basic Concepts, General Principles for Design.

EN60204 Part 1: 1993, Safety of Machinery - Electrical Equipment of Machines - General Requirements.

EN 55022 1998, 61000-3-2 2000, 61000-3-3 1995. Electromagnetic Compatibility (EMC) Emissions Standard: Class A Industrial Environment

EN 55024 1998. 1998 Electromagnetic Compatibility (EMC):Information Technology Equipment (ITE).

2.3 EMC Considerations

To maintain the integrity of the EMC precautions taken with the Cimjet 300, all connecting cables **must** be fully screened, and the screen **must** have 360 degree contact with the metal connector and, in turn the unit's case at both ends.

SECTION 2 - SAFETY

2.4 Electrical Safety

This printer is designed for use with the following supply systems that conform to IEC 664 light industrial / domestic installation category II mains supply.

- 'TN' (any of following - TN-C, TN-S or TN-C-S) For example: a system having one or more points of the source of energy directly earthed, the exposed conductive parts of the installation being connected to that point by protective conductors.
- 'TT' For example: a system having one point of the source of energy directly earthed, the exposed conductive parts of the installation being connected to earth electrodes electrically independent of the earth electrodes of the source.
- It is **NOT** suitable for connection to an 'IT' system For example: a system having no direct connection between live parts and earth, the exposed conductive parts of the installation being earthed. This therefore excludes any 'phase to phase' connected supplies such as may be available in some factories and / or countries.
- Incoming supply cable should be rated at 10A minimum for the Cimjet 300 (independent of nominal supply voltage).
- Maximum switch-on supply current surge for the Cimjet 300 is as follows:
- Cimjet 300 Maximum current level = 70A, Duration = 6ms

Recommended cable protection is as follows:

Fuses

- Use 10A HRC or HBC types with a minimum of 95A RMS symmetrical prospective current rating at a 10ms minimum pre-arcing time e.g. ASTA certified to BS88 part 2 'pullcap' type or equivalent.
- If either supply fuse (located on the rear of the controller, below the supply connector) is replaced it **must** be replaced by an HBC Style ceramic fuse with the rating shown as 'T5AH250V'.

MCB

- MCB (Miniature Circuit Breaker): to IEC 947-2 / EN 60947-2 and BS EN 60898 with a minimum instantaneous release response current of 10x rated current (type D)
- Klockner Moeller type FAZNS 6-2 (6A, 2 pole type D)
- Merlin Gerin type C60 HD 206 (6A, 2 pole type D)

Note: The Klockner Moeller or Merlin Gerin circuit breakers are recommended. An equivalent MCB can be used.

Electrical safety testing (after installation)

Test Equipment required: Digital Loop and PSC tester (e.g. Robin model KMP4120 Digital PSC-LOOP Tester).

- Connect tester to incoming mains supply to machine.
- Check that the supply voltage is within specification and that the connections are correctly wired (indicated on the tester).
- Select the 20 ohms scale on the tester and press the Test button to check the value of earth fault loop impedance for the power supply provided.

If a class **D MCB to BS EN 60898** or equivalent protects the supply then the maximum impedance should be **2 ohms**.

If the supply is protected by a **BS88** part 2 style fuse, then the maximum impedance should be **5.33 ohms**.

Select the PSC (Prospective Short Circuit Current) test and check that the PSC level does not exceed **1500A**.

Note: It is essential that the continuity of the protective bonding circuit and the prospective short circuit current level be checked after the machine is installed and the electrical connections, including those to the power supply are complete. A competent person must carry out these tests.

Failure to carry out these tests will potentially result in an unsafe installation and the equipment fault-clearance ability may not function correctly.

SECTION 2 - SAFETY

2.5 General Guidelines

1. **ALWAYS** disconnect the power to the machine before removing any covers. You must remove the plug from the mains power supply.
2. **DO NOT** operate the machine with any covers removed. All covers must be in place using the appropriate number of fasteners. It is essential that electrical and non electrical connector dust covers provided with the machine are fitted to all unused connectors to protect against dust and dirt and prevent possible static damage to internal components.
3. **DISCONNECT** the air supply before undertaking work on the applicator.
4. Do not adjust the regulator pressure above 6 Bar under any circumstances. Doing so could make the Cimjet 300 unsafe.
5. The regulator mounted inside the rear dispenser cover is set to 1.86 bar for safety reasons and should only be serviced or replaced by trained personnel. If the cylinder pressure is raised above 1.86 bar the customer must provide additional guarding for operator safety.
6. It is possible for the machine to become unstable when being moved. The machine must be lowered to its lowest possible position before moving and care must taken to prevent personal injury.
7. Loading labels can present a risk if the machine is mounted high up as the label reels are heavy. It may be necessary to provide a platform on which to stand allowing label reels to be loaded safely, without risk of personal injury. When lowering the machine, ensure no less than 2 people undertake the work and that the machine is fully supported at all times.
8. Always take care when moving around the machine not to slip, trip or fall. Especially when the machine is used in areas where the floor may be wet or greasy.
9. Be aware of the operating zone required by the Cimjet 300 when working with and near the machine. Ensure that there is ample space additional to the applicator operation zone to ensure operator safety. Ensure all reasonable safety precautions have been undertaken, however, ensure that when working with or around the machine, that care is taken to avoid potential hazards. If the customer has any safety concerns, guarding must be provided by the customer.

10. Be aware that free items, such as loose clothing or long hair, could become entangled or trapped in the Label Nip Roller or paper or foil path during the operation of the machine. A warning sticker is fitted locally to highlight the hazard.
11. Take care in the unlikely event of an electronic fault causing an unexpected start up or overrun of the pneumatic cylinders or printer drive motors, to avoid possible injury.
12. Make sure that the maximum light emission power and classification for any/all laser(s) used on this machine, do not exceed those specifications stated in the appropriate laser safety standards IEC825. When irregularities are detected in the laser beam generation, internal protective devices must switch the laser beam off.
13. Various Safety and Warning labels are placed on the Cimjet 300 (see following pages). These are provided for your safety and should not be ignored or removed.
14. All fixing screws in all covers must be used to ensure EMC integrity.
15. When the machine is installed, operators should be adequately protected from trip hazards caused by the stand and the stand base.
16. When the machine is installed, do not apply excessive force (excess of 100 N) to the machine or stand, as there is a risk that the stand would tip over causing injury to operators.

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SECTION 2 - SAFETY

2.6 Safety Labels

The information above is correct to the best of our knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in text.

Table 2– 1: Safety Labels

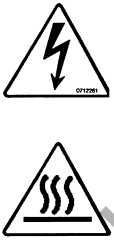
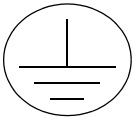
Line Voltage  Part Number BO5263AA	There is a danger of electrical shocks during checks and repair. Remove the power cord from the electrical outlet before performing all checks and repair. All Electronic checks must be performed by a qualified person.
Hot Surfaces  Part Number BO5265AA	To prevent mild injury from burns, be careful not to directly touch any surface where this safety sticker is placed.
Hazard Warning  Part Number BO5262AA	Hazard Warning Safety labels are placed in strategic positions around the machine to highlight potential hazards to the operator.

Table 2- 1: Safety Labels

Earth  Part Number BO5264AA	Earth labels are placed in strategic positions around the machine to highlight the machines earthing point.
 Part Number 34976BA	Use only 115V connections where you find this safety label.
 Part Number 34977BA	Use only 230V connections where you find this safety label.

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2.7 Isopropanol Safety

Table 2– 2: Isopropanol Safety

Product Name	Isopropanol Wipes
Part Number	B04985AA
Product Name	Isopropanol Cleaning Kit
Part Number	B03285AA
Product Name	Isopropanol Top Up Kit
Part Number	B03286AA
Supplier	MARKEM Technologies Ltd., Alexander Fleming Building, Nottingham Science and Technology Park, University Boulevard, Nottingham, NG7 2RF. England.
Composition / Information on Ingredients	
Identification of the preparation Chemical Name CAS-No EEC No Class Weight%	Isopropanol Wipes Cloth impregnated with 2ml fluid ~PROPAN-2-OL 67-63-0 200-746-9 F:R11<90 Sweden: V:R30 / 322, R313 Non Hazardous Constituents>10 Isopropanol Kits Alcohol ~PROPAN-2-OL 67-63-0 200-661-7

Table 2– 2: Isopropanol Safety

Hazards Identification	
Isopropanol Wipes Most Important Hazards	Highly Flammable
Isopropanol Kits Most Important Hazards	Highly Flammable
Specific Hazards	May cause slight eye / skin irritation. May cause irritation of respiratory tract. High concentration of vapours may induce unconsciousness / narcosis. Solvents may degrease the skin.
First Aid Measures	
General Advice	Use in well ventilated areas
Inhalation	Take patient to fresh air. Do not move about. Obtain medical advice.
Skin Contact	Remove spillage with soft tissue and / or wash off skin with cool water. In extreme cases obtain medical advice.
Eye Contact	Irrigate thoroughly with water for at least 10 minutes. Obtain medical advice.
Ingestion	
Isopropanol Wipes	Wash out mouth thoroughly and obtain medical advice.
Isopropanol Cleaning Kit / Isopropanol Top Up Kit	Drink water and obtain medical advice.

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Table 2- 2: Isopropanol Safety

Fire Fighting Measures	
Isopropanol Wipes	Carbon Dioxide, Dry Chemical Foam / Water Spray.
Isopropanol Cleaning Kit	Water Spray, Dry Powder or Vaporising Liquids.
Isopropanol Top Up Kit	Carbon Dioxide, Dry Chemical Foam / Water Spray.
Accidental Release	
Personal Precautions	Remove all sources of ignition. Wear suitable gloves and eye / face protection.
Environmental Precautions	If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise, absorb on an inert absorbent (sand, silica gel, acid binder, universal binder, sawdust) transfer to container and arrange removal by disposal company. Ventilate area to dispel residual vapour.
Handling and Storage	
Handling	Use only in well ventilated areas. Do not breathe vapours or spray mist. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.
Storage	Keep in a cool well ventilated place. Keep product and empty container away from heat and sources of ignition. Take precautionary measures against static discharges.

Table 2– 2: Isopropanol Safety

Exposure control / personal protection	
Personal protection equipment	Respiratory protection, Adequate ventilation.
Hand protection	Solvent resistant gloves
Eye protection	Safety glasses / Face shield.
Skin and body protection	Plastic apron / sleeves / boots (dependant on amount handled).
Physical and Chemical Properties	
Isopropanol Wipes	
Form	Of Liquid
Colour	Colourless
Odour	Characteristic
Melting Temperature	-89°C
Boiling Temperature	82°C
Density (g / ml)	0.78
Vapour Pressure	33 mmHg, 20°C
(Density)	(2.07)
Solubility in Water	Miscible in all proportions
Flash Point	12°C
Explosion Limits	Lower: 2.3%, Upper: 12%
Auto Ignition Temperature	425°C

SECTION 2 - SAFETY

Table 2- 2: Isopropanol Safety

Isopropanol Kits	
Form	Liquid
Colour	Colourless
Odour	Characteristic
Melting Temperature	-89°C
Boiling Temperature	82°C
Density (g / ml)	0.78
Vapour Pressure	33 mmHg, 20°C
(Density)	(2.07)
Solubility in Water	Miscible in all proportions
Flash Point	12°C
Explosion Limits	Lower: 2.3%, Upper: 12%
Auto Ignition Temperature	425°C
Stability and Reactivity	
Stability	Stable. Vapours may form explosive mixture with air.
Conditions to avoid	Keep away from heat and sources of ignition.
Materials to avoid	Oxidizing agents, strong bases, aldehydes, ammonia, chlorinated compounds, amines, organic nitro compounds, aluminium.
Hazardous decomposition products	Peroxides

Table 2– 2: Isopropanol Safety

Toxicological Information	
Isopropanol Wipes	
Acute Toxicity	IPA: LD50 / oral / rat= 5.04 g/kg LD50/ dermal / rabbit = 16.4 ml/kg
Local Effects	May cause skin irritation in susceptible persons.
Sensitization	May cause sensitization by skin contact.
Long Term Toxicity	Liver injury may occur.
Chronic Toxicity	Effects of excessive exposures may include liver toxicity.
Isopropanol Kits	
After inhalation	Irritation symptoms in the respiratory tract.
After absorption	Headache, dizziness, inebriation, unconsciousness, narcosis.
After uptake of large quantities	Respiratory paralysis, coma.
After skin contact	Irritation.
After eye contact	Irritation.
Further data	LD50 5045 mg / kg oral, rat. No evidence of carcinogenic properties. Evidence of reproductive effects.

SECTION 2 - SAFETY

Table 2– 2: Isopropanol Safety

Ecological Information	
Isopropanol Wipes	Not readily biodegradable.
IPA	LC50/96h fathead minnows = 9600mg /l
Isopropanol Kits	No environmental hazard provided that the material is handled and disposed of with due care and attention.
Disposal Considerations	
Waste from residues / unused products	Dispose of as special waste in compliance with the Control of Pollution (Special Waste).
Regulations 1980. Contaminated packaging	Store containers and offer for recycling of material according to the Environmental Protection (Duty of Care) Regulations 1991.

Table 2– 2: Isopropanol Safety

Transport Information	
Isopropanol Wipes	
UN-No	1219
Item	3 ^o (b)
HI/UN No	1219
Proper shipping name	Isopropanol
IMO Class	3.2
IMDG Page	3244
EmS	3-06
MFAG	305
Proper shipping name	Isopropanol
ICAO Class	3
UN/ID No	1219
Proper shipping name	Isopropanol
Isopropanol Kits	
UN-No	1219
IMDG Class	II
IMO	3.2 / 1219
Packaging group	II
TATA	1219
Packaging group	II
Correct technical name	Isopropanol (Isopropyl Alcohol)
ADR/RID	3, 3 ^o (b)

SECTION 2 - SAFETY

Table 2- 2: Isopropanol Safety

Regulatory Information	
Labelling according to EEC directives	90 / 492 / EEC
Symbol	F Highly Flammable
R Phrase (s)	R11 Highly Flammable
S Phrase (s)	S2, Keep out of reach of children. Keep container tightly closed in a cool, well ventilated place. S7-16, Keep away from sources of ignition - NO SMOKING. S33, Take precautionary measures against static discharges.

2.8 Foreseen Use / Misuse

This manual provides information about Safety, Installation, Operation, Troubleshooting, Illustrated Parts, Electrical Schematics, Recommended Spares and Preventative Maintenance Procedures. Using the Cimjet 300 in any other manner is considered a misuse of the product. Please consult your local Markem.Imaje Business Centre before using this Cimjet 300 for anything other than the foreseen use.

Misuses include, but are not limited to:

- Operating a system that is incomplete, cannot be serviced, or has been modified without authorisation.
- Failing to observe hazard requirements in the manual and / or on safety labels.
- Combining or interfacing *non* Markem.Imaje equipment with this system, other than as intended.
- Permitting a person who has not been fully trained to operate and / or service the system.
- Using unspecified supplies or material which may produce unsatisfactory or unexpected results.

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SECTION 3

INSTALLATION

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3 Installation

3.1 Installation of the Cimjet 300

First time Installations will normally be carried out by qualified Markem.Imaje service technicians.

For experienced customers who have existing Cimjet 300 units and wish to carry out installation themselves, please first check with Markem.Imaje to ensure that this is advisable.

If this is deemed acceptable please read all of the **relevant safety instructions** before commencing with any installation work.

WARNING: Failure to do this will invalidate the machine warranty.

3.2 Installation Requirements

Ensure that the required services and control signals are available:

- Power: 115 / 230V single phase power supply rated at 300VA continuous (750VA maximum at switch on).
- Compressed air: a dry, clean, non-lubricated air supply at 6 Bar.
- Trigger signals depending on the application.
- Sufficient space for installation and operation.

SAFETY: Do not adjust the regulator pressure above 6 Bar under any circumstances. Doing so could make the Cimjet 300 unsafe.

SAFETY: All cylinders have been factory set to 1.86 bar for safety. If the cylinders are operated over 1.86 Bar, the machine must be protected by guarding, supplied by the customer.

CAUTION: It is essential that the connector dust covers provided with the machine are fitted to all unused connectors to protect against dust and dirt and prevent possible static damage to internal components.

SECTION 3 - INSTALLATION

3.3 Power

The power connector (Type IEC 320) is supplied with the machine and conforms to EC regulations

3.3.1 Power Configuration

Before installing the machine check that the power supply is correctly configured.

The power supply is configured by:

- Power connections to the Toroidal transformer located at the rear of the machine.
- Fitting of the corresponding fuse. (T5AH250V)

Details of this procedure are given in Section 8 – Technical Guide.

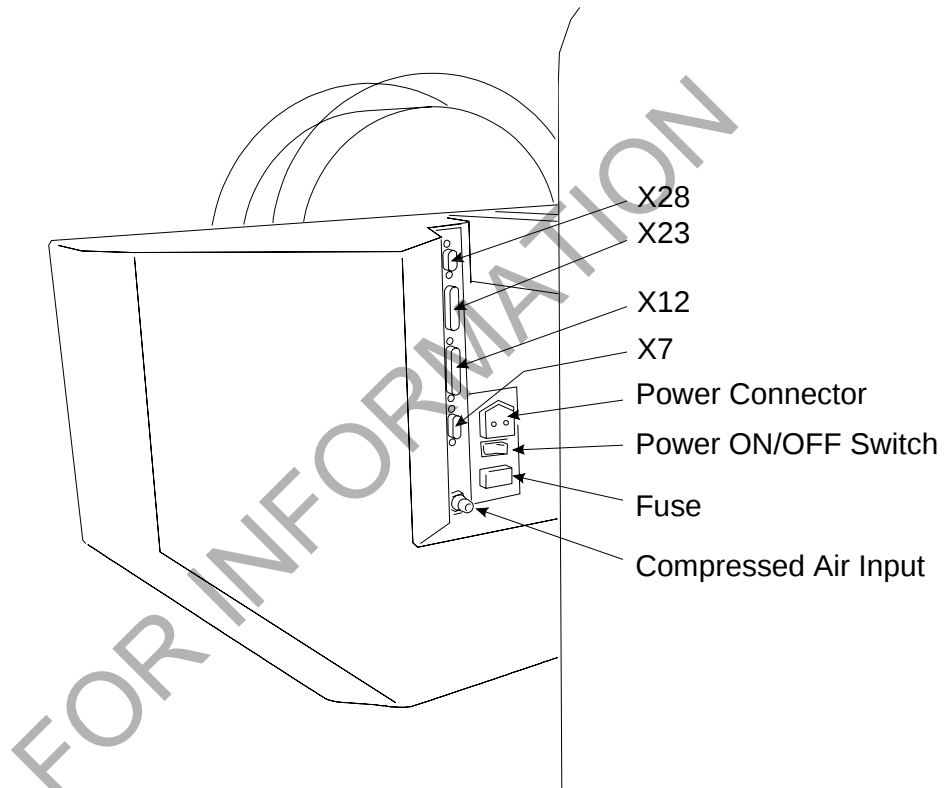


Figure 3– 1: External Connectors

For full details of electrical connections see Section 8 – Technical Guide and Electrical Schematics.

3.4 Air Requirements

A compressed air supply is required by the Cimjet 300 to drive the applicator module. This must be set to 6 bar and should be dry, uncontaminated air which should not be lubricated.

3.4.1 Air Regulator

A filter regulator assembly is fitted to the base of the stand, this comprises of a manual isolation valve, a water trap and pressure regulator. The air supply is via a 6mm or 1/4 BSP flexible pipe.

A single connection is supplied to the main filter regulator unit, from here a supply goes to the Applicator, (If air operated) and to the Dispenser printhead air regulator.

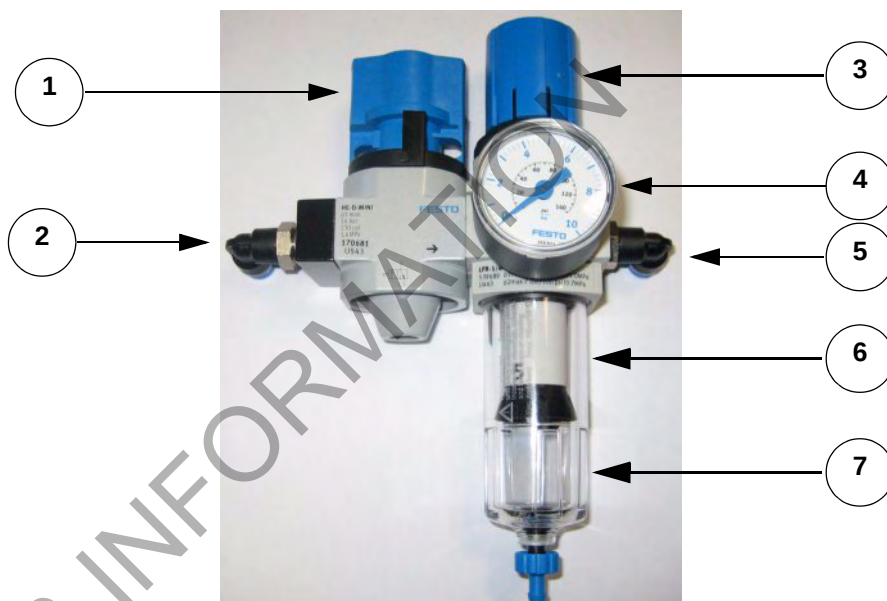


Figure 3– 2: Air Filter/Regulator Unit

1. Isolation Switch
2. Unregulated air inlet.
3. Pressure regulator.
4. Pressure indication dial (0-10 bar).
5. Regulated air outlet.
6. Filter (Micro Mesh).
7. Water Trap.

SECTION 3 - INSTALLATION

3.5 I/O Interface

Connections for all sensors and solenoids are accessed by removing the rear cover. External I/O is connected via the External I/O connector (25-way D-type connector (X12)) located under the rear cover of the Cimjet 300.

For full details see Section 8 – Technical Guide.

3.6 Positioning the Cimjet 300

The Cimjet 300 is normally supplied with a stand which allows the positioned label height on the product to be adjusted within a limited range. The applicator height will be determined by the conveyor height and required position of the label on the product.

Levelling feet are provided as standard so care should be taken to align the machine with the product transportation system.

Before final positioning, the machine should be placed so that the applicator arm is square to the product and the position of the machine provides the correct label position on the product.

CAUTION:

If the machine is not secured to the floor it is possible for the machine to gradually change position during use. It is therefore important to mark the provisional position of the machine prior to starting labelling trials.

3.7 Print and Apply Sensors

Configuration of the sensors will vary according to the type of applicator fitted to the Cimjet 300. Some general guidelines follow:

Depending on the mode of operation, set via the Restricted Parameters menu, the Cimjet 300 can use a combination of Print sensor only, Apply sensor only or both Print sensor and Apply sensor.

The sensors must be positioned correctly to obtain the best possible results. Different considerations are required for different operation modes.

Ensure that the product passes within the operating range of the sensor. i.e. 10 mm - 800 mm.

3.7.1 Sensor Connection

The Print and Apply Sensor is connected to Cimjet 300 via the 9 pin D type connector **X23** on the rear of the machine.

Depending upon the installation, different wiring configurations can be used.

In **simple applications** with only Print and Apply Sensors, wire the sensors directly to **X23**.

In **more complex applications** with a number of connections to **X23**, it is recommended that a single multi-core cable be run in conduit to a junction box. The junction box can then be mounted at a convenient position and individual cables run to the sensors and conveyor control etc.

For full connection details refer to Section 8 – Technical Guide.

3.7.2 Testing the Sensors

Viewing the status of the inputs in the Engineer Mode **Diagnostic** screen will test the functionality of the sensors. Take the Cimjet out of Auto Mode; depress the Engineer Mode button then the Display I/O button. The status of the inputs can then be seen.

Passing an object between the sensor and reflector should cause the status to change from **OFF** to **ON**.

SECTION 3 - INSTALLATION

3.8 Positioning sensors

3.8.1 Auto Apply Mode

In this mode only the **Print** sensor is used and the label is applied automatically after the Apply delay timer has elapsed.

The Print sensor should be positioned far enough away from the Cimjet applicator (up stream) to allow enough time for the label to be printed.

To achieve this set the Apply Delay timer to zero and position the sensor so that the label is firmly and fully applied to the pack as early on as possible. Make sure it is applied as close as possible to the nearest edge. Use the Apply Delay timer to fine-tune the label's position on the pack.

Note: If the conveyor speed varies, the label position may differ from pack to pack and in extreme cases may even miss the pack completely. This can be avoided by using **On Demand** mode, which requires both Print and Apply sensors.

3.8.2 On Demand Mode

In On Demand Mode, a **Print** sensor triggers the printing of the label and an **Apply** sensor the application of the label.

When the Apply Sensor is triggered, Cimjet waits for the Apply delay timer to elapse and then applies the label onto the pack.

The Apply Sensor position and the Apply Delay parameter setting determine the position of the label on the pack.

Consequently:

The **product's** pitch and speed, and the speed of **printing** determine the position of the **Print sensor**.

The Print sensor must be mounted far enough away from the Cimjet applicator (up stream) to allow a label to be printed before the product reaches the applicator. If this distance is greater than a product pitch then steps must be taken to increase the print speed or increase the product pitch.

The **Apply** sensor should be mounted as **close to the applicator as possible**. This sensor triggers the application of the printed label onto the pack and the location of this sensor will set the position of the label on the pack.

A user parameter (Apply Delay) may be used to delay the application of the label but the zero delay label position is set by the sensor position.

3.8.3 Pre-print Mode

In Pre-print mode, the label is automatically printed and held on the applicator, ready for application to the product.

When the **Apply** sensor is triggered Cimjet waits for the **Apply Delay** timer to elapse and then applies the label onto the pack.

The applicator is returned to its Home position and the next label is then immediately printed and held on the applicator.

The Apply sensor should be mounted as **close to the applicator as possible**. This sensor triggers the application of the printed label onto the pack and the location of this sensor will set the position of the label on the pack.

A user parameter (Apply Delay) may be used to delay the application of the label but the zero delay label position is set by the sensor position.

Note: For more detailed information regarding sensor positioning and overall cycle times, please refer to the specific applicator manuals.

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3.9 Preparing the Cimjet 300 for operation

Once the Cimjet 300 has been installed and checked for safety, the machine can be loaded with Ribbon and Labels ready for use.

Label designs can be prepared on Markem.Imaje's CoLOS Create Pro software package and down loaded to the machines Local database.

In cases where the Cimjet 300 is connected to a Network using Markem.Imaje's **CoLOS Control** package, label data storage may be on the on a PC in an office.

3.9.1 Ribbon and Labels

Cimjet 300 uses Outside Inking Ribbon and Inside wound Labels.

The Left Hand model is a mirror image of the Right Hand.

To load labels and ribbon, carry out the following instructions:

- Ensure that the ribbon is fed through correctly, refer to the following diagrams for clarification on ribbon direction, otherwise refer to the direction diagram on the dispenser.
- When fitting new foil ribbon, make sure that the waste take up spool is at least the width of the foil ribbon. This will help to prevent the foil ribbon from possible creasing.

CAUTION: The reel of labels used on your machine may be heavy. Take care to take appropriate precautions when loading labels so as to prevent injury.

CAUTION: If non-Markem.Imaje ribbon is used, Markem.Imaje recommend that anti-static properties must be considered. Markem.Imaje cannot guarantee the safety and / or suitability of non-Markem.Imaje print ribbon.

3.9.2 Loading Ribbon

1. Release the label nip roller.
2. Raise the printhead.
3. Load the Full Ribbon core onto the Ribbon supply reel
4. Fit an empty core onto the Ribbon waste rewind reel.
5. Always use a core to collect the waste ribbon. **DO NOT** secure the ribbon directly to the take up roller as this makes it very difficult to remove the waste ribbon.
6. Feed the ribbon between the drive roller and printhead, ensuring that the Inked side faces away from the Printhead.
7. Attach the end of the Ribbon to the waste rewind core.
8. Wind on an amount of ribbon onto the waste take up spool.
9. Ensure that ribbon is secure and that there are no creases in the ribbon.

3.9.3 Loading Labels

1. Remove the Perspex outer disk from the label supply reel.
2. Load a full Label reel onto the Label supply shaft, ensuring that the Labels are facing the correct direction.
3. Replace the outer disk and secure it.
4. Remove approximately 1 metre of Labels from the backing web.
5. Thread the labels onto the machine ensuring that the labels pass through the label gap optic.
6. Feed the backing web around the Idler rollers and between the drive roller and printhead. (Removal of some labels makes this easier)
7. Ensure that the backing web passes between the print roller and air assist blow pipe and not over it.
8. Feed the backing web around the print roller and secure to the waste web rewind shaft with the clip provided.
9. **DO NOT** stick the label web to the roller.
10. Lower the print head and secure the nip roller.

SECTION 3 - INSTALLATION

3.9.4 Webbing Diagrams

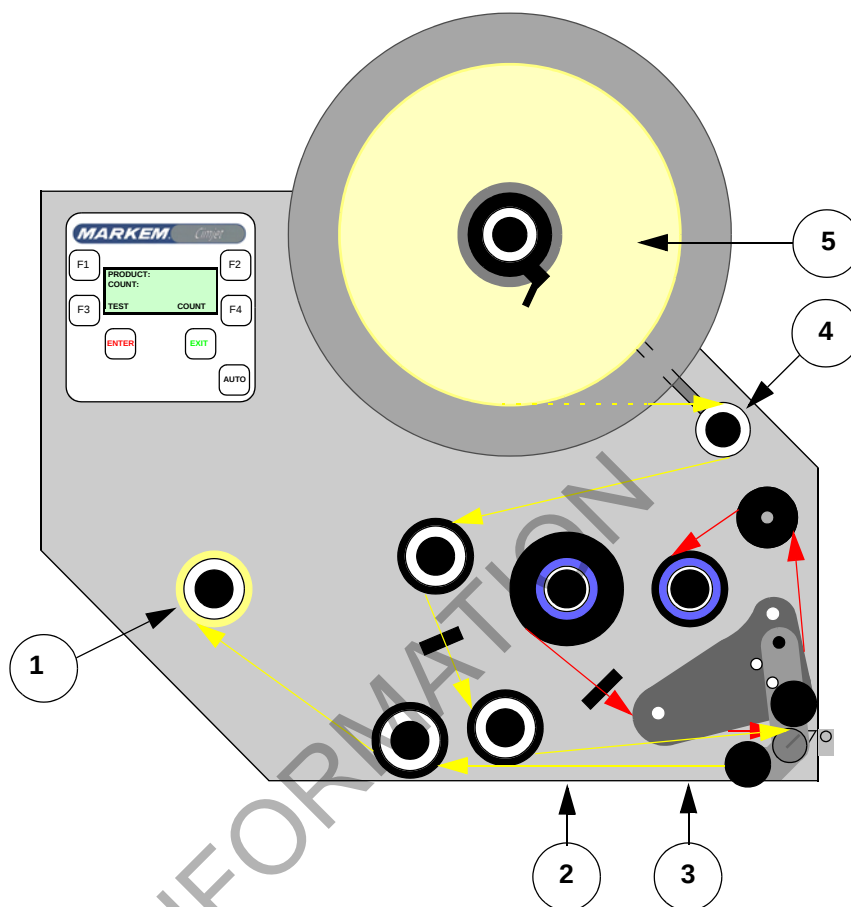


Figure 3–3: Webbing Diagram for Left Hand machines (Orientation A)

1. Label backing waste take up reel.
2. Ink ribbon supply reel.
3. Ink ribbon waste take up reel.
4. Label supply brake. (dancing arm)
5. Label supply reel.

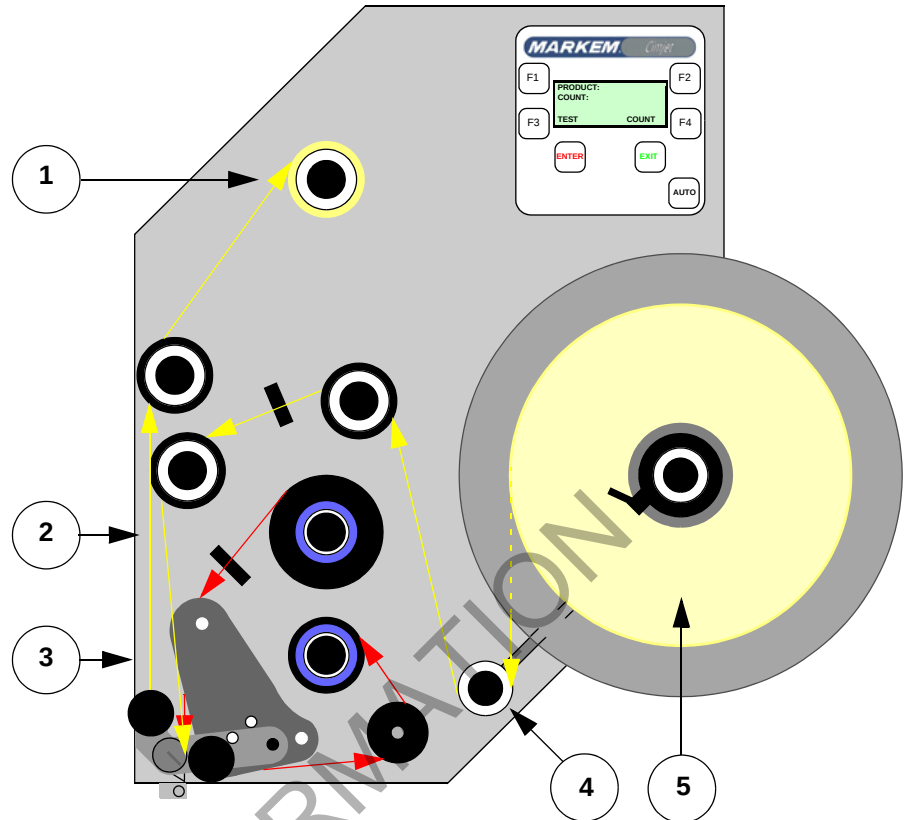


Figure 3-4: Webbing Diagram for Left Hand machines (Orientation B)

1. Label backing waste take up reel.
2. Ink ribbon supply reel.
3. Ink ribbon waste take up reel.
4. Label supply brake. (dancing arm)
5. Label supply reel.

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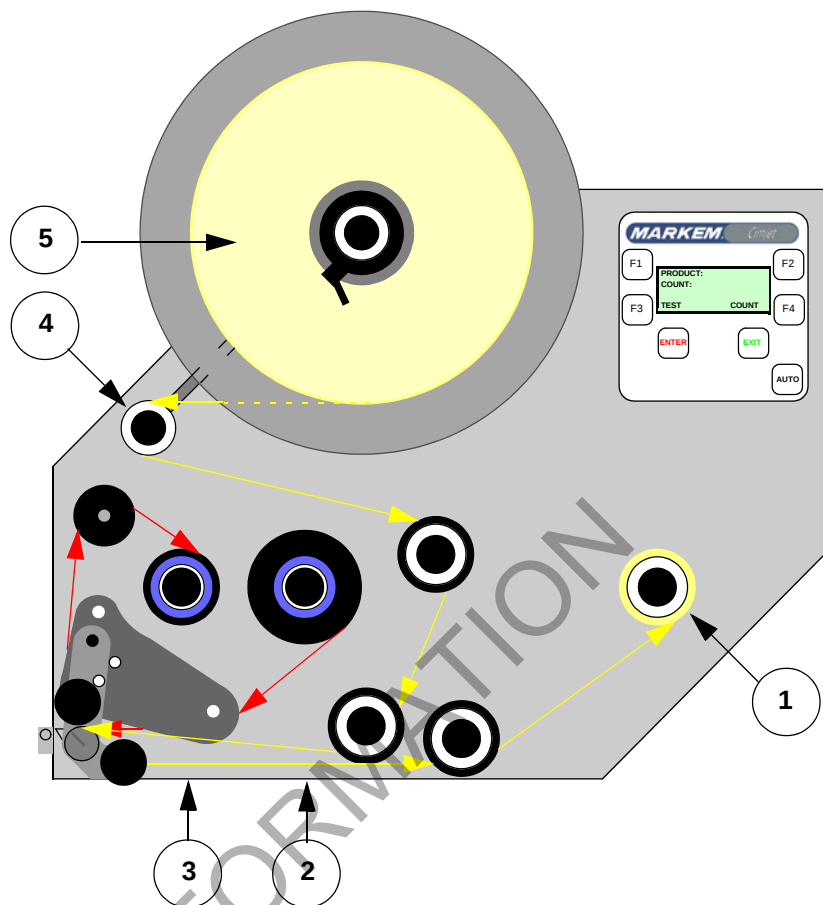


Figure 3-5: Webbing Diagram for Right Hand machines (Orientation A)

1. Label backing waste take up reel.
2. Ink ribbon supply reel.
3. Ink ribbon waste take up reel.
4. Label supply brake. (dancing arm)
5. Label supply reel.

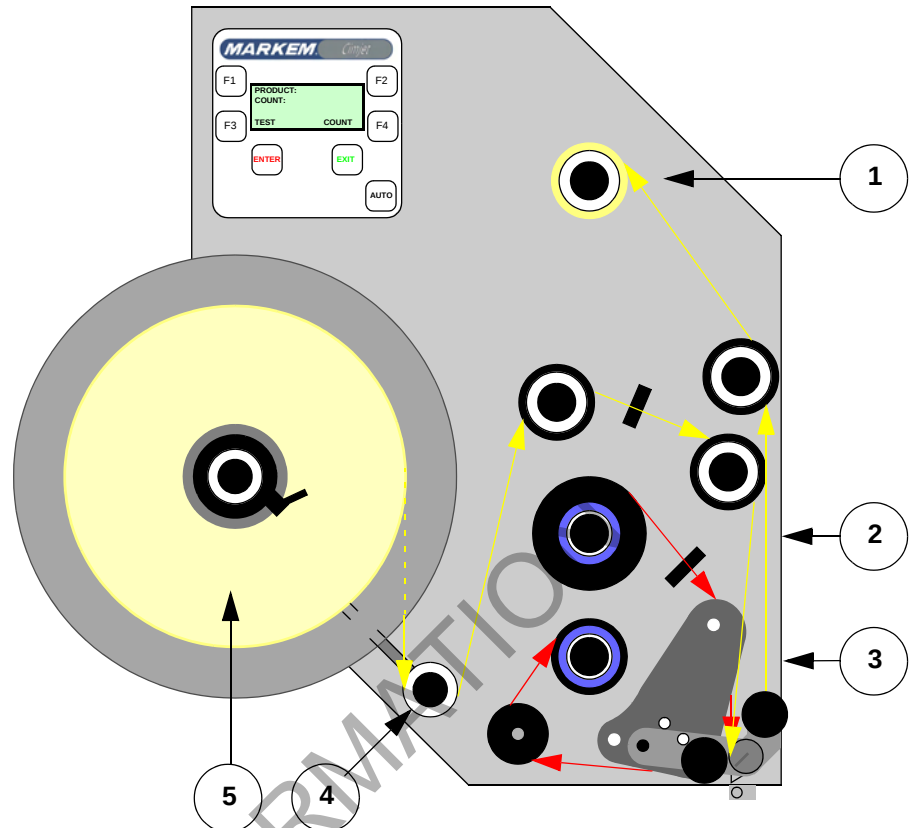


Figure 3-6: Webbing Diagram for Right Hand machines (Orientation B)

1. Label backing waste take up reel.
2. Ink ribbon supply reel.
3. Ink ribbon waste take up reel.
4. Label supply brake. (dancing arm)
5. Label supply reel.

SECTION 3 - INSTALLATION

3.10 Power Up

To prepare the machine for use:

1. To turn the Air Supply ON, rotate the Air Supply control anti-clockwise.
2. Check that labels and ribbon are correctly loaded and that the printhead is down with the nip roller latched in position.
3. Check that the power cable is connected and switch on the power at the rear of the machine.
4. During power up, the User Interface defaults to **SET Mode** and displays the current software version.
5. Press **AUTO**
6. The Cimjet 300 automatically feeds two or three Datum Labels to set the correct label stop position and measure the length of the labels in use.
7. The message: **REMOVE DATUM LABELS, THEN PRESS AUTO** is displayed on the User Interface.
8. Remove the labels
9. Press **AUTO**

Your Cimjet 300 is now ready to operate.

Note: Be aware that free items, such as loose clothing or long hair, could become entangled or trapped in the Label Nip Roller or paper or foil path during the operation of the machine. A warning sticker is fitted locally to highlight the hazard.

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OVERVIEW

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4 Overview

The Cimjet 300 is a compact label printer and applicator. It uses a high resolution, high speed, thermal printhead combined with thermal ribbon or chemi-thermal labels to print on plain or pre-printed labels.

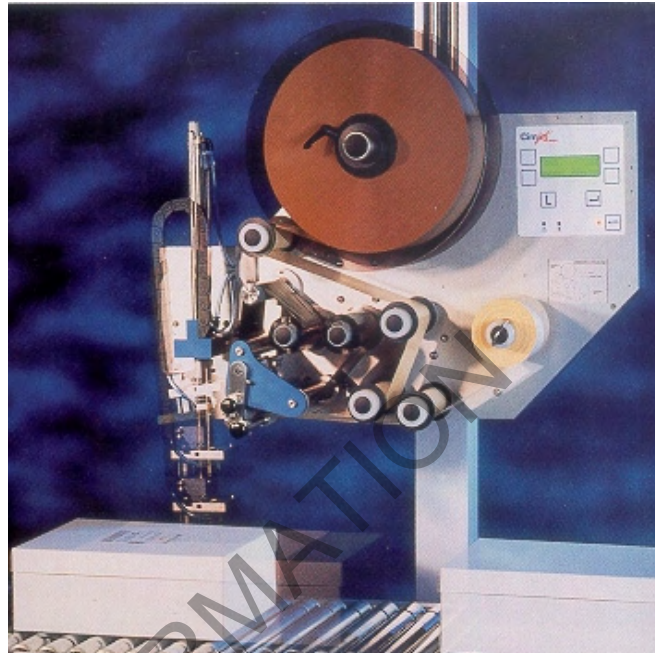


Figure 4-1: Cimjet 300 with a 334 Applicator fitted

SECTION 4 - OVERVIEW

4.1 Key Features

- **Different Applicator modules to suit specific applications:** Front, Top, Side or Front and Side apply.
- Left or Right Hand machine orientation to suit the application.
- **Easy Loading** of Labels and Ribbon.
- **Purpose-built Real-time Printer.** The Cimjet 300 is designed as a real time printer applicator, with a built-in clock and a robust, integrated operator interface.
- **Networking** and **Stand-alone** Operation.
- **Flexibility.** The control system allows product information to be stored in local memory or set remotely via a host PC.
- **CoLOS Create Pro Software.** Create 1D and 2D barcode labels in an easy WYSIWYG label design package.
- **Wide Range of Fonts:** Bitmap, Scalable or Vector and Fast Imaging (ILF) fonts available.
- **Operator and Maintenance Diagnostics.** On-screen display of `Error` and `Warning` messages with corrective action to be taken.
- **Printer Emulation Mode.** Allows a wide variety of existing label design packages to be used with the Cimjet 300.
- **Compatibility.** Compatible with the full range of Markem.Imaje products (Cimpak, SmartDate, Series 5000, 9096, Smartlase), all of which can share the same network.
- **Intelligent Ribbon Save.** This is a highly efficient Ribbon Save which uses ribbon for only the sections of the label that require printing. For example: this is useful for efficient printing onto pre-printed labels.
- **Bar code Verification Laser** facility.
- **Product code “Lookup” scanner** facility.
- **Hand Held scanner** facility.
- **Range of Printheads :**
 - 104 mm wide, 8 dot/mm flat printhead,
 - 107 mm wide, 12 dot/mm flat printhead,
 - 150 mm wide, 8 dot/mm flat printhead,
 - 107 mm wide, 12 dot/mm corner-edge printhead.

4.2 Components of Cimjet 300

The Cimjet 300 consists of a Dispenser and an Applicator.

In addition Cimjet 300 is usually supplied with an adjustable height stand

4.2.1 Dispenser

The label dispenser provides the label supply and label printer and can be Left or Right Hand.

It consists of:

- Label and ribbon drive.
- Print engine.
- Sensors for label and ribbon control.
- Operator interface.
- Connection for Inputs/Outputs

The dispenser is the main body of the Cimjet 300 and houses the power supply, main processor PCB and I/O interface.

4.2.2 Applicators

Several modular applicators are available to meet your different requirements.

The different applicators apply labels in different ways. For example: Air-blow, or Telescopic tamp. The choice of applicator also determines the face of the product that is labelled; labels can be applied to one side, two adjacent sides, the top or front of the product.

The applicator fitted may vary from the type shown in the following figures. Specific details of applicators are given in the applicator supplement.

The main components of the Cimjet 300 are shown in Figures 4.2, 4.3 and 4.4.

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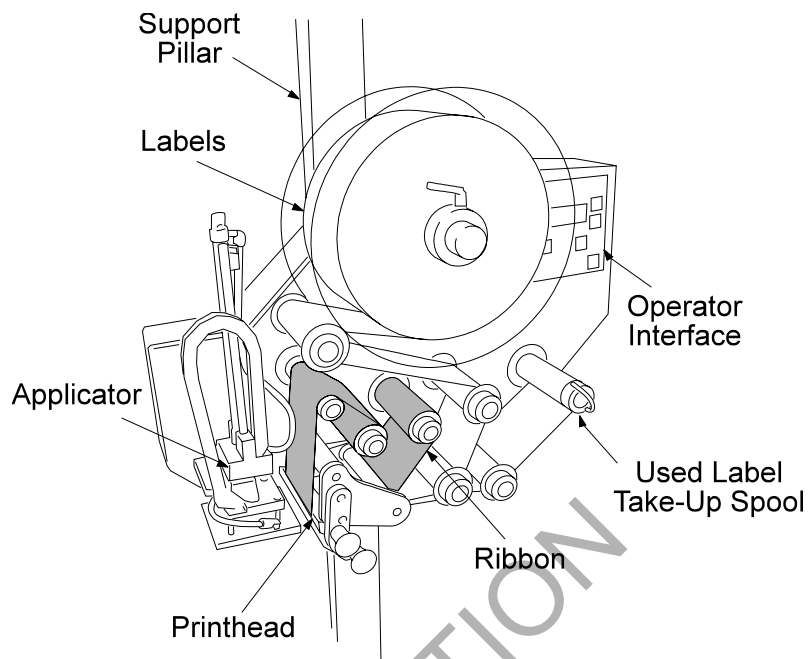


Figure 4-2: Front

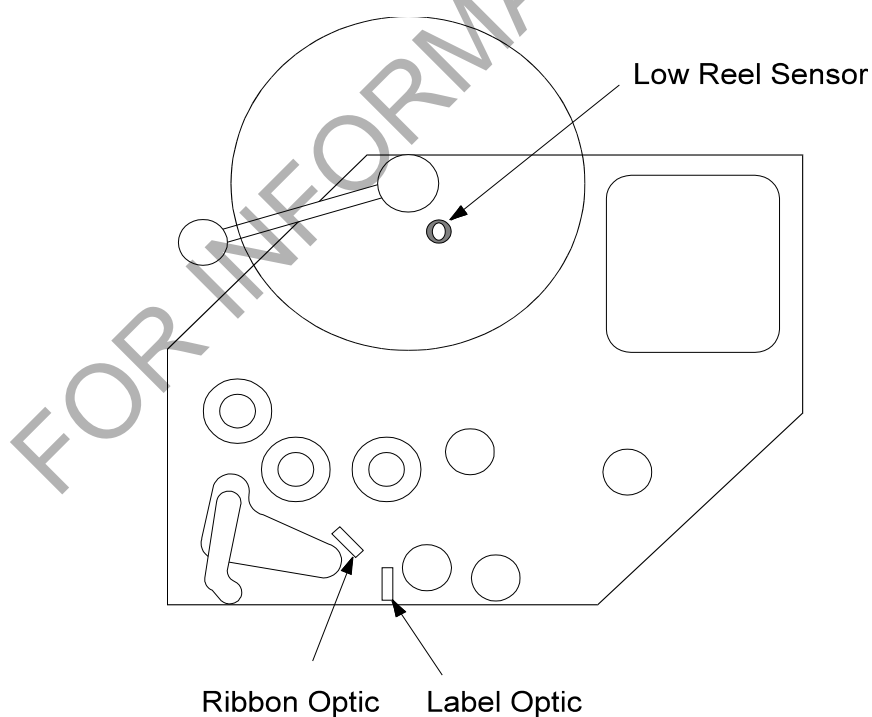


Figure 4-3: Label and Ribbon Optics

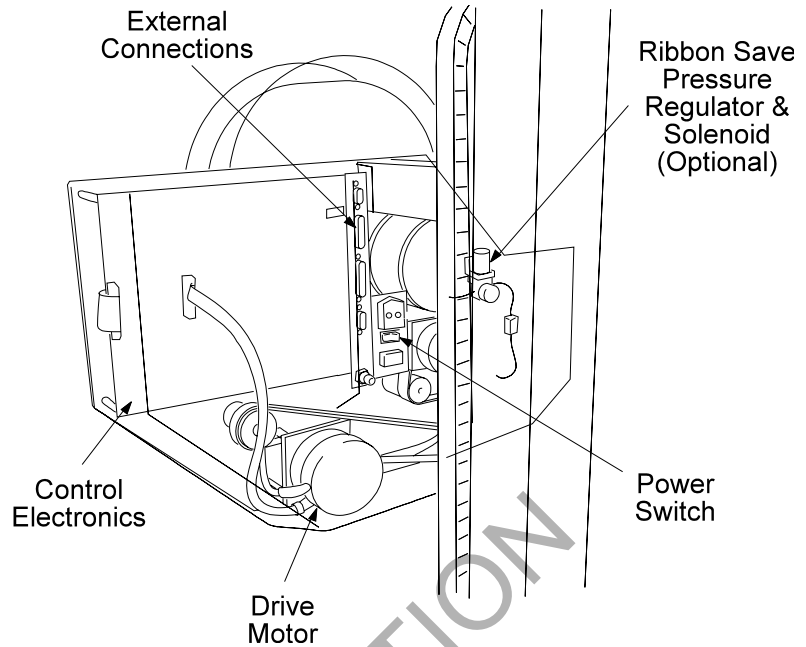


Figure 4-4: Rear (Cover Removed)

The rear of the machine provides connections for:

- Mains power.
- Communications.
- The Print/Apply Input Sensor.
- The Air supply for the Applicator.

The Power supply for the machine is altered by removing and rotating the fuse holder (115 or 230V).

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4.3 Print Information

The Cimjet 300 prints text, graphics and barcodes.

4.3.1 Available Print Area

The maximum available print area is:

Width - Dependant on the printhead type fitted.

Length - 400 mm.

4.3.2 Label Designs

Labels are generated using the Markem.Imaje CoLOS Create Pro software. CoLOS Create Pro also provides a database for storing the data for individual product codes.

The label designed in CoLOS Create Pro can specify that additional data is to be entered when a label is selected. This information can be entered at the operator interface or at the controlling PC if product selection is being performed remotely.

Label designs, fonts, graphical images and label data are transferred to the Cimjet 300 through using the Markem.Imaje CoLOS Create Pro and CoLOS Control packages.

4.3.3 Label Sizes

These are Applicator dependant. (See Applicator Section)

4.4 Principles of Label Design

Cimjet 300 uses a common approach with all of the Markem.Imaje printers for dealing with label designs and data.

Label information is stored in a number of different types of file:

Format files store information about the fields on the label. Each field in the format file stores information about the type of field, position, size and orientation of the field etc. Field type can be Text, bar codes, Logo etc. The Format file is effectively a template for the design

The Markem.Imaje CoLOS Create Pro label design software is used to create the formats and allows you to generate a database of product information. The label design can specify that data comes from the label database or can be generated at the time the label is printed by the Cimjet 300.

For example:

- Variable data fields - Cimjet 300 prompts for these when labels are selected. (These may also be updated automatically by a Host system).
- Time and date fields - These are generated using the 1's real time clock.
- Best before dates - Up to four Best Before End groups can be created on a single label. The date offsets for each group can be set at the design stage by CoLOS Create Pro. Specific update times can be set on the Cimjet 300's BBE parameters.
- Incremental fields - The starting value is set by the user when the label is selected.
- SSCC codes: Start and End values are set in the "Restricted Access Mode". See Section 6 – Restricted Access Mode User Guide (SSCC Parameters).
- Cimjet 300 supports the printing of all bar codes commonly used for product identification e.g. ITF, Code 39, Code 128, EAN 8, EAN 13, EAN 128, UPC A and UPC E, UCC 128
- Linear Reduced Space Symbology (RSS) PDF 417, QR Code, Data Matrix
- Graphical images, such as company logos can be included in the label design. These are stored in the Cimjet 300 memory as compacted binary images, by doing this the storage requirements of the images are minimised.

SECTION 4 - OVERVIEW

4.4.1 Fonts

To provide the best possible flexibility Cimjet 300 provides a wide range of fonts. Contact your local Markem.Imaje Business Centre if you require additional font styles.

Bitmap Fonts

Markem.Imaje Font 1 and 2

Fast Bitmap fonts compatible with the Cimjet 300 and SmartDate range of printers.

Corpus Christi

Fast Bitmap fonts (Cimjet 300 and SmartDate compatible) provided in three base sizes.

Austin

Fast Bitmap fonts (Cimjet 300 and SmartDate compatible) provided in two base sizes.

Scalable Fonts

Cimjet 300 provides support for Scalable fonts. These fonts are defined as a series of vectors and can be set to any size. The fonts appear smooth and do not have the stepped appearance associated with magnified bitmap fonts.

A single scalable font is stored in the permanent memory:

Swiss 721

This is a version of the Helvetica™ font

Note: Other Scalable fonts can be downloaded as required.

The download of font files is handled automatically by CoLOS Create Pro and CoLOS Control.

Up to two additional Scalable fonts can be down loaded to a machine with a standard font licence.

4.4.2 Fast Imaging Fonts

The Cimjet 300 also supports the use of fast imaging (ILF) fonts. These fonts provide improved performance over the other font types.

ILF fonts provide the ability to scale a font to any size and keep a smooth profile but can be updated much more quickly than scalable fonts. CoLOS Create Pro and CoLOS Control support the use of these fonts. ILF fonts generate a font file for each size/style combination used. CoLOS Create Pro provides details of the memory requirements of these fonts.

4.4.3 Label Download and Storage

The local label database can be maintained when the Cimjet 300 is in SET mode. The label information is held in battery backed memory within the Cimjet 300.

The standard Cimjet 300 has 512 kB of label database memory.

The number of labels this represents depends upon the complexity of the label designs and the number of down loadable fonts and graphical images used.

The Markem.Imaje CoLOS Create Pro and CoLOS Control PC based products are used to transfer information from the design PC into the Cimjet 300.

The CIMCOMMS protocol supports both stand alone machines and networked systems. Up to 31 printers can be connected on each of the available RS-485 Comm ports. Most Markem.Imaje printers including Cimjet 200, Cimpak 300, Cimjet 200, SmartDate overprinters and Markem.Imaje Inkjet coders can be mixed on the same network.

The download process makes the data management process as easy as possible. When labels are selected the Cimjet 300 and CIMCOMMS protocol determine what information is required to print a specific label and all the required data is down loaded to the machine.

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4.5 Print and Apply Cycles

4.5.1 Print

A print sensor is used to activate the print cycle.

This is normally mounted on the production conveyor.

As a product passes the sensor, the reflected light is detected by the sensor and the print signal is activated.

Cimjet 300 will then start the print sequence.

During printing an air assist jet is normally used to ensure that the label comes into contact with the applicator.

The printed label is then held on the applicator ready for application to the product.

The time taken to print the label will depend upon the length of the label and the print speed. The print speed is a variable that can be adjusted in the Printer parameter settings.

Example 1:

- Label length - 100 mm
- Print speed - 100 mm/sec
- Print time - 1 second

Example 2:

- Label length - 100 mm
- Print speed - 150 mm/sec
- Print time - 0.45 seconds

4.5.2 Apply

Once the label has been printed the apply sequence is activated.

The position of the label on the product pack can be set by adjusting the Apply Delay timer which is a variable.

The higher the apply delay time the further the product pack will pass the sensor before the label is applied to it.

After the apply delay time is complete the label is applied to the product pack.

The applicator mechanism then returns to the home position ready for the next label.

In the case of an applicator such as the 331 where no moving parts are used, the next print signal will initiate printing of the next label.

4.6 Desktop Mode Operation

Cimjet 300 can be operated in a similar manner to a Desktop printer. When set to Desktop mode, any applicator fitted to the Cimjet 300 Dispenser will be non operational. This allows you to batch print labels without using the applicator.

Labels can be printed one at a time or in batches, and can be automatically peeled off the backing paper or left attached.

A Desktop stand is available from your local Markem.Imaje agent.

This allows you to print labels and wind them onto a roller without them being peeled off the backing paper. (Part No. 10000186)

Product selection is the same as with an operational applicator, but the display screen will have different options.

For full operational details see Section 5 Machine Operation.

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SECTION 5

MACHINE OPERATION

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5 Machine Operation

5.1 User Interface

The User Interface provides:

- Product code selection.
- Data entry.
- Machine set-up and fault finding.
- Error and Warning Messages.



Figure 5-1: User Interface

- Four option softkeys.
- Liquid Crystal Display (LCD) with 4 lines of 20 characters.
- Three fixed keys: **EXIT**, **ENTER** and **AUTO**.

SECTION 5 - MACHINE OPERATION

5.2 Auto and Set Mode

The Cimjet 300 has two modes of operation:

Auto Mode

Cimjet 300 automatically responds to Print and Apply signals. Application is triggered by sensors or other inputs. For further details refer to the Cimjet 300 Technical Guide.

Set Mode

This mode provides a series of menus which allow you to:

- a) Select product information to be printed.
- b) Run diagnostic tests.
- c) Control applicator parameters such as print delays, etc.
- d) Set the Time and Date.
- e) Load, View and Delete information from the local database

The **Auto** key is used in place of a keyswitch and toggles Cimjet 300 between Auto and Set Mode.

5.2.1 Operator Interface LEDs

Three LEDs provide a visual indication of machine status.

Table 5- 1: LEDs

LED	Description
Mode LED	Indicates if the machine is in Auto or Set Mode . Green LED: Auto Mode Red LED: Set Mode
Machine Busy LED 	Yellow LED: Cimjet 300 is printing or applying in AUTO Mode .
Status LED 	Green LED: Machine OK. Amber / Yellow LED : Warning, e.g. low paper. Red LED: Fault, e.g. no labels/foil

5.3 Guidelines for Entering Data

Many of the screens in both Auto and Set Mode require you to enter information using your menu.

To select an option:

- Press the 'soft key' next to the required option.

NEXT and PREVIOUS

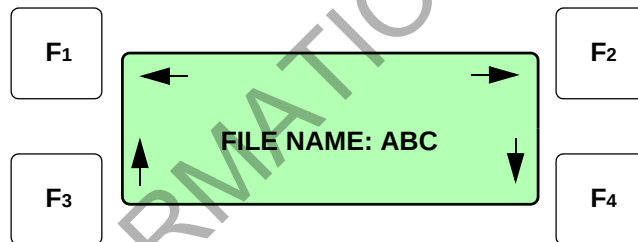
Generally only one parameter can be displayed on the screen at one time.

To scroll through available options:

- Press **NEXT** to view the next available parameter.
- Press **PREVIOUS** to view the previous available parameter.

Entering characters

When character entry is required, arrow keys are shown on the LCD :



- Move the cursor to the required character using $\rightarrow$ and $\leftarrow$.
- Change the character using $\uparrow$ and $\downarrow$. These keys scroll through all available characters.

Saving and Discarding Changes

The method of saving and discarding changes depends on the particular screen. Generally, to save changes:

- Press **ENTER**, the new parameter value is saved.

To discard changes and retain the previous value:

- Press **EXIT**

Also press **EXIT** to step back up through the menu structure.

SECTION 5 - MACHINE OPERATION

5.4 Auto Mode

In Auto Mode, Cimjet 300 automatically prints and applies labels.

Application is triggered by sensors or other inputs e.g. PLC control. For details refer to the Cimjet 300 Technical Guide.

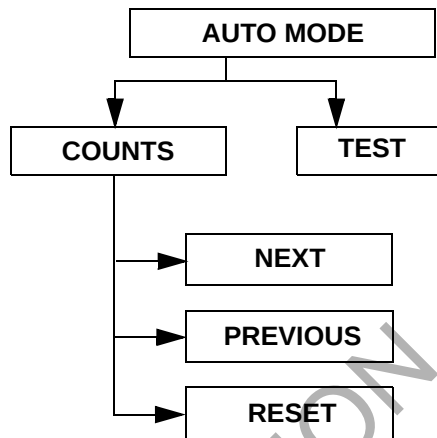
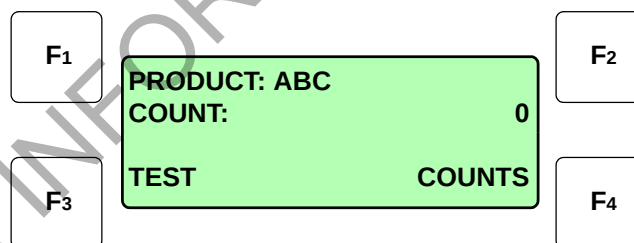


Figure 5-2: Auto Mode Menu Tree

To select Auto Mode:

- Press **AUTO**

The Auto Mode LED is green and the following LCD Screen is displayed:



This screen shows:

- The code of the product currently selected.
- The number of labels printed for this product.

5.5 Set Mode

In Set Mode, Cimjet 300 does **NOT** respond to Print and Apply requests.

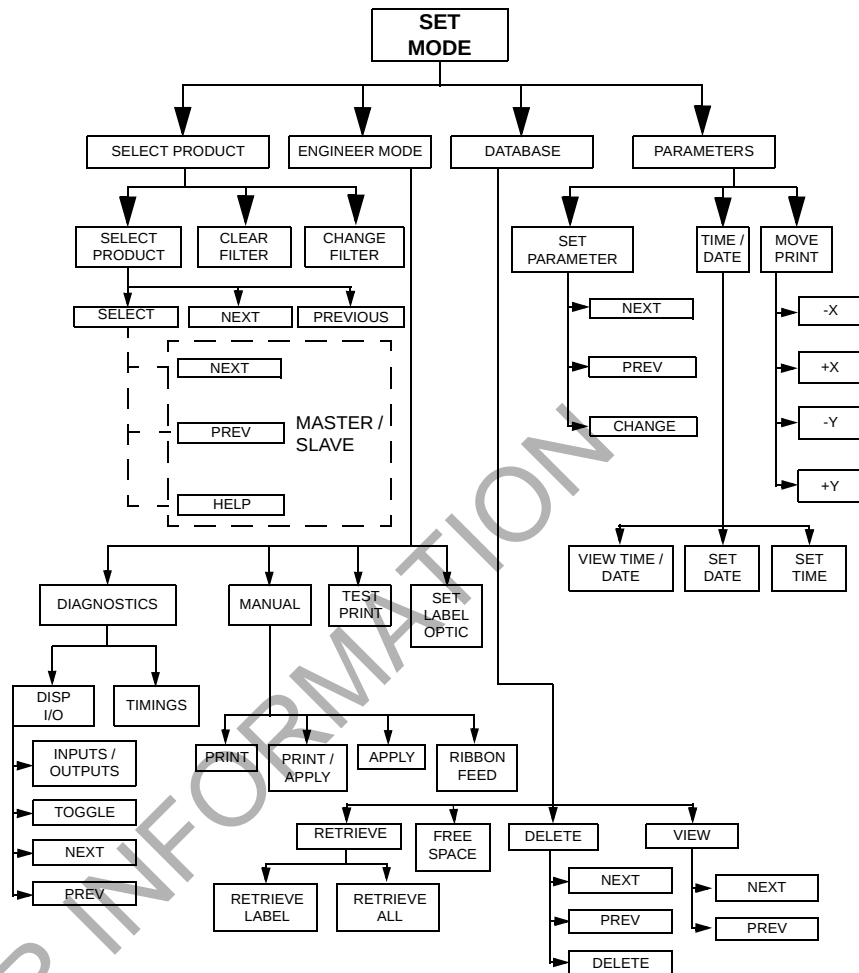


Figure 5-3: Set Mode Menu Tree

SECTION 5 - MACHINE OPERATION

Set Mode provides a series of menus which allow you to:

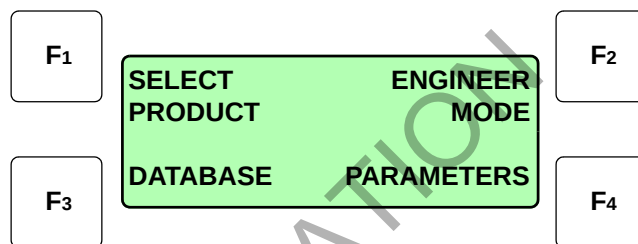
- Select product information to be printed.
- Run diagnostic tests.
- Control applicator parameters such as print speed etc.
- Set the Time and Date.
- Load, View and Delete information from the local database.

Cimjet 300 has a further level of restricted access menus, which give access to other infrequently changed parameters. For further information, see the Restricted Access Mode User Guide.

To select Set Mode:

- Press **AUTO**

The display shows the available Four Main Options:



5.6 Select Product

This selects the label to be printed. You can make changes to any Variable Text in the current design or select a different design.

Product Selection

Product Selection is normally performed by using the **NEXT** and **PREVIOUS** keys

If your Cimjet 300 is connected to a computer, the **NEXT** and **PREVIOUS** options are not available. In this instance, you must enter your file name one character at a time and then press the Enter key.

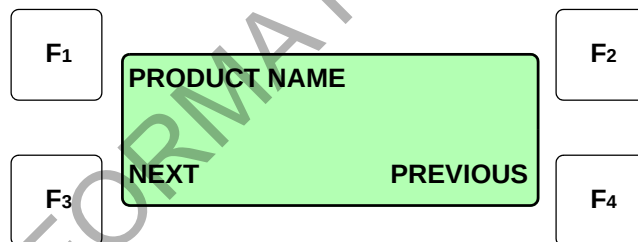
Note: The Product label information is then retrieved from the Host PC.

Product selection can also be initiated from the Host PC running Markem.Imaje's CoLOS Control. For further information on this topic please refer to the appropriate documentation.

To select the label to be printed:

- Press **SELECT PRODUCT**

The method of selecting a new product now varies slightly depending on whether data is stored locally (LOCAL RAM) or on a PC (HOST PC).



Local RAM Mode

Only one product is displayed at a time.

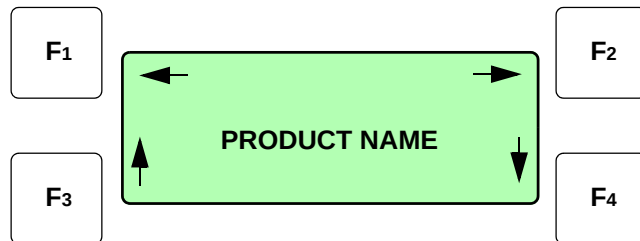
To select a product:

- Press **NEXT** and **PREVIOUS** to scroll through the products.
- Press **ENTER**

Edit any variable fields, if required when prompted.

SECTION 5 - MACHINE OPERATION

Host PC Mode



- Enter product file name using the arrow buttons to navigate the cursor.
- Press **ENTER**

The product data is retrieved from the host PC.

Note: If the product data does not exist, or if no connection is made to the host PC, or if ABORT is pressed, the message RETRIEVE FAILED is displayed.

- Enter any variable fields, as prompted.
- Press **ENTER**
- The new product is selected.

Printing a Test Label

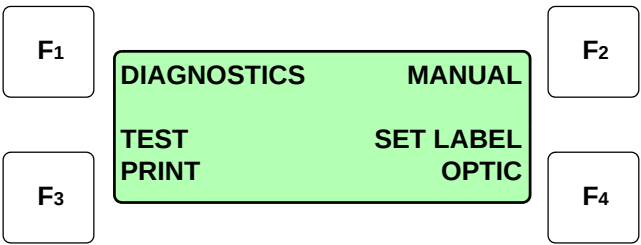
To print the selected label (as a test):

- Press **AUTO**
- Press **TEST**

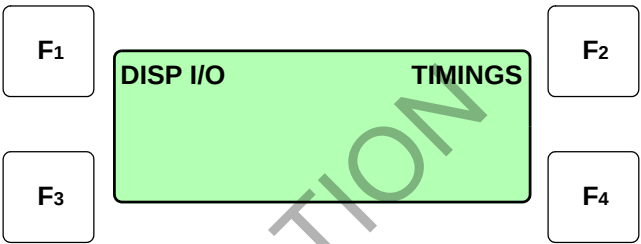
This will print the last label selected and perform an Apply cycle.

5.7 Engineer Mode

These options provide a number of first line machine maintenance functions:



5.7.1 Diagnostics



Display I/O

This screen allows the operator to view the current status of the Cimjet 300 inputs and to test the various Cimjet 300 Outputs.

Full details can be found in Section 8 – Technical Guide.

SECTION 5 - MACHINE OPERATION

Timings

This option lists the following times for the last Print and Apply cycle performed:

Note: The arrow will allow you to scroll down for more menu choices (See table for details on available options).

F1	IMAGE TIME 0.537s UPDATE TIME 0.004s PRINT TIME 0.750s CYCLE TIME 2.250s	F2
F3		F4

Table 5– 2: Timers

Timer	Description
Image Time	Time after selection to image the design in the printer memory.
Update Time	Time taken to update any incremental or time fields.
Print Time	Time taken to print the label.
Cycle Time	Time taken to complete a full print and apply cycle.
Variable	Time taken to update any variable fields
Remote Prod.	Time taken to perform a product selection from a Host system.

5.7.2 Manual

The Manual option allows the print and apply sections of the machine cycle to be checked individually.

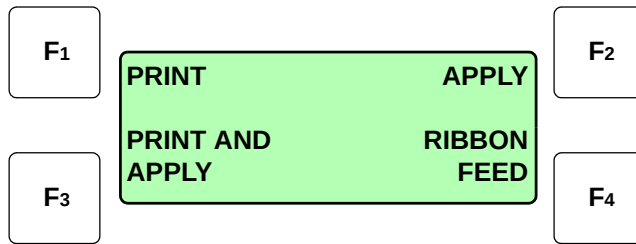


Table 5– 3: Manual Menu Options

Command	Description
Print	Allows the operator to manually print a label.
Apply	Allows the operator to manually apply a label.
Print and Apply	Allows the operator to manually print and apply a label.
Ribbon	Allows the operator to manually feed the ribbon.

5.7.3 Test Print

The Test Print option provides access to a Test pattern which is designed to allow printhead problems such as dot failures, printhead pressure and printhead alignment problems to be quickly diagnosed. After printing a test pattern you **MUST** re-select a product or Cimjet 300 continues to print the test pattern label.

5.7.4 Set Label Optic

Cimjet 300 feeds labels to automatically determine the optimum setting for the label sensor. This function can be used, if for example different label stock is used.

SECTION 5 - MACHINE OPERATION

5.8 Database

This option provides access to a set of menus that allow you to control the local label database.

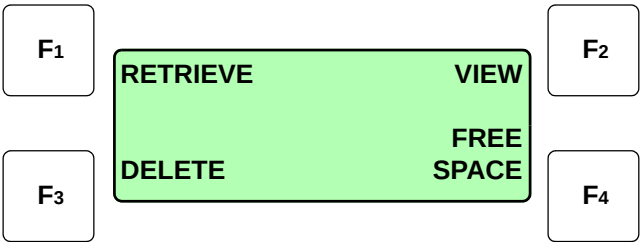


Table 5– 4: Retrieve Menu Options

Retrieve Menu	Description
Retrieve	Allows for retrieval of either one or all labels if connected to a Host PC.
	Retrieve Label: Allows you to select the label you wish to retrieve. Filename character entry required.
	Retrieve All: Allows you to retrieve all label data from the Host PC, this will also include Formats, Logo's and Fonts used. You have the choice of aborting this selection should you wish to do so, the on screen prompts will tell you if the retrieval has failed and to press ENTER to continue. Doing this will return you to the Retrieve one or all label screen option).

Table 5– 5: View Menu Options

View Menu	Description
View	Allows you to view all Labels/Formats/Logo's and Fonts that are resident in the machine Database. Product code selection can not be performed from this menu.

Table 5– 6: Delete Menu Options

Delete Menu	Description
Delete	Allows you to delete any of the Label/Format/Logo or Fonts that are present in the machine Database. If a Label code is selected after an associated Format, Logo or Font has been deleted, the selection will be unsuccessful and an Error message will be displayed. For example: No Format file found.

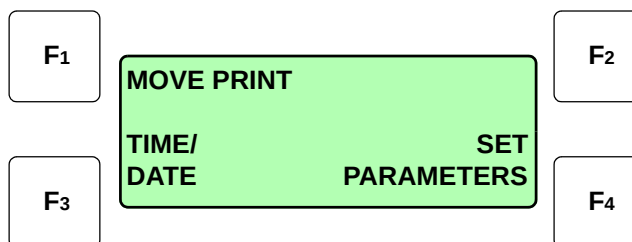
Table 5– 7: Free Space Menu Options

Free Space Menu	Description
Free Space	Allows you to view the amount of free memory space (bytes) currently available in the Database e.g. FREE SPACE 128990.

SECTION 5 - MACHINE OPERATION

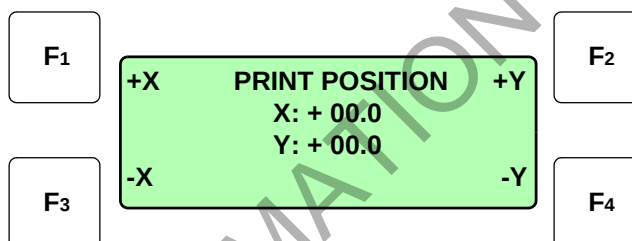
5.9 Parameters

This option allows you to alter various operating parameters:

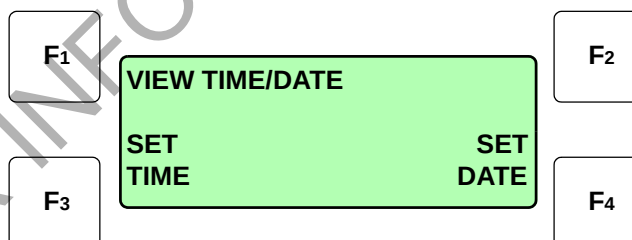


Move Print

The position of print can be altered. Altering the X and Y co-ordinates moves the printed information in the Label feed direction or across the printhead.



Time / Date



- Enter the required date and time.
Time is entered in the 24 hour format.

Set Parameters

This lists the Set Parameters available, for viewing and /or changing. Other parameters are available, for further information refer to Section 6 – Restricted Access.

Table 5– 8: Set Parameters Menu Options

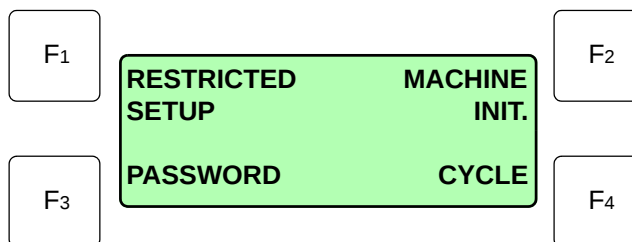
Parameter	Description
Darkness % Range: 15-140% Default: 100%	Percentage of time the printhead is energised for each line of print. A value of 100% is the recommended maximum setting. In all cases using the head at darkness values in excess of 100% is likely to decrease the print head life. Darkness levels can be set to above 100% in cases where a printhead is already defective and a replacement is not immediately available. Using a zero value allows the Cimjet 300 to be used as a label applicator for Pre-printed labels.
Print Speed Range: 50 -150mm/s Default: 150mm/s	Print speed (mm/s) is the time taken for the label to pass the printhead. (Max speed is dependant on printhead type) Dependent on the application cycle time, it may be possible to keep this setting and the print darkness setting low ensuring a longer printhead life. The quality of the Print is determined by a combination of the darkness level and the Print speed.
Direction° Range: 0-180 degrees Default: 0 degrees	Print direction can be set to 0 or 180 degrees. This allows common label designs to be used on printers used in differing orientations.
Applicator Only Mode Range: Enabled/ Disabled Default: Disabled	This allows you to apply pre-printed labels to products.

SECTION 5 - MACHINE OPERATION

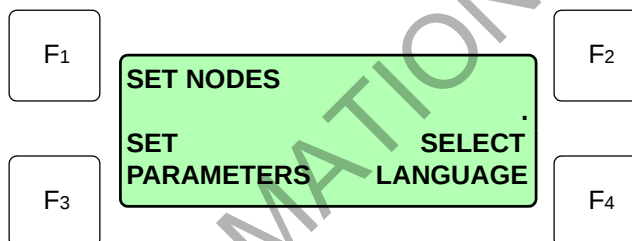
5.10 Desktop Mode Operation

When set to Desktop mode, any applicator fitted to the Cimjet 300 Dispenser will be non operational. This allows you to batch print labels without using the applicator.

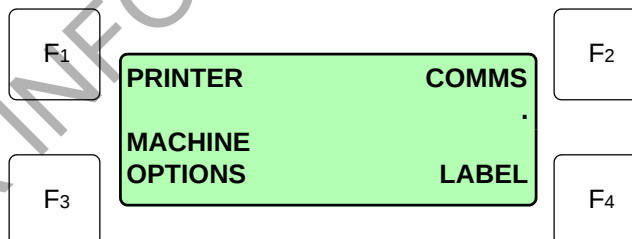
From the Restricted Access Menus:



- Press **RESTRICTED SETUP**
- The following screen is displayed:

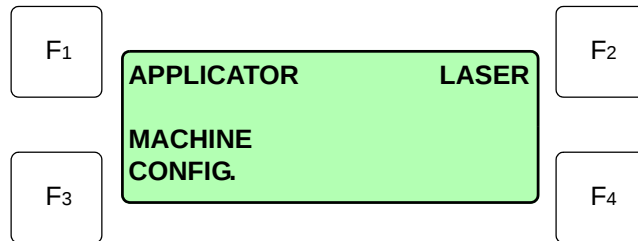


- Press **SET PARMAMETERS**
- The following screen is displayed:

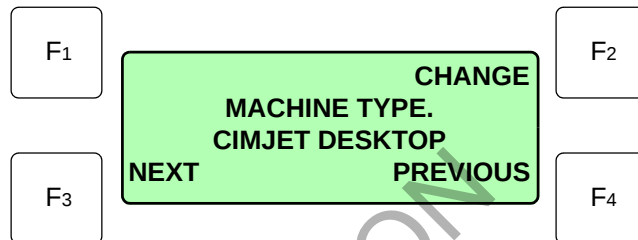


- Press **MACHINE OPTIONS**
- The following screen is displayed:

SECTION 5 - MACHINE OPERATION

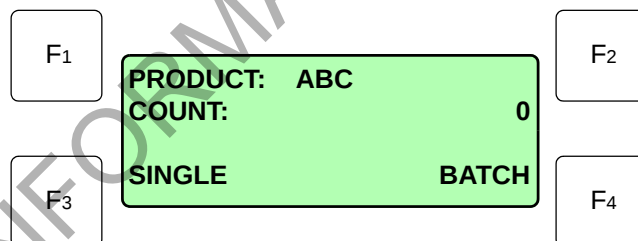


- Press **MACHINE CONFIG.**
- The following screen is displayed:



Select **CIMJET DESKTOP** by using the **CHANGE** option

- Press the **AUTO** button
- The following screen is displayed:



Note: The **ENTER** and **EXIT** buttons are disabled from this screen.

SECTION 5 - MACHINE OPERATION

Press the **SINGLE** option to print one label

Press the **BATCH** button to display the following screen:

F ₁	+1	BATCH	+10	F ₂
		0		
F ₃	-1		-10	F ₄

- Press the relevant button option to select the number of labels required.
- Press **ENTER** to activate the printing sequence.
- The following screen is displayed:

Example:

F ₁	PRODUCT: ABC	F ₂
	COUNT: 5 of 50	
F ₃	PAUSE	CANCEL
		F ₄

- The print sequence can be paused or cancelled from this screen.
- Press **RESUME** to continue after a pause.

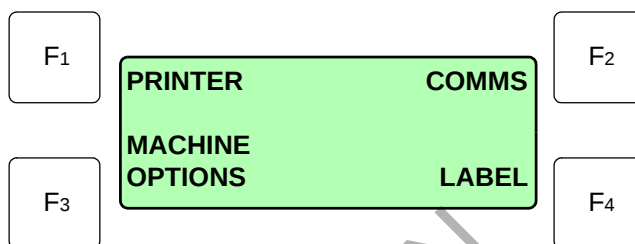
5.10.1 Desktop Mode Repeat Prints

If labels have fields with Incremental numbers or SSCC information on them, it may be necessary to print more than one label with the same information.

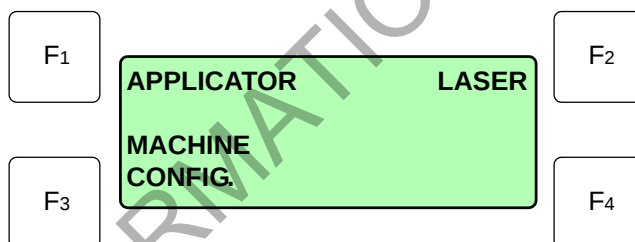
This can be done by using the **REPEAT CYCLE** option in the Applicator parameters.

From the Restricted Access Menus:

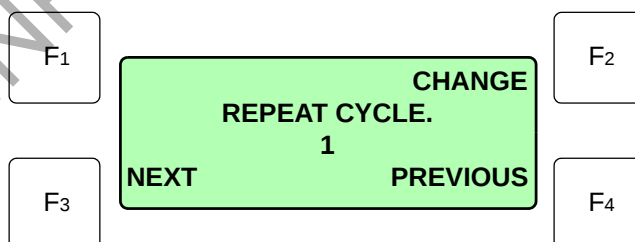
Press **MACHINE OPTIONS**



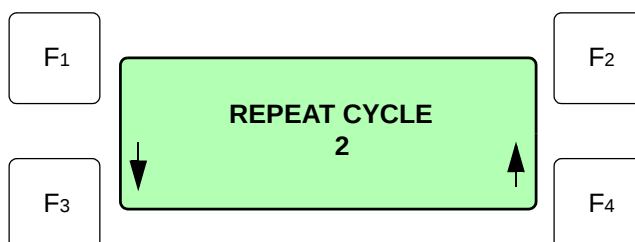
- The following screen is displayed:



- Press **APPLICATOR**
- The following screen is displayed:



Press **CHANGE** to alter the number of repeat labels to be printed.



The default is 1 (No repeat labels) and the maximum is 4 labels with the same information.

Press **ENTER** to accept.

Press **AUTO** to return to the print screen.

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SECTION 6

RESTRICTED ACCESS

FOR INFORMATION

6 Restricted Access

The Restricted Access Mode in Cimjet 300, has a series of menus. These menus allow the configuration to be altered.

CAUTION: The accessed parameters should only require changing directly after installation and should only be changed by qualified Markem.Imaje personnel or under instruction from Markem.Imaje.

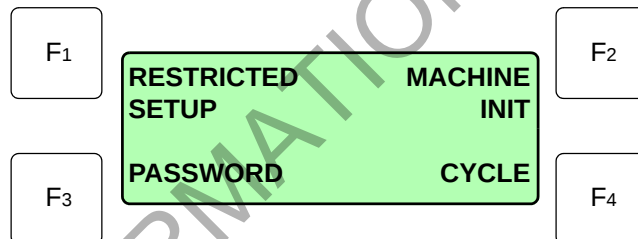
6.1 Entering Restricted Access Mode

To enter Restricted Access Mode:

- Select **Set Mode**.
- Press and hold the **ENTER** and **EXIT** keys.

After approximately five seconds the restricted access main menu appears. Release the **EXIT** key first.

The restricted access main menu has four main options:



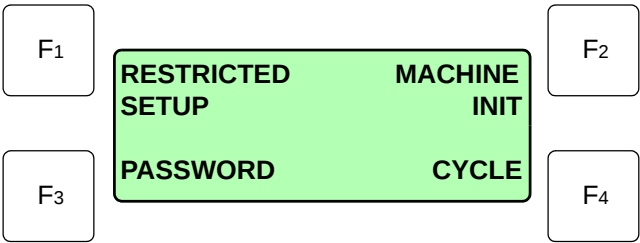
- Restricted Setup
- Machine Init (Initialisation)
- Password
- Cycle

Further details on these menus can be found on the following pages.

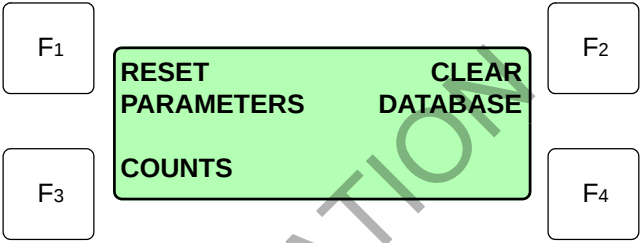
SECTION 6 - RESTRICTED ACCESS

6.2 Machine Init (Initialisation)

From the main menu :



- Press **MACHINE INIT**
The Machine Init menu is displayed :

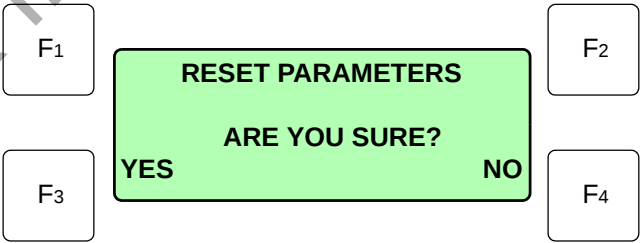


6.2.1 Reset Params

This option resets all parameters to their default values. The current selected applicator is not changed but the applicator parameters are set to the corresponding default values.

From the Machine Init menu:

- Press **RESET PARAMS**
The following screen is displayed :



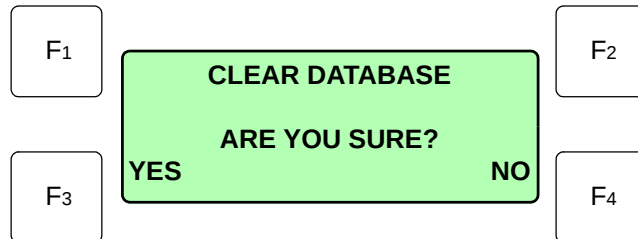
6.2.2 Clear Database

This option deletes **all** label, format, font and logo information stored in the machine's database.

From the Machine Init menu:

- Press **CLEAR DATABASE**

The following screen is displayed :



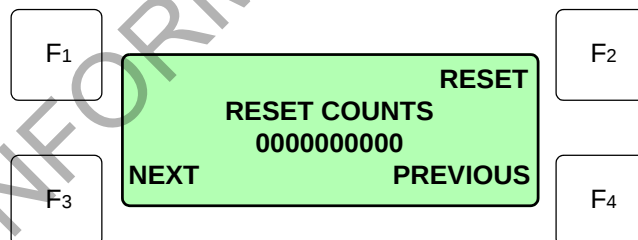
6.2.3 Counts

This option resets the BATCH COUNT, TOTAL COUNT and BARCODE VERIFICATION PASS/FAILS to zero.

From the Machine Init menu:

- Press **COUNTS**

The following screen is displayed :



To obtain the Batch or Total or Overburn count :

- Press **NEXT** and **PREVIOUS**

To zero a count :

- Press **RESET**

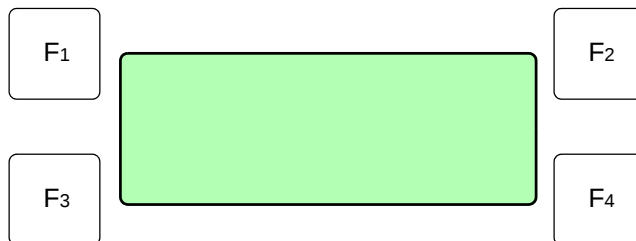
Note: Overburn is a record of the number of prints performed with the Print Darkness parameter set above the recommended maximum. The Overburn count can not be re-set.

SECTION 6 - RESTRICTED ACCESS

6.3 Password

Cimjet 300 can have password protection of the various Set Mode functions.

Passwords are entered using the four soft keys. The keys are :



A * will be displayed for each digit entered, and the **ENTER** key should be pressed when the complete password has been typed.

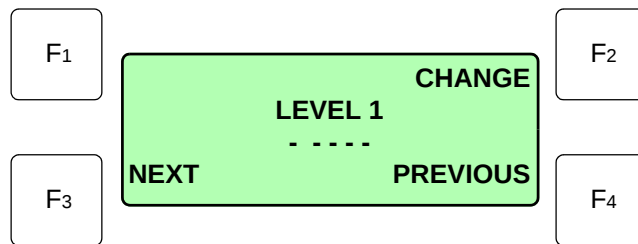
The passwords for each access level are fixed. The key sequences are given on the last page of this section. This page may be removed if passwords are being used, and this manual is freely available.

When a password is enabled for a key, Cimjet 300 will request entry of a key sequence before allowing access to the option. The four levels are intended for use by different user types:

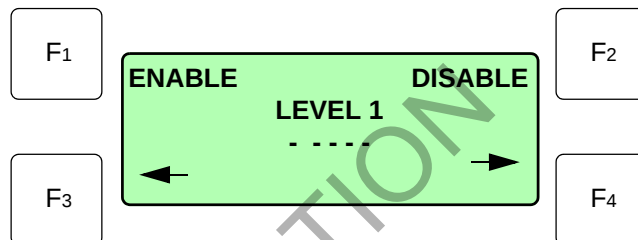
- Level 1 - Operators
- Level 2 - Line Supervisors
- Level 3 - Maintenance Personnel
- SYSTEM - Markem.Imaje Personnel and Line Managers

6.3.1 Password Configuration

On selection of the **PASSWORD** option from the top level restricted access menu, the following screen is displayed :

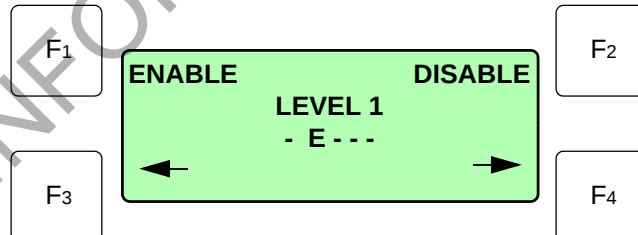


- Select **CHANGE**, the following screen is displayed :



The **NEXT** and **PREVIOUS** keys are used to scroll through the four access levels.

To activate a specific button on any level press **ENABLE** with the cursor flashing on the required function (- E ---) indicates which functions are available to users of this password level.



SECTION 6 - RESTRICTED ACCESS

In the above example LEVEL 1 has access via the level 1 password to the SELECT PRODUCT option (**Button 1**)

The Underscores on the screen indicate which function button is associated with the button numbers shown at the beginning of this section.

For example reading from left to right the first underscore activates the Restricted Set up buttons (**Enter** and **Exit** pressed at the same time) the next underscores are buttons **1 2 3** and **4**.

Access to the other softkeys and restricted access mode will depend on the other users protection level.

If all users have a “-” for a particular key (or restricted access) then no password protection will exist on that key.

The protection level for the particular user, may then be changed using the softkeys.

Note: The System password is the only one, which when active allow access to change the password settings.

6.3.2 Password Key Sequences

The Key sequences for each access level are fixed and are as follows:

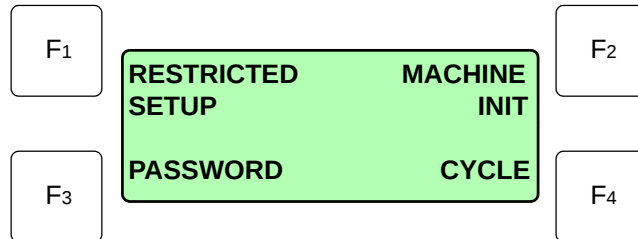
- Level 1 -2-1-1-1
- Level 2 -2-3-3-1
- Level 3 -4-1-2-3
- System 4 -2-4-4-1

CAUTION: If you have password protection to restricted access mode, the SYSTEM user will automatically have access to this mode, regardless of the SYSTEM password configuration. Also the SYSTEM user will be the only user with access to the password configuration menus.

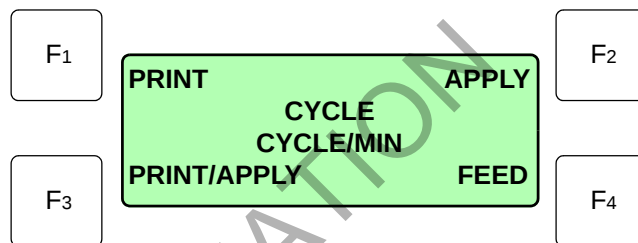
6.4 Cycle

This option allows the various elements of the machine to be set into continuous operation. For example: to continuously cycle the application or printer.

From the main menu see below :



- Select **CYCLE**, the following screen is displayed :



To start a cycle :

- Press the **REQUIRED SOFTKEY**

To stop the cycle :

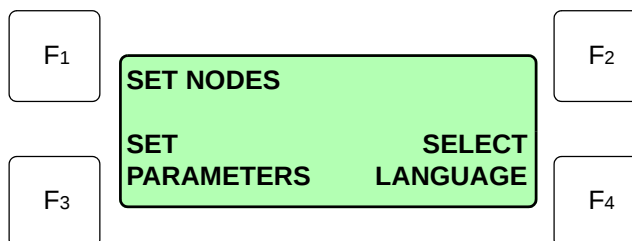
- Press the **REQUIRED SOFTKEY** again

SECTION 6 - RESTRICTED ACCESS

6.5 Restricted Setup

- From the main menu :
- Press **RESTRICTED SETUP**

The following screen is displayed :



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6.6 Set Nodes

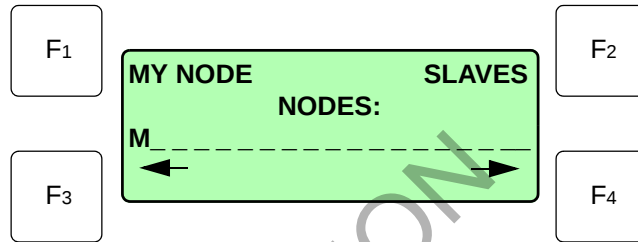
Cimjet 300 can be set to inform other Markem.Imaje machines on a network to select the same product code. This is done by assigning which Nodes numbers are to be slaves on the Master machine.

This option provides details of the current machine node setup, and node addresses if any are slaves.

From Restricted Setup menu :

- Press **SET NODES**

This following screen is displayed :



You can change :

- The Master Node number
- Network machines which are to be slaves

Changing the Master machine's Node number

To change the Master Node number :

- Move the cursor along to the required position and press MY NODE.
- The numbers run incrementally from left to right 123
- The Master Node numbers of other machines on the Network should be set on individual machines and **must be different**
- The Master machine Node number can also be changed from the **Comms** set up parameters.

SECTION 6 - RESTRICTED ACCESS

Changing Slaves

To add/remove slave units :

- Move the cursor to the desired node
- Press **SLAVES**

This toggles the slave status of the selected node. If the selected node was not previously a slave, an **S** is placed at that node number to indicate that the selected node is now a slave of this printer. Alternatively, if the selected node was a slave, pressing **SLAVES** removes the **S** and replaces it with a -.

It is possible for each Networked machine to be a Master with other machines as Slaves

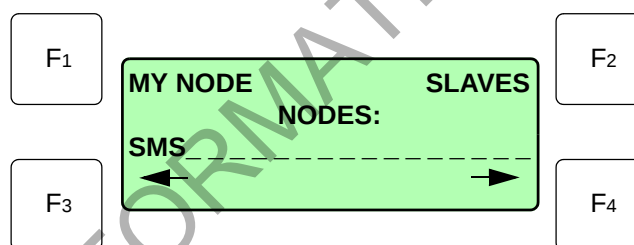
For example:

Machine Node 1 with machine Node 2 and machine Node 3 as Slaves

Machine Node 2 with machine Node 1 and machine Node 3 as Slaves

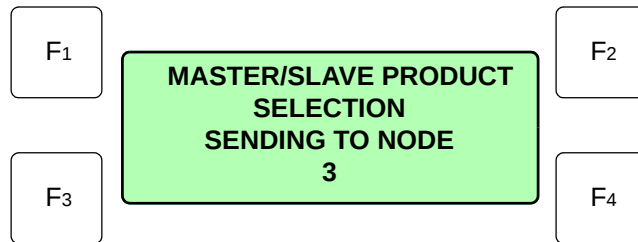
Machine Node 3 with machine Node 1 and machine Node 2 as Slaves

The following example shows that machine nodes **1** and **3** are slaves to machine node **2** which is being used as a Master :

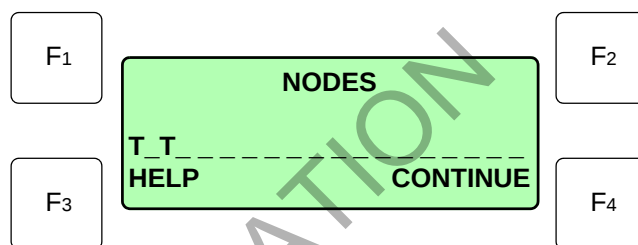


Whenever a Product Select is performed on a Master machine it will request that the Slaves select the same product code.

The following screen is displayed :



If the product select is successful or unsuccessful Cimjet 300 will display a letter in the Slave Node number position. For example: S or T.



Press the Help function softkey for a full explanation of any errors.

SECTION 6 - RESTRICTED ACCESS

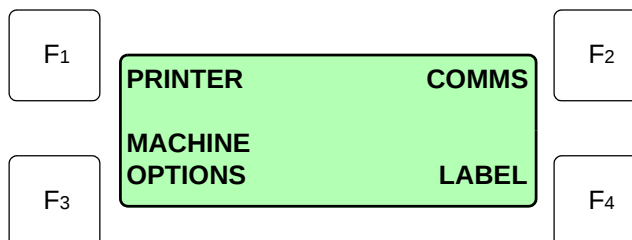
6.7 Set Parameters

This option allows various parameters to be viewed and changed.

From Restricted Setup menu :

- Press **SET PARAMETERS**

The Set Parameters screen is displayed :



You can change :

- Printer Parameters
- Communications Parameters
- Machine Options
- Label Parameters

6.8 Printer Parameters

These parameters control printing performance.

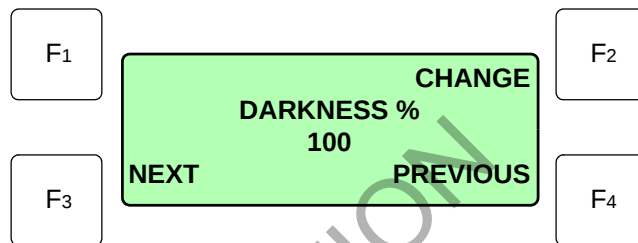
From the Set Parameters screen :

- Press **PRINTER**

The first parameter is displayed.

Example of editing the parameters

Only one parameter is displayed at a time. You can scroll through the parameters using **NEXT** and **PREVIOUS**.



Press **CHANGE**. An edit screen is displayed.

- Use the arrow keys to change the value shown.
- Press **ENTER** to save changes or **EXIT** to discard changes.

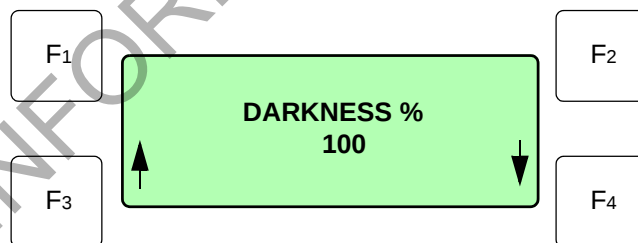


Table 6– 1: Printer Parameters

Parameter	Description
Darkness % Range: 15 to 140 Default: 100 %	Percentage of time the printhead is energised for each line of print. A value of 100% is the recommended maximum setting. In all cases using the head at darkness values in excess of 100% is likely to decrease the printhead life. Darkness levels can be set to above 100% in cases where a printhead is already defective and a replacement is not immediately available.
Edge Darkness Range: 50 to 90 Default: 80	This option is only available with an 8 dot printhead. Sets the darkness level when printing the start of characters. If the edges of these characters are not dark enough increase this parameter. If these edges appear 'smudged', due to excessive heat, reduce this parameter.
Print Speed Range: 50 to 400 mm/s Default: 150 mm/s	The maximum Print speed is dependant on the type of printhead fitted to the Cimjet 300. Print speed (mm/s) is the time taken for the label to pass the printhead. Dependent on the application cycle time, it may be possible to keep this setting and the print darkness setting low ensuring a longer printhead life. The quality of the Print is determined by a combination of the darkness level and the Print speed.
Backfeed Speed Range: 20 to 400 mm/s Default: 150 mm/s	Sets the Printer's backfeed speed.
Feed Adjust Range: ± 400 Default: 0 Note: 10 : 1mm	Allows fine adjustment of the label stopping position with respect to the beak.(label peel off bar) If the label is not being fed off the beak this parameter can be increased. If this parameter is increased the Backfeed must be increased by an equal amount.

Table 6– 1: Printer Parameters

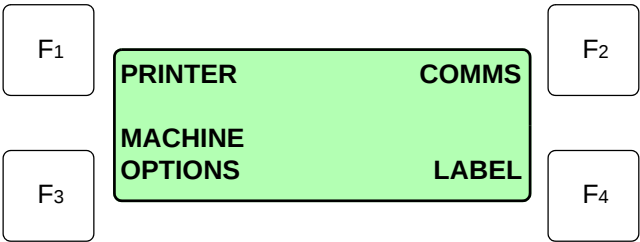
Parameter	Description
Backfeed Range: 0 to 500 Default: 115 Note: 10 : 1 mm	Distance the label is driven back from the beak, before starting to print a new label.
Optic Adjust Range: ± 400 Default: 0 Note: 10 : 1 mm	If the label gap happens to stop in the label Gap sensor this will cause feed problems. In cases where this happens the Label Gap sensor can be moved to a different position 10mm lower. The Optic adjust parameter should then be adjusted by -100 to compensate. This parameter should not be adjusted for any other reason.
Direction Range: 0°, 180° Default: 0°	Direction of print - 0 or 180 degrees. This allows common designs with machines mounted in differing orientations.
Ribbon Sense Range: Yes, No Default: Yes	Used for thermal transfer printing. Set to YES to activate the ribbon sensor. Set to NO for chemi-thermal printing.
Ribbon Save Range: None, Maximum, High, Medium, Low, Minimum Default: None	Enables the ribbon save option if fitted. The following three parameters are only displayed when this option is selected
Head Down Time Range: 0 to 100 ms Default: 25	Ribbon save parameter only. It is the time in ms for the printhead to be lowered onto the label and drive roller, before printing starts.
Head Up Time Range: 0 to 100 ms Default: 10	Ribbon save parameter only. It is the time in ms for the printhead to be lifted following the end of printing, before the label is fed back.
Applicator Only Mode Range: Enabled or Disabled Default: Disabled	Ribbon save parameter only. This parameter allows the Cimjet 300 to use Pre-printed labels. The printhead is not lowered during what would normally be the print cycle. This function should only be used when the Ribbon Save Dynamic head is fitted.
Printer Hand Range: Left, Right Default: Left	Defines which side of the printhead the image is aligned.

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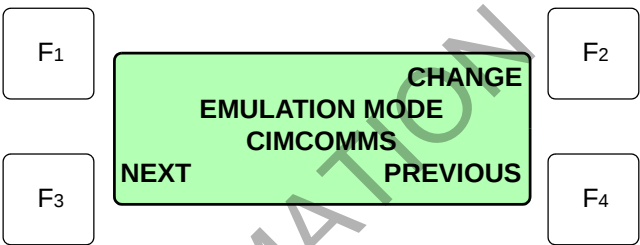
6.9 Communications Parameters

These parameters configure the Communications port.
From the Set Parameters screen :

- Press **COMMS**



The first parameter is displayed :



- Press **CHANGE** to select a different option
See the following table for a full list of available Communications Parameters.

Table 6– 2: Communications Parameters

Parameter	Description
Emulation Mode Range: CimComms, Emulation Z or S Default: CimComms	Determines whether the Cimjet 300 Host communication channel is set to respond to CIMCOMMS protocol or desktop EMULATION protocol.
Comms Baud Range: 2400, 4800, 9600, 19200, 38400, 57600, 115200 Default : 19200	Host communications link baud rate.
These four parameters only appear in Emulation Z or S	
Comms Protocol Range: 7-0-1 to 8-N-2 Default: 8-N-1	This sets the Comms protocol for Emulation Z or S.
Emulation Dots per mm Range: 8 to 12 Default: 8	This sets the print resolution for Emulation Z or S.
Emulation Label Width Range: 20 to 152 Default: 104	This sets the label width for Emulation Z or S
Emulation Vector Font Range: Swiss - Futura Medium Default: Swiss	This sets the Font type for Emulation Z or S.
Comms Link Range: RS232, RS422, RS485 ETHERNET Default: RS232	Host communication link type. ETHERNET is only available if the appropriate card is fitted.
Comms Mode Range: Local, Slave Default: Local	In SLAVE mode the Cimjet 300 responds to remote product select commands.
Network Node Range: 1 to 31 Default: 1 (RS232 operation)	Network node number for RS485 network applications.
PC Network Server Range: Yes or No Default: Yes	This option is only available if slaves have been configured.
Transfer Timeout Range: 30 secs to 10 mins Default: 30 secs	This allows the download transfer time out to be increased.

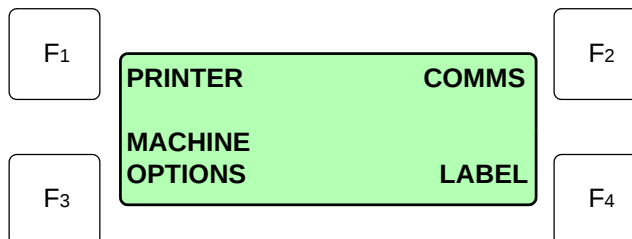
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6.10 Machine Options Parameters

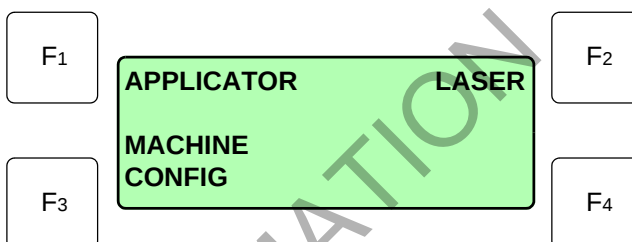
These parameters configure the machine options available.

From the Set Parameters screen :

- Press **MACHINE OPTIONS**



The following screen is displayed :



This screen provides access to :

- Applicator Parameters
- Laser Setup Parameters
- Machine Configuration

Note: Laser Parameter options only appear if a Serial Laser Card is fitted.

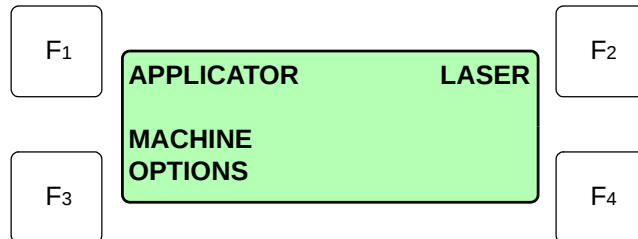
6.11 Applicator Parameters

These parameters configure various applicator set up options :

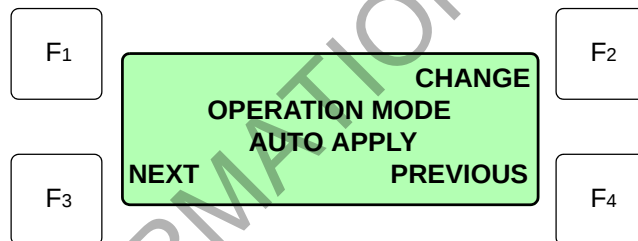
For a complete list of the available options please consult the appropriate Applicator section.

From the Machine Option screen :

- Press **APPLICATOR**



The first parameter is displayed:



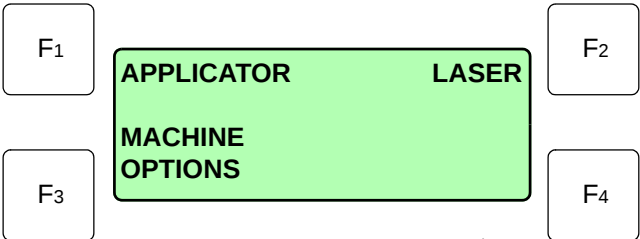
The options can be accessed by using the **NEXT** and **PREVIOUS** soft keys.

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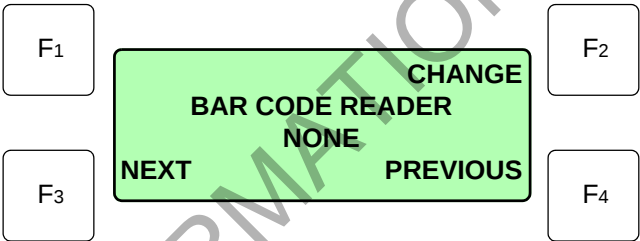
6.12 Laser Parameters

Only displayed if the optional Serial laser card is fitted.
These parameters configure various Laser options and Auxiliary Comm port options.
From the Machine Options screen :

- Press **LASER**



The first parameter is displayed :



The options can be accessed by using the **NEXT** and **PREVIOUS** soft keys

Note: The Verification Laser Option parameters are only displayed after selecting the Bar Code reader as Sick (Erwin Sick Scanners) or Generic.

Table 6– 3: Laser Parameters

Parameter	Description
Barcode Reader Range: Sick, Generic, Debug, None Default: None	Type of barcode scanner connected.
Laser Mode Range : Synch , Asynch Default : Synch	Selects whether laser is gated by a sensor (asynchronous) or not (synchronous).
Verification Delay Range: 0 to 10000 Default: 1000	Delays the start of the laser gate. Normally set to 0 for Cimjet 300 machines.
Verification Time Range: 0 to 2000 Default: 100	Time the laser is gated for in synchronous mode.
Consecutive Fails Range: 0 to 20 Default: 5	This sets the maximum number of bad reads before a fault is generated.
Reject Pulse Time Range: 0 to 2000 Default: 500	If a Barcode scan fails Cimjet 300 can generate a Reject pulse. This parameter determines the length of the reject pulse if it is used.

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Table 6– 3: Laser Parameters

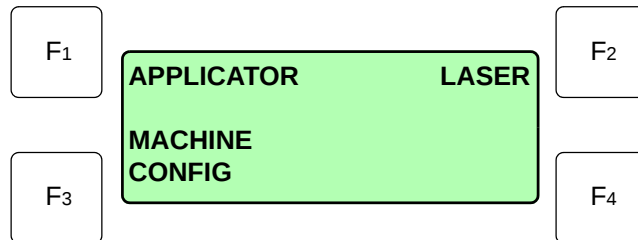
Parameter	Description
Verify Limit Range: 0 to 20 Default: 0	This limits the number of barcodes to be scanned therefore reducing the overall verification time. A zero setting will mean that all barcodes will be verified.
Verification Level Range: Full, Readability only or External Default: Full	Determines if full verification of the barcode is to be used or if the scan is for readability only. The latter will speed up the verification process time on fast lines. External is used with 2D Barcodes
Auxiliary Port Range: None, Wand, Debug, Ascii Comms, Tu Generic Or Tu Raw Default: None	Configures the auxiliary serial port to expect product select information from different sources. i.e. This can be from a Hand held scanner (Wand) or from a TU lookup source such as a TU scanner or PLC
ASCII Comms Baud Range: 9600, 19200, 38400, 57600 Default: 9600	This sets the Baud rate used with the ASCII Comms function

6.13 Machine Configuration Parameters

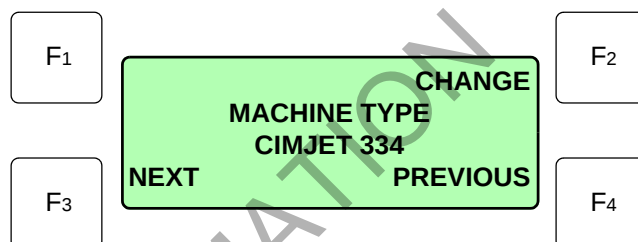
These parameters configure various machine set up options :

From the Machine Option screen :

- Press **MACHINE CONFIG**



The first parameter is displayed :



The options can be accessed by using the **NEXT** and **PREVIOUS** soft keys.

Table 6– 4: Machine Configuration Parameters

Parameter	Description
Machine Type Range: 306, 307LT, 309, 311, 312, 313, 314P, 315P, 316, 321, 331, 334, 342, 344, 345, 346, 2112, 2113, 2132, 2341, 2422, Cimjet 200 Cimpak 300 Default: 334	These options are for the Cimjet 300 series machines and defines the Applicator type fitted.
Database Mode Range: Local RAM, Host PC Default: Local RAM	Cimjet 300 has two methods of product selection: Local RAM Mode: Cimjet 300 selects labels resident in the local memory. Host PC Mode: Cimjet 300 requests the required data from the Host PC.
File Lock Override Range: Enabled or Disabled Default: Enabled	This is a safety feature for the image that is currently being used in production. If a new version of this image is downloaded to the Cimjet 300 and the File Lock Override is disabled the image can not be updated.
Sensor Debounce Range: 0 to 2000 Default: 0	Delays the response to external sensors. This is useful, for example, if the shrink wrap on a product is causing the product sensor to trigger a number of times for each pack. By setting a higher Sensor Debounce value, Cimjet 300 only responds to signals that stay on or off for the debounce time.
Enable Counts in Run Range: Yes, No Default: Yes	Allows the product counts to be displayed on the RUN Mode screen.
Test In Run Range: Yes, No Default: Yes	Most applicators provide a TEST option in RUN Mode that allows a label to be printed without an external signal. Set to No to disable this function.
Measurement Units Range: Metric, Imperial Default: Metric	Style in which measurements are displayed, either Metric or Imperial.

Table 6– 4: Machine Configuration Parameters

Parameter	Description
Filter Select Range: Off, On Default: Off	If set to On, allows operator to search for a product using a filter. For example: first letter of the product name. A* or 3* Only product names beginning with A or 3 will be displayed
Log Printed Data Range: No, To File, Realtime Default: No	If enabled, allows you to keep a record of all printed labels through CoLOS Control.
Status Output Range: None, Image complete, Print complete, Apply complete or Cycle complete Default: None	Used with external control systems.
Status Output Reset Range: Product Select/UD, Print, Apply, Reset Input Default: Product Select/UD	This determines which function will be used to Reset the Status Output.
CimComms Status Reset Range: Product Select/UD, Print, Apply, Reset Input Default: Product Select/UD	This determines which function will be used to Reset the CimComms Status Word. Used with either Cimcomms or ASCII Comms status messages.
Compatibility Mode Range: On / Off Default: On	This determines if the CimComms Status Reset function is used or not.
Product Select Input Range: On / Off Default: Off	This allows the Cimjet to switch between two product codes.
Key Beep Range: On / Off Default: On	This switches the key audio effect on or off.

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Table 6– 4: Machine Configuration Parameters

Parameter	Description
Optic Position Range: Old / New Default: Old	This refers to the old or new position for the label gap sensor. All new machines will have the sensor in the new position.
Labels on Full Roll Range: 20 - 32740 Default: 7000	This allows you to configure the number of labels on a new roll.
Labels Low Warning Range: 20 - 3200 Default: 500	This allows to to configure when the low lables warning will be displayed.
Allocation Warning Range: Off / On Default: Off	If set to On, a warning is displayed when an allocation runs out.
Allocation Abort Range: On, Off Default: Off	An allocation set from CoLOS Control can be stopped before it is completed.
Allocation Override Range: Disabled / Enabled Default: Disabled	This allows you to override an allocation sent from CoLOS Control.
Allocation Update Range: Start of Print, End of Print, End of Cycle Default: End of Cycle	This allows you to when the allocation complete signal is sent back to CoLOS Control.
Allocation on Select Range: Disabled / Enabled Default: Disabled	This allows you to enter an allocation for the selected product code at the machine.
Image While Print Range: Normal / Off Default: Normal	This allows the Cimjet 300 to prepair the next image while the previous one is being printed.

Table 6– 4: Machine Configuration Parameters

Parameter	Description
Head Distance Warning Range: Disabled / Enabled Default: Disabled	When enabled a printhead clean Warning will be displayed after a set number of prints.
Head Clean Distance Range: 1km - 100 km Default: 10 km	This allows to to set the distance (number of prints) for the above Warning.
LCD Display Driver Range: English / Japanese - English / European, Cyrillic Default: English / Japanese	This determines the which hardware micro chip is being used for the LCD display.
Code Page Range: IBM850, ANSI 1250, ANSI 1251, ANSI 1252, ANSI 1253, ANSI 1254 Default: ANSI 1252	This determines which code page has been used to create the display text on a PC.
Preheat Range: Disabled / Enabled Default: Disabled	This allows the Cimjet 300 to preheat the printhead in cold conditions.

Note: For full information on the Status Output and Product Select Input option parameters please see Section 8 – Technical Guide.

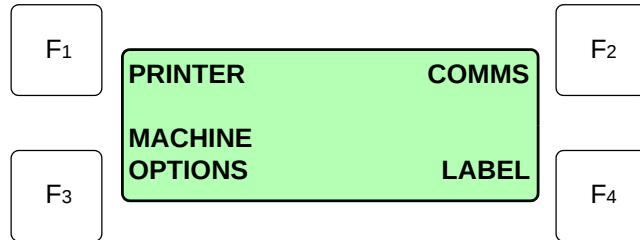
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6.14 Label Parameters

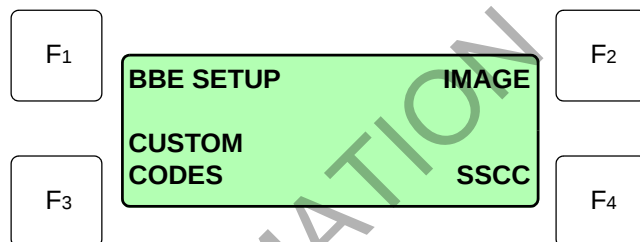
These parameters configure various label-specific information options.

From the Set Parameters screen :

- Press **LABEL**



The screen is displayed :



You can view and change :

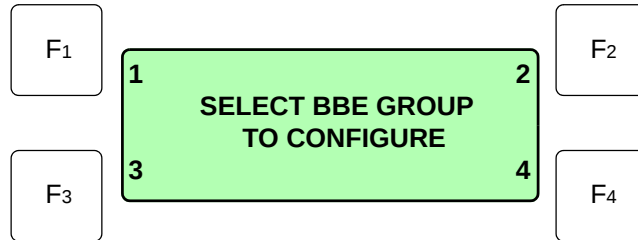
- Best Before End (BBE) parameters.
- Some fields which appear on the label.
- Position of the label design.
- Custom Code set up for Shift codes, Year codes etc.
- SSCC Start and End Values

6.14.1 BBE Setup Parameters

This configures each BBE group.

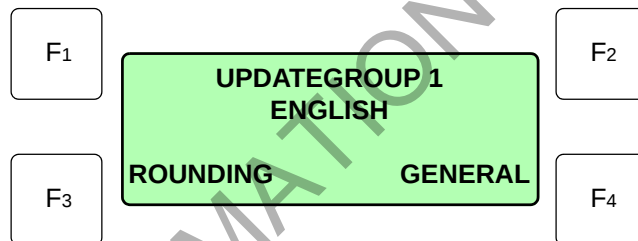
From the Label screen :

- Press **BBE SETUP**, this shows the following screen :



- Select a group. For example : Press **1**

The following screen is displayed:



- Select **UPDATE**

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The following screen is displayed :

F ₁	MODE GROUP 1 + DAY UPDATE EVERY DAY AT TIME 0:00 - DAY	F ₂
F ₃		F ₄

Note: The following procedure is the same for each group.

To set the general format to be used in the calculation of BBE date :

- Press **MODE**

MODE scrolls through the available following settings :

- UPDATE **EVERY DAY** AT **00:00**
- UPDATE **WEEKLY ON MONDAY** AT **00:00**
- UPDATE **MONTHLY ON 1ST DAY** AT **00:00**
- NEVER UPDATE

To add days (e.g. change Monday to Tuesday, or 1st to 2nd etc.) :

- Press **+DAY**. Repeat the process as required.

To subtract days :

- Press **-DAY**. Repeat the process as required.

To add hours :

- Press **TIME**. Repeat the process as required.

- Press **EXIT** then **ROUNDING**

Table 6– 5: BBE Parameters Rounding

Parameter	Description
NO ROUNDING	No rounding is performed.
ROUND TO THE PREVIOUS/ NEAREST/ NEXT DDD DAY OF THE WEEK BEFORE/ AFTER/ BEFORE AND AFTER CALCULATION.	DDD DAY - Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. Example The BBE offset is set to 1 year, and you require the BBE date to be rounded to the next Monday before and after calculation. Every time the BBE date is updated, the date will immediately round forward to the next Monday, increment the offset of 1 year, then round to the next Monday again. If the same example was used but was only set to round after the calculation, then the BBE date will increment the offset by 1 year, then round to the next Monday.
ROUND TO THE PREVIOUS/ NEAREST/ NEXT X DAY OF THE MONTH BEFORE/ AFTER/ BEFORE AND AFTER CALCULATION.	X DAY - 1st, 2nd, 3rd28th, 3rd Last, 2nd Last, Last Day. As previous example except that the day of the week is replaced with a date in the month.

- Press **EXIT** then **GENERAL**

Table 6– 6: BBE Parameters General

Parameter	Description
BBE Prompt Range: None, Fixed, Offset Default: Offset	Type of prompt used when selecting a product.
BBE Language Range: English, French, German, Dutch, Swedish and Spanish, Italian Default: English	Allows the BBE Month to be printed in the selected language.

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6.15 Image Parameters

From the Label screen :

- Press **IMAGE**

The first parameter is displayed :

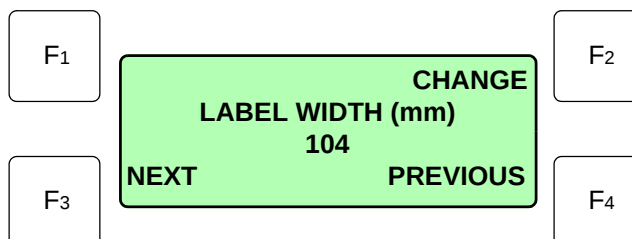


Table 6– 7: Image Parameters

Parameter	Description
Test Label Width / Height Range: W 10 mm to 152 mm, H 8 mm to 400 mm Default: W 104 mm, H 100 mm	Sets the width / height of the Test label stock. The range allowed depends upon the type of printhead detected.
Move Print x mm Range in mm: ± 100 Default: 0 Range in inches: ± 4 Default: 0	Allows the position of the printed image to be shifted across the label.
Move Print Y Range mm : ± 50 Default: 0 Range inches: ± 2 Default: 0	Allows the position of the printed image to be shifted along the web path. The value entered is in units x 10 For example: 10:1mm.
Save Variable Data Range: No, Yes Default: No	If Cimjet 300 applies various labels with the same base format, this parameter can be used to store the last set of variable data entered
BBE Date Base Time Range: At select / Last update Default: At selec	Set at Selection or by the Last update.
Line Number Range: 1 to 99 Default: 1	This allows fields marked by a CoLOS Create Pro Line Number User code to print the machine specific value into a Field on the label.
Machine Identifier Range: 0000 to ZZZZ Default: 0000	This allows fields marked by a CoLOS Create Pro MACHINE ID user code to print the machine specific value into a Field on the label.

Table 6– 7: Image Parameters

Parameter	Description
Start of week Range: Monday To Sunday Default: Monday	Sets the day to be used as the first day in the week. This is used in day number date fields. For example you may use ABC code for the days of the week. By default, A is Monday. If your week starts on Sunday, change this setting.
Start of day Range : ± 12 Default : 0	This affects the BBE dates calculations and sets when each new day is considered to have started. The calculation is automatically performed at the time set in the BBE UPDATE menu.
BBE Range Limiting Range: No / Yes Default: No	This allows you to limit the amount of BBE offset that can be configured.
Incremental Start Value Range: 00000000 to ZZZZZZZZ Default: 00000000 (Alphanumeric)	Start value for incremental fields.
Force Position Range: Right or Left Default: Right	This is used with Emulation mode.
Number of shifts Range: 1 - 21 Default: 6	Selects the number of shifts that can be set up using the Custom Code Setup parameter (see below).
Date Language Range: English, French, German, Dutch, Italian, Spanish, Swedish Default: English	Allows you to display dates in any of the available languages, when the Month is in a 3-letter format. For example: JAN, OCT, etc.
Overlap Mode Range: Default / Group Clear Default: Default	This is used on images where space is limited. If a field on the image updates regularly (Time/ Date) it may overlap another field. If Overlap mode is set to Group, both fields will be re-imaged.
Images Per Label Range: Single / Double Default: Single	This is used with the 342 applicator where the same image can be used twice on one label.

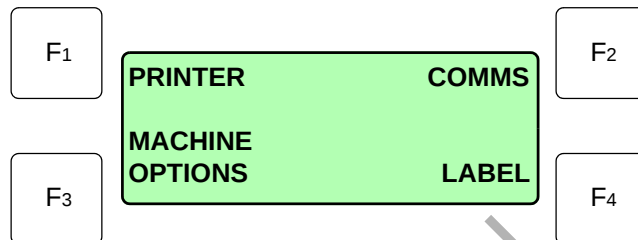
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6.15.1 Custom Code Setup

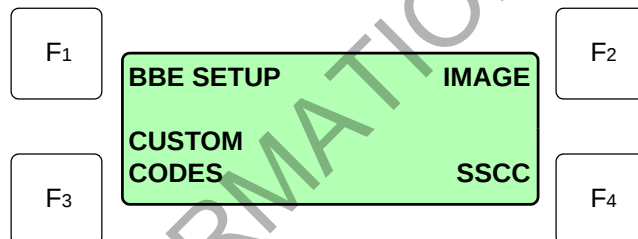
This allows the Operator to alter how certain Dates and Times are printed.

For example it may be required that the year 2001 is printed as "AMMS" or in some other form. The Label design may incorporate a Shift Code that requires automatically updating at certain times during the production period. The Custom Code set up allows the Operator to define these.

The Custom Codes Menu is accessed via the **LABEL** menu :

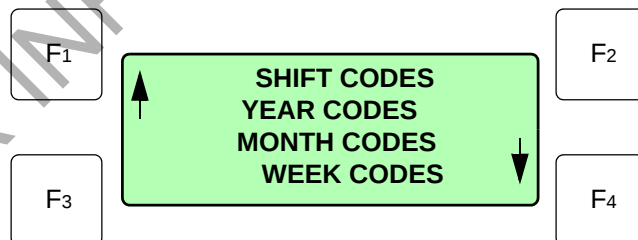


- Select **LABEL**, the following screen is displayed :



From this screen :

- Select **CUSTOM CODES**, the Custom Code screen is displayed :



To select and edit any of the codes :

- Use the arrow keys
- Press **ENTER**

To select **SHIFT CODES** :

- Position the arrow next to it
- Press **ENTER**

6.15.2 Shift Codes

For Shift Identifiers to appear on a label, two steps are required:

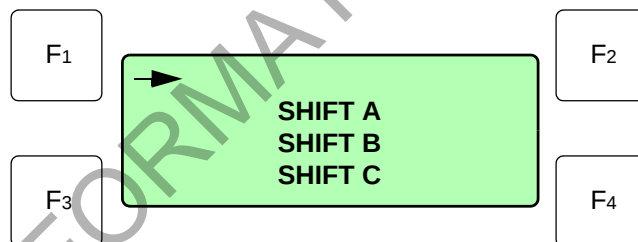
1. CoLOS Create Pro

Create the Label Shift code field at the design stage on Markem.Imaje's CoLOS Create Pro label design package. Assign the field with a **Shift Code** User Code. See the CoLOS Create Pro manual for full details on how to do this.

2. Cimjet 300

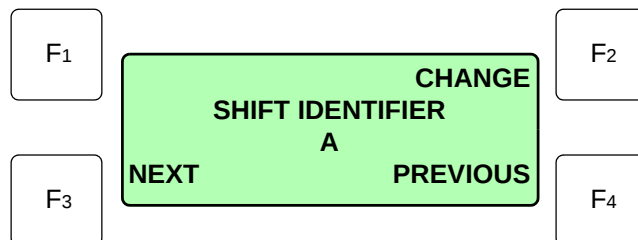
For each shift, set :

- Shift Identifier - this is displayed on the label when the shift codes are used in the label design.
- Shift Start Time.
- Shift End Time.
- Shift Working Days. On a weekly basis, which days use this shift.



To change the identifier :

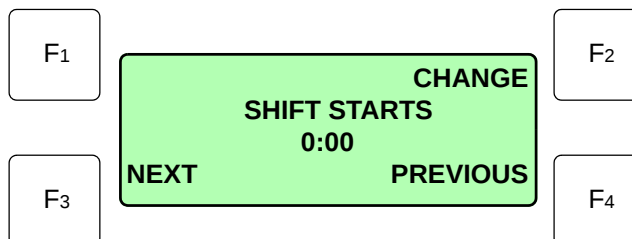
- Use the Arrow to select the SHIFT that requires editing
- Press **ENTER**



- Press **CHANGE** to edit the name of the Shift and use the arrows to select the required characters
- The Screen allows up to 9 characters to be used in the name
- Press **ENTER**
- To display the next screen :
- Press **NEXT** to display the Shift Start time

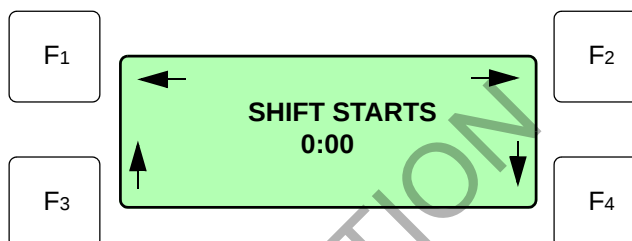
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Shift Start Time



To change the start time :

- Press **CHANGE**

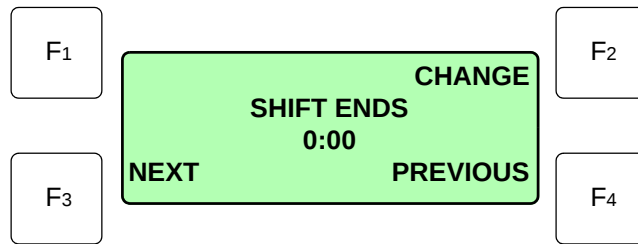


- Change the time using the arrow keys
- Press **ENTER**

To display the next screen :

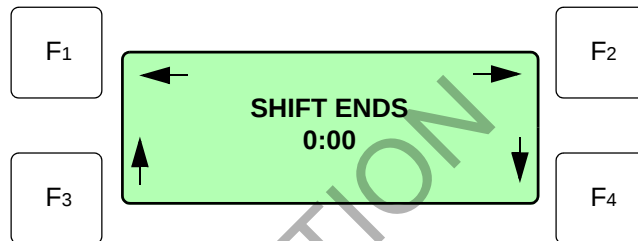
- Press **NEXT** to display the Shift End Time

Shift End Time



To change the end time :

- Press **CHANGE**



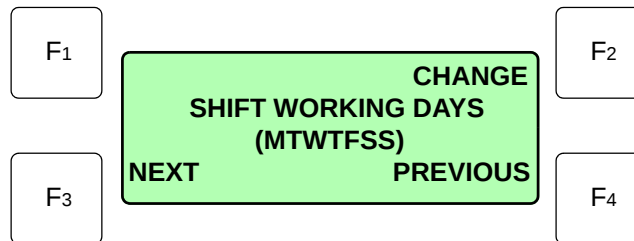
- Change the name using the arrow keys
- Press **ENTER**

To display the next screen :

- Press **NEXT** to display the Shift Working Days

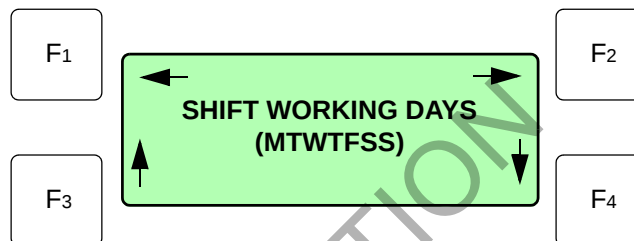
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Shift Working Days



To change the working days :

- Press **CHANGE**



- Select the days to include in the shift :
Move the cursor to the required day using ← → ↑ and ↓
- To add or remove a day from the shift pattern use the arrow keys
- Press **ENTER**

Table 6– 8: Shift Parameters

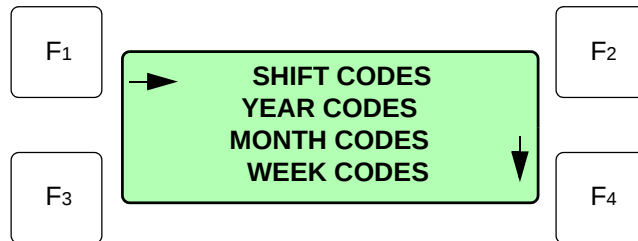
Shift Parameter	Description
Shift ID Range: Full 128 ASCII Character Set Default: I	Allows you to set the Shift Identifier.
Shift Starts Range: 00:00 to 23:59 Default: 00:00	Allows you to set the start time of the shift.
Shift Ends Range: 00:00 to 23:59 Default: 08:00	Allows you to set the end time of the shift.
Shift Working Days Range: (MTWTFSS) Default: (MTWTFSS)	Allows you to set the shift working days.

6.15.3 Date and Time Custom Codes

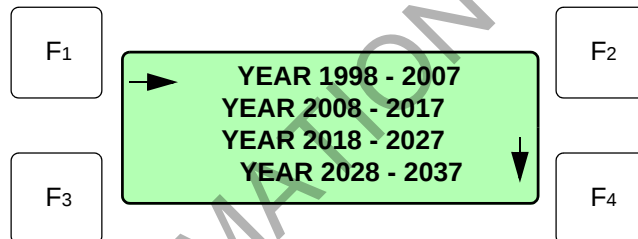
Cimjet 300 provides for Year, Month, Week, Weekday, Day and Hour codes to be set up. The set up procedure is similar for all of these options;

Some examples follow :

- Select **YEAR CODES** from the Custom Code Menu

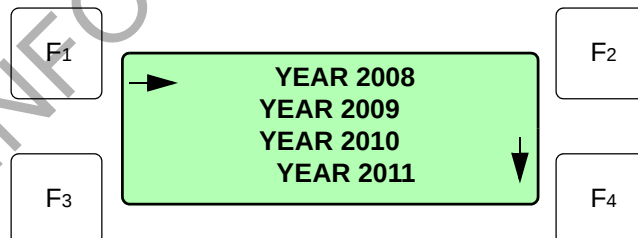


The following screen is displayed :



- Select **YEAR 2008 - 2017**

The following screen is displayed :



- Select **YEAR 2010**

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The following screen is displayed :

F1	CHANGE YEAR IDENTIFIER 2010 NEXT PREVIOUS	F2
F3		F4

- Select **CHANGE** to edit how the Year 2010 is to be printed

F1	← → YEAR IDENTIFIER BXAX ↑ ↓	F2
F3		F4

In this example, **2** is encoded as **B**, the **0**'s as **X** and the **1** as **A**.
The same procedure applies to options.

F1	← → MONTH IDENTIFIER JAN ↑ ↓	F2
F3		F4

F1	← → WEEKDAY IDENTIFIER MON ↑ ↓	F2
F3		F4

6.15.4 SSCC Parameters

Serial Shipping Container Codes (SSCCs) are supported within the Cimjet 300 range of machines. The SSCC number is an 18-digit number that is normally incorporated into a label Barcode. The Cimjet 300 will automatically increment the SSCC value between print cycles. The values used are dictated by customer specific requirements, an example of this might be as shown below :

3 12345678 00000000 X

The 18-digit number is normally made up in the following way :

- **3** specifies the packaging type e.g. Pallet
- **12345678** specifies the customer specific site code
- **000000000** the incremental number
- **X** the check digit (Automatically calculated by Cimjet 300)

Note: Cimjet 300 allows only for 17 digits to be edited, the last being the check digit.

This means that the 2nd last number is the one that increments sequentially and the last number (check digit) appears random.

The label field type must be specified at the CoLOS Create Pro design stage.

When this is done a **Default number** is used by CoLOS Create Pro and the Cimjet 300 settings will not come into effect until the SSCC values have been set and Product code is selected

An example of the set up might be :

SSCC Start value : 312345678000000000

SSCC End value : 312345678999999999

SSCC Current value : 312345678000000123

To enter SSCC values :

- Press **Restricted Setup**
- Press **Label**
- Press **SSCC**

SECTION 6 - RESTRICTED ACCESS

The following screen will be displayed :

F1

CHANGE

SSCC START VALUE

0000000000000000

NEXTPREVIOUS

F2

F3

F4

SSCC START Value

This should always be less than the current and end values. To amend the Start Value:

- Press **CHANGE**

The following screen will be displayed :

F1

←→

SSCC START VALUE

0000000000000000

↑↓

F2

F3

F4

SSCC END Value

This should always be greater than the start and current values.

To amend the End Value:

- Press **CHANGE**

The following screen will be displayed:

F1

←→

SSCC END VALUE

0000000000000000

↑↓

F2

F3

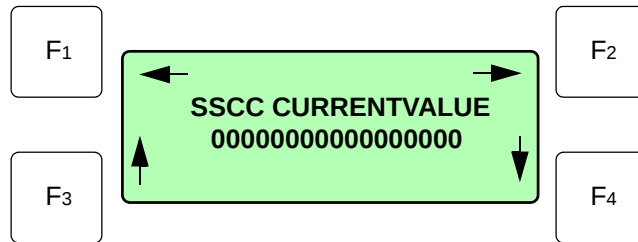
F4

SSCC CURRENT Value

This allows the current values to be set. To amend the Current Value:

- Press **CHANGE**

The following screen will be displayed :



SSCC Parameters

Table 6– 9: SSCC Parameters

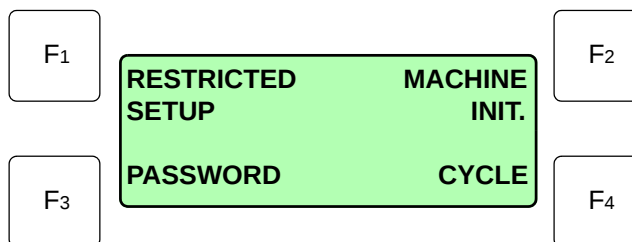
Parameter	Description
SSCC Start Value Range: 17 digit	This defines the start value for the SSCC and includes the customer site code It does not include the check digit.
SSCC End Value Range: 17 digits	This defines the highest value for the second to last 8 digits of the SSCC (excluding check digit). On reaching this value the SSCC will automatically wrap back round to the START VALUE for the next print cycle.
SSCC Current Value Range: 17 digits	This allows the current SSCC value to be changed. If this is set outside the START, END range it will be automatically set to the SSCC START before the next print cycle.

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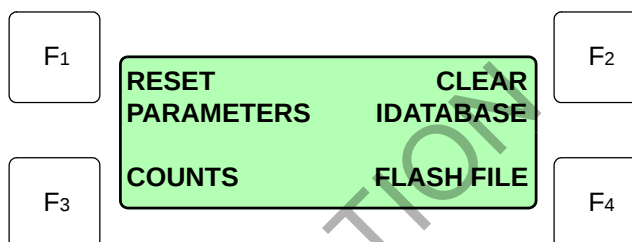
6.16 Machine Initialise

From the Restricted Access screen :

- Press **MACINE INITIALISE**



- The first parameter is displayed :



- The following options are available:

Table 6– 10: SSCC Parameters

Parameter	Description
Reset Parameters	This will reset the Cimjet 300 parameters to the factory defaults.
Clear Database	This will delete any files in the Cimjet 300 database. Image, Font or Graphic files
Counts	This allows you to reset various counters. Note: Overburn counts can not be reset
Flash File	This will delete any files in the Cimjet 300 Flash File database. Language files

FOR INFORMATION