DOMINO

Domino V-Series
User Guide

V120i

V230i

V320i

Domino. Do more.

CONTENTS

REGULATION

Declaration of Conformity (V20i, V120i and V230i)

DOMINO

1 EU DECLARATION OF CONFORMITY

2 Manufacturer
Domino UK Limited, Trafalgar Way, Bar Hill, Cambridge CB23 8TU, United Kingdom

3 Trademark
DOMINO

4 Authorized Representative
Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

5 Product Description
5.1 Industrial thermal overlay printer including accessories

6 Model/Type Number(s)
6.1 V20i IM, V20i CM, V120i, V230i (53mm), V230i (32mm), TOUCHPAD

7 We herewith declare under our sole responsibility that the above-mentioned products meet the provisions of the following EU Directives and harmonized standards:

8 EU Directives
8.1 2014/35/EU : Low Voltage Directive
8.2 2014/30/EU : EMC Directive
8.3 2011/65/EU : RoHS Directive, including amending Directive 2015/863

9 Applied harmonized European standards
EN 62368-1:2014+A11:2017
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 61000-6-2:2005
EN 61000-6-4 :2007+A1:2011

10 Further applied harmonized standards
N/A

11 This declaration is valid from the product starting with serial number
11.1 V20i from 20CR32A20G118620, V120i from 120L32E21G118620, V230i from 230R32E21G117721, TOUCHPAD from 100001F21G127088

12 Place, Date and legal Signature:

12.1 Cambridge, 30.06.2021

Lutz Doehnert
Group Research and Development Director,
Domino UK Limited.
On behalf of the Manufacturer

12.2 Hamburg, 30.06.2021

i.V. Martin Pauly
Director R&D – Laser,
Domino Laser GmbH.
On behalf of the Authorised Representative

Document Number: Doc-0009373_R09 Page 1 of 1

Contents of EC Declaration of Conformity

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N/A

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V120i from 120L32E21G118620,
V230i from 230R32E21G117721,
TOUCHPAD from 100001F21G127088

12 Place, Date and legal Signature:

12.1 Cambridge, 30.06.2021
Lutz Doehnert
Group Research and Development Director,
Domino UK Limited.
On behalf of the Manufacturer

12.2 Hamburg, 30.06.2021
i.V. Martin Pauly
Director R&D - Laser,
Domino Laser GmbH.
On behalf of the Authorised Representative

Declaration of Conformity (V320i)

DOMINO

EU DECLARATION OF CONFORMITY

Manufacturer
Domino UK Limited, Trafalgar Way, Bar Hill, Cambridge CB23 8TU, United Kingdom

Trademark
DOMINO

Authorized Representative
Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

Product Description
Industrial thermal overlay printer including accessories

Model/Type Number(s)
V320i, V320i PSU, TOUCHPAD, TouchPanel

We herewith declare under our sole responsibility that the above-mentioned products meet the provisions of the following EU Directives and harmonized standards:

EU Directives
2014/35/EU : Low Voltage Directive
2014/30/EU : EMC Directive

Applied harmonized European standards
EN 61010-1:2010+A1:2019
EN 55032 :2015
EN 55035 :2017
EN 61000-6-2:2005
EN 61000-6-3 :2007+A1:2011
EN 61000-3-2:2014
EN 61000-3-3:2013

This declaration is valid from the product starting with serial number
V320i from 320L05L20G113424

Place, Date and legal Signature:

Cambridge, 20.12.2020

Lutz Doehnert
Group Research and Development Director,
Domino UK Limited.
On behalf of the Manufacturer

Hamburg, 20.12.2020

i.V. Martin Pauly
Director R&D – Laser,
Domino Laser GmbH.
On behalf of the Authorized Representative

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Contents of EC Declaration of Conformity

Manufacturer

Domino UK Limited, Trafalgar Way, Bar Hill, Cambridge CB23 8TU, United Kingdom

Trademark

DOMINO

Authorized Representative

Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

Product Description

Industrial thermal overlay printer including accessories

Model/Type Number(s)

V320i, V320i PSU, TOUCHPAD, TouchPanel

We herewith declare under our sole responsibility that the above-mentioned products meet the provisions of the following EU Directives and harmonized standards:

EU Directives

2014/35/EU : Low Voltage Directive

2014/30/EU : EMC Directive

Applied harmonized European standards

EN 61010-1:2010+A1:2019

EN 55032 :2015

EN 55035 :2017

EN 61000-6-2:2005

EN 61000-6-3 :2007+A1:2011

EN 61000-3-2:2014

EN 61000-3-3:2013

This declaration is valid from the product starting with serial number

V320i from 320L05L20G113424

Place, Date and legal Signature:
Cambridge, 20.12.2020

Lutz Doehnert
Group Research and Development Director,
Domino UK Limited.
On behalf of the Manufacturer Hamburg, 20.12.2020

i.V. Martin Pauly
Director R&D - Laser,
Domino Laser GmbH.
On behalf of the Authorized Representative

Document Number: Doc-0009374_R06

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

European EMC Statement

This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

HEALTH AND SAFETY

Notes: (1) Please read the entire Health and Safety section in your Product Manual (Part No. 25275) before operating the printer.

(2) Unless stated otherwise, information provided is applicable to all printer variants.

The printer and its component parts must only be used for the purpose for which they were sold, and for which they are designed and constructed. No parts may be used for other functions.

Read the Safety Data Sheet (SDS) for Cleaning Fluid (Part No. WJ-111).

Read the following important notices before using the printer. The hazard information is prioritised into warning and caution notices.

Symbols

The following symbols are used in this manual. Where they appear next to a procedure or instruction, they have the significance and importance of written warnings and cautions.

Eye protection must be worn.

Protective clothing must be worn. Use adequate protective gloves. Consult the relevant Safety Data Sheet (SDS).

Disconnect before carrying out maintenance or repair.

Only trained personnel should carry out this procedure.

Warning Notices

Warning notices denote a potential hazard to the health and safety of users. These notices clearly state the nature of respective hazard and the means by which it can be avoided.

WARNINGS:

(1) Only trained and authorised personnel may carry out maintenance work. Observe all statutory electrical safety codes and practices. Risk of electric shock, disconnect the printer from the mains electrical supply before removing the cover or attempting any service or repair activity.

(2) The heating element and surrounding area become very hot during use. To avoid the risk of burns, never touch the heating element area of the print head.

(3) Cleaning fluid contains organic solvents. Always wear suitable PPE (goggles and clothes) to avoid contact with the eyes and skin. Avoid inhalation of the vapour. Do not smoke in the vicinity of solvents.

(4) Replace ribbons with care to avoid cutting hands or fingers.

(5) Keep clear of the print head whilst the printer is powered on, due to risk of injury from moving parts.

(6) Replaceable batteries should only be replaced using batteries of the correct specified type and rating. Failure to do so may result in an explosion hazard. Used batteries should be disposed of according to the battery manufacturer's instructions.

(7) To ensure continued protection against the risk of fire, replace fuses with the specified type and rating only.

(8) To avoid the possibility of electric shock hazard and damage to equipment, do not fit or remove any connector (except USB) on the printer while the printer is switched on.

(9) There is a danger of electrical shocks from the electrical outlet. All electronic checks must be performed by qualified personnel.

Caution Notices

Caution notices denote a risk to equipment damage. These notices clearly state the nature of the hazard and the means by which it can be avoided.

CAUTIONS:

(1) Changing the print head without setting the new resistance value may cause severe damage to the print head.

(2) To avoid damage to the cables or equipment, ensure that the cables are routed clear from any moving parts.

(3) To avoid damage to the equipment, do not exceed the supply voltage stated in the manual.

(4) To avoid damage to the printer components, use only soft brushes and lint-free cloths. For cleaning, always use Cleaning Pens (Part No. VPR0223), Cleaning Fluid (Part No. WJ-111) and Print Head Cleaning Wipes (Part No. MT25215). Do not use high pressure air, cotton waste, abrasive materials, metallic objects or degreasing cleaning fluids (e.g., Benzene, acetone).

(5) To avoid the risk of damage to the print head use only Domino spares, parts and consumables.

(6) Do not run the printer without ribbon material, as this may damage the print head.

(7) Do not expose the printer or controller to any water

INTRODUCTION

General

This document contains basic operation instructions for the Domino V120i, V230i and V320i printers.

For further information, refer to *Product Manual* (Part No. 25275).

Description

The Domino V-Series is an industrial Thermal Transfer Overprinter (TTO). It consists of a rectangular printer unit which contains a heated print head and thermal ribbon. The printer can be controlled through an optional TouchPanel, TouchPad or from a networked PC.

Printing is achieved by placing a thermal ribbon between a heated printhead and the substrate to be marked. Heat from the printhead is passed through the ribbon, causing ink to melt and be released from its underside. The ink adheres to the substrate and then cools rapidly, resulting in a permanent print.

Intended Use

The V-Series is intended to print variable data, bar codes and images onto flexible packaging films and labels

The V-Series excludes the use within a non-professional or household environment.

This equipment is not suitable for use in locations where children are likely to be present.

Safety may be impaired if the product is used in a manner not specified by the manufacturer.

Only use the supplied external power supply or safety of the equipment may be impaired.

V120i

The V120i is an entry level, compact TTO printer with a 32mm wide print head. The maximum ribbon length is 770m which gives an effective length of 1925m when economy mode is used.

V230i

The V230i is a general purpose TTO printer, with 2 print head width options (32mm and 53mm). The maximum ribbon length is 770m which gives an effective length of 1925m when economy mode is used.

V320i

The V320i is a high speed TTO printer, with 2 print head width options (53mm and 128mm). The maximum ribbon length is 1600m which gives an effective length of 3500m when economy mode is used.

V120i and V230i System Specification

TouchPad

Type	5.7 inch, full colour TouchPad (640x480 resolution), handheld, with docking station.
TouchPad Dimensions (mm)	170(W) x 127.9(H) x 33.7(D)
Weight (kg)	0.385kg
Connectivity	USB, Ethernet, (Mini USB for power / data connection to printer)
Network Interface	Ethernet 10/100 base TX
Accessories	Wall brackets
Operating environment	5 - 40°C
Humidity	20 - 80 % RH non-condensing
Location	Indoor use only
Maximum operating altitude	<2000m
Pollution degree of intended environment	2

Printer Specification

Printing Mode	Intermittent and Continuous
Left Hand / Right Hand	Both options available (convertible with no extra parts in 15 minutes)
Print Resolution	300 DPI
Maximum Print Area IM	32mm/53mm x 55mm
Maximum Print Area CM	32mm/53mm x 500mm
Print Speed (max) IM	400mm/s
Speed Range CM	10mm/s - 750mm/s
Print repeat rate (max)	6 prints/s (with a 10mm long print)
Ribbon drive technology	i-Tech Ribbon Drive with unique dancing arm tension control
Max ribbon length	770m (up to 1925m effective length with Economy mode)
Ribbon save modes	Economy mode: Variable up to 60% with no reduction in print resolution; Retraction mode: Less than 1mm gap between prints; Column mode: 15mm max printed ribbon per print (CM), 50mm max printed ribbon per print (IM); Stop mid print
Print features	Date code format, offsets, shift codes, serial number generation
Fonts	Most TrueType fonts
Controller / hardware interface options	No dedicated controller required. Hardware interface options: Domino TouchPad (via USB cable- hot swappable), Shared TouchPad (via Ethernet cable or network), PC-based interface (via Ethernet cable or network)
Connectivity	Ethernet / USB x 2 / mini USB (service)
CAUTION: The ethernet socket includes Power over Ethernet output.	
Inputs	Print Go, Encoder

Outputs	Error, Ready, Ribbon Low, Spare (volt-free contacts)	
Special features	Master / slave, password, Fast Mode	
Label creation	Onboard or via EasyDesign or QuickDesgin	
Electrical requirements	24V d.c. (+/- 2%) at 5A (if direct)	
Dimensions:		
Width:	218mm	
Height:	160mm	
Depth:	V120i: 148.5mm	
	V230i (32mm): 182mm	
	V230i (53mm): 202mm	
Weight:	V120i:	5.6kg
	V230i (32mm)	6.4kg
	V230i (53mm)	7.3kg
Temperature requirements	5°C to 40°C	
Humidity Requirements	20-80%, RH non-condensing	
Location	Indoor use only	
Maximum operating altitude	<2000m	
Overvoltage category	CAT II	
Pollution degree of intended environment	2	

Power Supply Unit

Dimensions:	135mm x 58mm x 35mm
Weight:	0.5kg
Rated Input Voltage Range:	100-240V~2.0A, 50-60Hz
Output Voltage:	+24V d.c.
Rated Output Power:	120W subject to de-rating
Working Temperature:	0 to +50°C subject to de-rating

Storage Temperature:	-20°C to +85°C
Location	Indoor use only
Maximum operating altitude	<2000m
Overvoltage category	CAT II
Pollution degree of intended environment	2

V320i System Specification

TouchPanel

Display	10.4 inch SVGA Full Colour TouchPanel
Operating System	Windows CE 7
Dimensions (mm)	307(W) x 232(H) x 75(D)
IP Rating	Designed to IP55
Mounting Accessories	Full range of brackets
Temperature	5 - 45°C
Humidity	10 - 90% non-condensing
Location	Indoor use only
Maximum operating altitude	<2000m
Overvoltage category	CAT II
Pollution degree of intended environment	2
Electrical supply voltage	100 - 230 VAC
Electrical supply frequency	20W 50-60 Hz
Weight	2.85 kg
Mounting	VESA 75 Mounting Standard
Ethernet Cable	5m and 10m

Printer Specification

Product Specification	V320i 53mm Printer	V320i 128mm Printer
Printer Dimensions (mm)	260(W) 190(H) 225(D)	260(W) 190(H) 305(D)
Printer Weight (Kg)	12	12.5
Print Area - IM (Intermittent Mode)	53 X 115mm	128mm x 115mm
Print Area - CM (Continuous Mode)	53mm x 2700mm	128mm x 1000mm
Ribbon Saving Features	Up to 60% Variable ribbon economy (CM and IM) Ribbon Retraction offering <1mm gap between prints on used ribbon. Print overlap possible if message design allows.	
Print Speed (IM)	Up to 5 prints per second in IM (based on 2 line print)	
Print Speed (CM) mm/sec	50 - 800 (Normal Mode) 500 - 1400 (Fast Mode)	
Print Density	300 DPI	
Character Control	Real Time Clocks, Text (in true type fonts), Logos Barcodes and Graphics	
Graphics Format	Monochrome PCX, Monochrome BMP	
User Interface	Quickstep; Web browsable GUI (option available)	
Label Creation	EasyDesign PC application. Also compatible with Connect+, Codesoft, Labelview, Prysm, QuickDesign	
Connectivity	Ethernet, USB (for USB Stick), Secure Digital (On printer only), Digital I/O for host machine integration.	
Ribbon	Compatible with the full range of DOMINO ribbons.	

Ribbon Width	Standard Widths: 30mm, 55mm and 130mm. Other widths available on Request
Beacon Alarm Outputs	General fault and Printer Ready conditions.
Storage for Printer	Internal 2GB SD (Secure Digital) card. External SD card up to 2GB. No limit for external USB.
Electrical supply	115-230V~3.5A, 50-60Hz - Fuse 4 amp T 5x20 UL
Compressed Air Inlet Min	2 bar
Compressed Air Inlet Max	5 bar
Compressed Air regulated	2-5 bar (according to application)
Operating Temperature (Celsius)	5° to 40°
Location	Indoor use only
Maximum operating altitude	<2000m
Overvoltage category	CAT II
Pollution degree of intended environment	2
Ribbon length	1600 metres (up to 3500m effective length with Economy mode)
Approvals	CE
IP Rating	Designed to IP44 (when print head opening is covered)

Note: For purity of supplied compressed air, Domino required compliance with Compressed air purity classes ISO 8573-1 6 3 2.

Mechanical Installation

Installation Requirements

Ensure that the following services and control signals are available:

Notes: (1) V120i and V230i Power: 100-240V AC, 50/60Hz, 2.0A

(2) V320i Power: 115-230 VAC, 50/60Hz, 3.5A

(1) For V320i: Compressed Air: 2-5 Bar, dry, uncontaminated.

Note: For purity of supplied compressed air, Domino requires compliance with Compressed air purity classes ISO 8573-1 6 3 2.

(2) A print start signal; we recommend a volt-free contact which closes when printing is required.

(3) Sufficient space for installation and operation.

(4) If using the printer in Continuous Mode, an encoder giving 12 (or a multiple of 12) pulses per mm is required to monitor the substrate speed. (This is included with the CM bracket.)

Brackets - V120i and V230i

Notes: (1) For a list of the tools required, see the bracket instructions provided with the bracket kit.

(2) For spares information, see MyDomino.

The bracket range covers widths of up to 900mm. The available flat-pack variants are:

- Window bracket (for IM and CM versions)

Notes: (1) The CM version includes the encoder and CM axle assembly.

(2) The CM rubber roller assemblies are available in 100mm size increments (305mm to 805mm) and must be ordered separately.

(3) The Quick Release (QR) Carrier Assembly (P/N EPT006141) is available for mounting the printers directly onto V120i and V230i flat pack window brackets (IM bracket EAS002706 and CM bracket EAS002717). Use this assembly in wash-down environments or other situations where printers need to be removed on a regular basis. The assembly has the same overall dimensions as the standard printer carrier (P/N

5-0460258) and can be swapped out on existing installations.

- Web positioning module
- Labeller bracket (IM only)

Mounting the Printer in the Bracket System

V120i and V230i

Notes: (1) Tool required: 5mm Allen key

(2) Prior to mounting the V230i in the bracket system, remove the cassette to enable easier handling.

(1) Mount the printer in the bracket system, using four M6 screws (supplied with bracket).

(2) When mounting the printer in the CM bracket, ensure the print head is positioned above the top point of the rubber roller.

Note: To obtain the best print quality, fine adjustment of the print head can be done electronically at a later stage. *See "Set Up Printer - Final Steps (V120i and V230i)" on page 27.*

(3) In order to apply the correct print head pressure, ensure that the height between the base of the printer and rubber roller or platen is approximately 3mm.

Note: The precise height of the print head will need to be adjusted electronically via the software once the services are connected. *See "Set Up Printer - Final Steps (V120i and V230i)" on page 27.*

(4) When the correct distance is obtained, tighten the screws.

(5) Mount the power supply. See "Connectivity - V120i and V230i" on page 25.

V320i

(1) Mount the printer in the bracket system, using four screws (M6 x 35mm).

Note: When mounting the printer in the CM bracket, ensure the print head is mounted on the top point of the rubber roller. This may be adjusted to obtain the best print quality.

(2) Adjust the height between the rubber roller or platen using the appropriate shims provided.

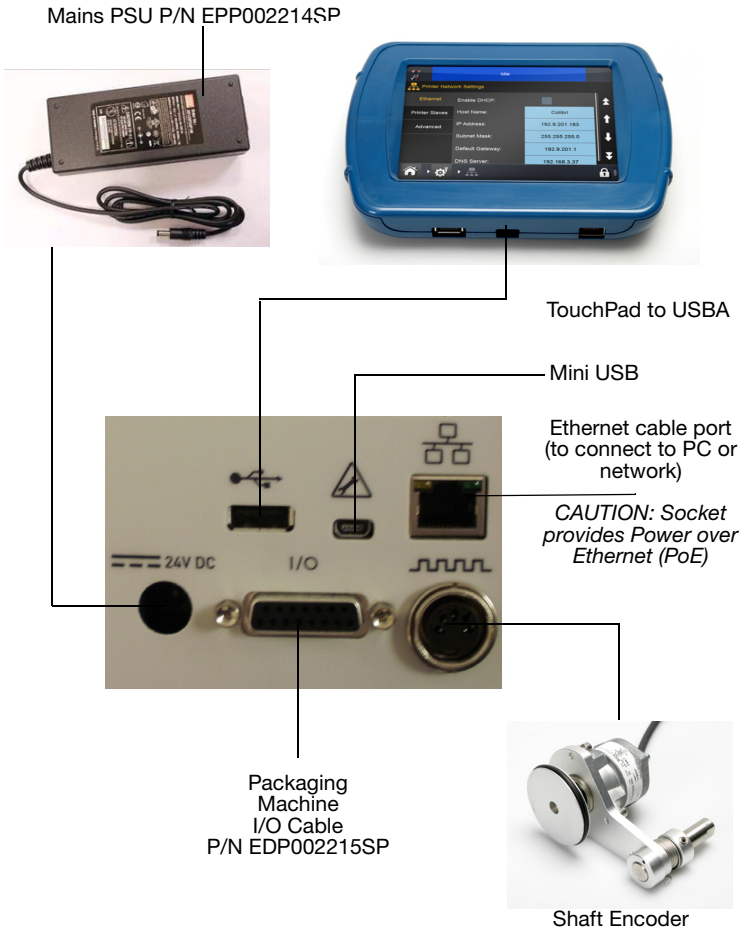
Note: The height may need to be adjusted once the services are connected.

(3) When the correct distance is obtained, tighten the screws.

(4) Mount the I/O box and power supply. See "Connectivity - V320i" on page 26.

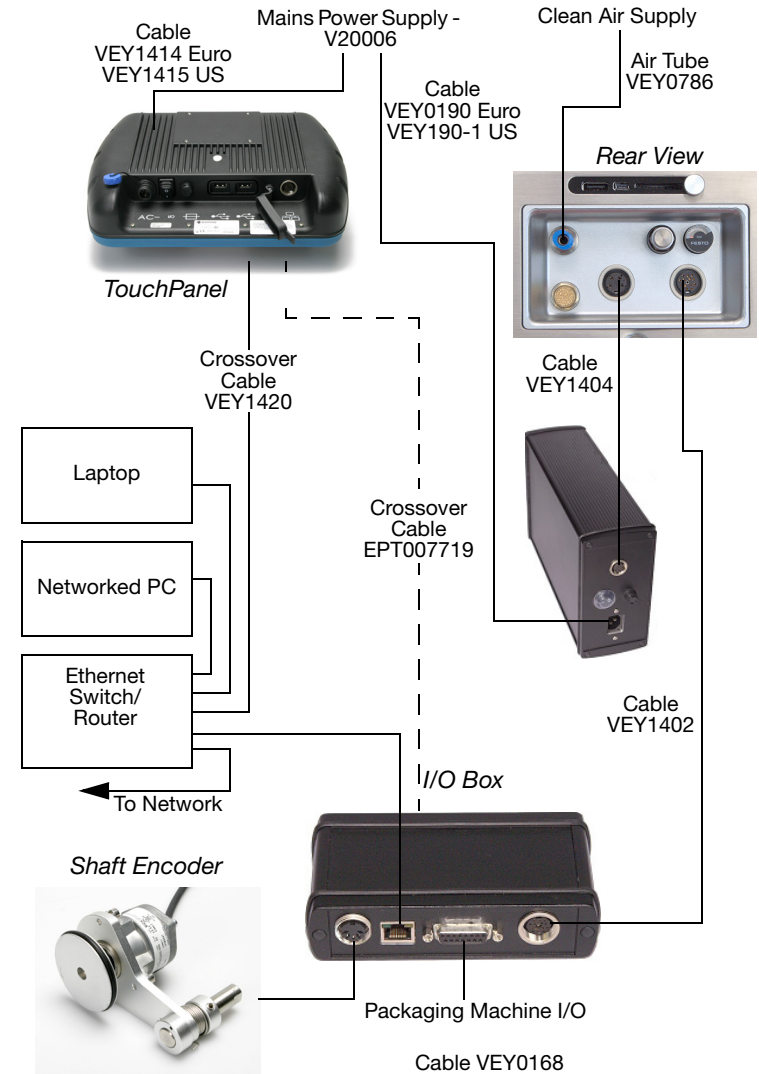
Connectivity - V120i and V230i

The following diagram shows general connectivity for the printer. This example shows a TouchPad connected directly via USB.



Note: The rear USBA and Mini USB connections share a port and therefore cannot be used together.

Connectivity - V320i



Set Up Printer - Final Steps (V120i and V230i)

CAUTIONS: *(1) The printer must be calibrated before installing it on the production line. See below.*

(2) In dusty environments, it may be beneficial to fit a V-Series Positive Air Kit (P/N EAS002970).

Calibrating the Printer

CAUTION: *When calibrating, the print head must be able to extend fully, please ensure enough space is allowed to perform this function. (In CM, the print head position parameter must be set to allow this, in IM, the printing surface should be moved from under the printer. If neither is possible, remove the printer from the bracket).*

Calibrate at the printer operating temperature. Go to *Settings* > *Production Line Setup* > *Head Functions* and select *Calibrate*.

Optimising the Print Head

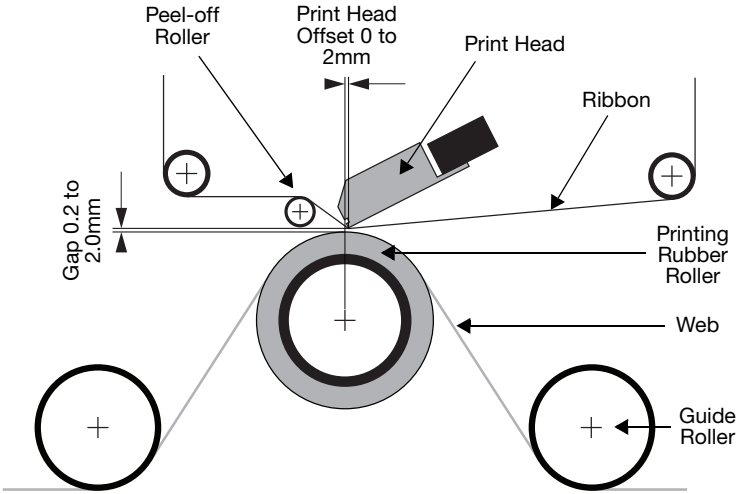
Having mechanically installed the printer in the brackets, optimise the head position for printing:

(1) Go to *Settings* > *Production Line Setup* > *Line Movement* and select either *CM (Moving)* or *IM (Static)* from the *Line Movement* pull-down menu.

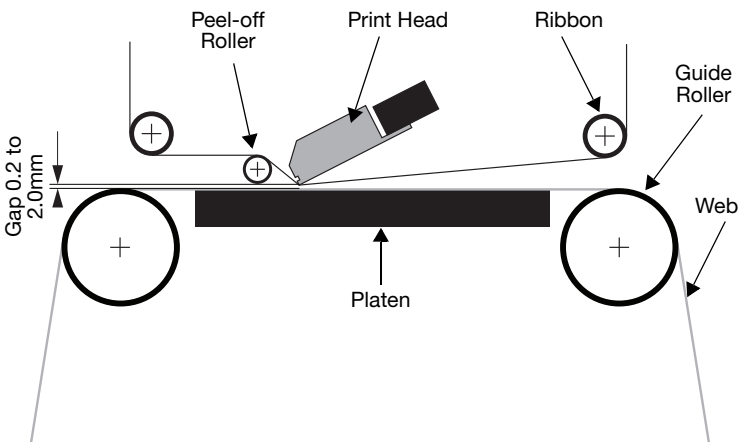
(a) For CM applications, set the Encoder Divide to 0. The current read-only Line Speed is updated every few seconds.

(2) *For V120i and V230i printers:* Go to *Settings* > *Production Line Setup* > *Head Functions* and use the *Align* button to automatically set the head position to the roller. If necessary, manually adjust the Head Position and Print Head Height parameters to set the correct distance of 0.2-2mm between the print head and substrate for both CM and IM.

(3) Review the following CM and IM bracket mounting diagrams:



Bracket Mounting - Continuous Mode (CM)



Bracket Mounting - Intermittent Mode (IM)

(4) Set the Print Trigger as required at *Settings* > *Production Line Setup* > *Print Trigger.* For more information, See "Print Trigger" on page 29.

(5) Go to *Settings* > *Production Line Setup* > *Print Head* and set the Head Position:

(a) For the CM printer type, set the Head Position so that it is above the roller.

(b) For the IM printer type, we recommend that the horizontal print head position is set to 0.

Print Trigger

Go to *Settings* > *Production Line Setup* > *Print Trigger*

This menu changes, depending upon whether the printer is in CM or IM.

Set details of how printing is triggered:

(1) **Trigger By:**

(a) In CM, from the pull-down menu, select the source for the print trigger - External Input, Internal (Distance) (which prints continuously while the print trigger is closed) or Internal Continuous (which prints continuously while a valid message is selected and there are no errors or warnings active).

(b) In IM, the source options for the print trigger are External Input, Internal (Time) or Internal Continuous.

Note: When using the Internal (Distance / Time) option, the distance / time is set by the extra parameter.

(c) When the print trigger is open, voltage is low - when it is closed, voltage is high.

(2) **Active Level:** The default is to start printing when the voltage is rising (i.e., when the contacts are closed). It only triggers when the voltage rises.

(3) **Start on External Trigger:** In IM, this setting is available if *Trigger By* is set to Internal (Time).

Test Print, Align and Calibrate - V120i and V230i

Go to *Settings* > *Production Line Setup* > *Head Functions* and select the desired function.

Test Print - V320i

Go to *Settings* > *Production Line Setup* > *Head Functions* and select the desired function.

OPERATION

Start-Up

With the printer connected to the mains power, select the *Power / Reset* button on the front of the printer, for V320i select the power button at the PSU.

The Printer can be operated via a TouchPad, TouchPanel, PC or laptop.

From a TouchPad / TouchPanel:

(1) Connect the TouchPad to the printer:

  (a) If connection is via a USB, the TouchPad automatically powers on (V120i/V230i only).

  (b) If connection is via Ethernet, the TouchPad powers on when the USB power cable is connected.

(2) If the connection is via Ethernet, the Connection screen displays. Either:

  (a) Select the device to connect to, or

  (b) Long-press the device name for details and then select either *Connect* or *Cancel*.

(3) Enter Username and Password if requested, the Home screen will display.

From a PC or laptop:

(1) Launch the Domino Web Browser application.

(2) At the Connection screen, either:

  (a) Select the required device to connect to, or

  (b) Long-press the device name for details and then select either Connect or Cancel.

(3) Enter Username and Password if requested - the Home screen will display.

Note: The default Username is 'admin'; the password field is blank.

Shut Down

Disconnect TouchPad / TouchPanel from Printer

(1) From the *Log In screen*, select *Disconnect*.

From any other screen,

(2) Select and then select *Disconnect from printer.*

(3) If a TouchPad is being used, it will turn off when its power is removed. If it is connected by USB, this will happen automatically when the printer is shut down.

Printer Shut Down

To shut down the printer,

(1) Select and hold the *Reset* button until the LED changes colour,

(2) Release the *Reset* button.

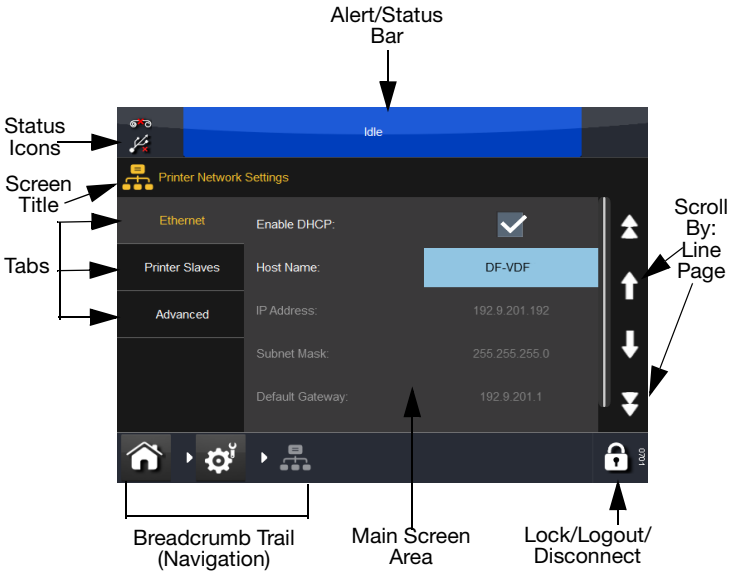
V320i Printer Shut Down

(1) Switch power off at the PSU

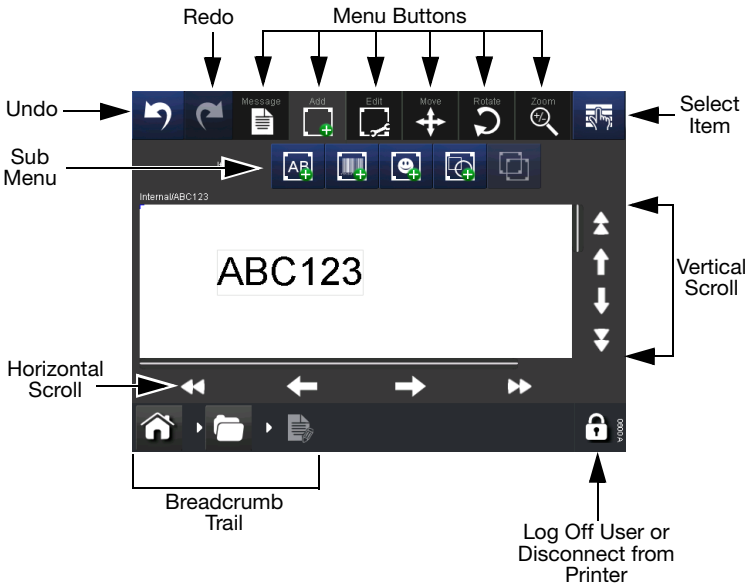
Note: The counter values are not retained when the printer is switched off.

Screen Functions

General



Editor Screen



Notes: (1) Long-press can be used on most buttons to view a short description of the button's function.

(2) When an icon is greyed out, its function is not available from that screen.

New Message

Select *Messages* > *New Message* to open the Message Editor - note that for new messages, the default menu will be *Add*:

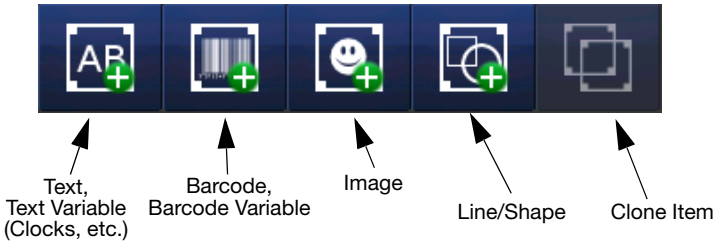
Notes: (1) The Undo/Redo buttons can be used at any stage of the message creation or editing process to undo or redo the previous action.

(2) To see a brief description of a button, long-press the button.

(3) It is possible to select the message area to locate the cursor - adding an item will then place the item at the cursor point.

Add

Add various items into the message.



Items Available to Add into a Message

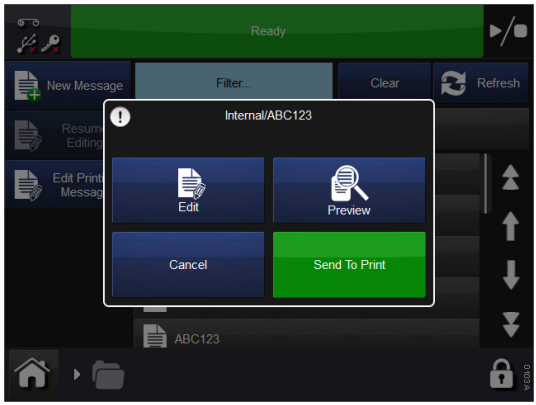
For details of the above items, refer to *Product Manual* (Part No. 25275), PART 3, 'NEW MESSAGE'.

Save Message

Once the message has been created/changed, select the *Save* button to save the message. Enter the message name required and select the message store if appropriate.

Selecting an Existing Message

At the *Home screen*, select either the message area OR the *Messages* button to open the message store. Select the required message from the list and the following screen will display:



Choose to *Edit, Preview, Send to Print* or *Cancel*.

Changing an Existing Message

To change the selected message, select *Messages,* then open the required message store and select the required message. The screen as shown previously will display, select *Send to Print.* The printer will revert to the *Home screen* and the selected message will be displayed.

Global Print Settings

Print settings and parameters can be set and adjusted. Settings that are likely to be set or adjusted on a day-to-day basis follow. For more detail and settings, refer to *Product Manual* (Part No. 25275), 'ADJUSTING PRINTING PARAMETERS'.

Quality

The Quality menu allows the alteration of parameters that will normally affect print quality. Note that other parameters such as Economy can also influence quality.

Contrast -This feature controls the contrast of the print head temperature at which the print head prints. The recommended settings for this are between 80% -100%. The higher this value, the hotter the print head will be when printing. The contrast required is dependent on the type of material being printed on and the type of ribbon used for printing.

Note: When increasing the level of ribbon economy, it is necessary to reduce the Contrast value to compensate for extra friction forces applied on the ribbon during printing. Reducing the Contrast value reduces the heat and prevents the print from being smudged.

Print Head Pressure (V120i/V230i only) -Print Head Pressure controls the pressure applied to the print head during printing.

The pressure required is dependent on the type of material being printed on.

The default value is 1.0 bar. This value will need to be reduced if the ribbon economy function is being used and may need to be increased if printing onto rough surfaces such as paper labels.

Note: When increasing the level of ribbon economy, it is necessary to reduce the Print Head Pressure value to compensate for extra friction forces applied on the ribbon during printing. Reducing the Print Head Pressure value reduces the friction forces. If the friction forces are too high, the ribbon will not move under the print head and can cause the ribbon to crease, stick to the substrate or break.

Economy

The Economy menu enables the definition of some of the parameters that have a direct cost savings effect for the print run. All the values entered in this menu will therefore influence the consumption of ink ribbon.

Ribbon Economy -This feature uses the FADING technique, which is one the printer's patented features.

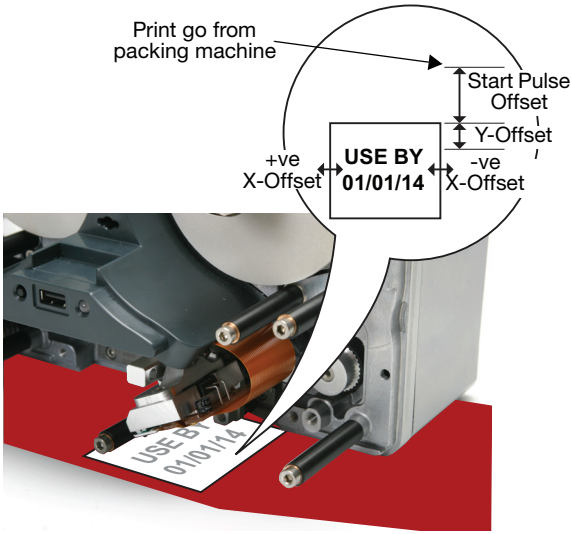
If this feature is set to 0%, the printer will use exactly the same area of ribbon as the area of the actual print, i.e. a 1:1 ratio. By increasing the value of Ribbon Economy, the consumption of ribbon will be reduced, but this will not affect the size of the print.

The higher the value set for Ribbon Economy, the lower the print density.

This feature depends on the type of material being printed on. There are very few cases where the FADING technology cannot be used. It is recommended to experiment with this feature when installing the printer.

The printer and the print head cannot be overloaded in any way by entering high values in this menu, but if increasing the Ribbon Economy, it is recommended that the contrast settings be reduced accordingly, thus increasing the lifetime of the print head.

Position



X-Offset -Moves the print position across the print head (the X Axis). By entering a minus value the print will be moved towards the rear of the printer, and entering a positive value will move the print towards the front of the printer.

Note: The width of the print head must not be exceeded.

Y-Offset -This is the gap before the message (the Y Axis), it must take into account the head down time. Generally, this is set prior to installation and should not need adjusting.

Start Pulse Offset -Use the Start Pulse offset to adjust the position of the print along the Y Axis.

This function displaces the print in the Y Axis (adds the offset to the Y Offset), but also allows the printer to receive a start signal from the packing machine "sending signals" in the middle of printing.

Saved With Message

Here the user can save specific settings with a message simply by ticking the feature's tickbox. If the feature is not ticked, the software will use the Global Print Settings.

COMMON ERRORS AND ACKNOWLEDGEMENT

Note: This list is not exhaustive. For the full list of errors, see your Product Manual (Part No. 25275).

Error No.	Error Text	Action
6	Label too long	The total print length (Y-offset + label) is longer than the supported print length. Use a lower Y-offset or shorten the label.
11	Speed Too Low	Adjust the minimum line speed setting. In CM, go to *Alert Configuration* > *Ranged Alerts* and set the print speed in the range of 0 to 100 mm/s. In IM, go to *Global Print Settings* > *Quality* and set the print speed in the range of 50 to 400 mm/s.
12	Y-offset too short	The Y-offset is too short. Some parts of the print out may be missed. Increase the Y-offset or reduce speed.
13	Ribbon Alarm	The ribbon is broken or there is no more ribbon left. Check remaining ribbon. In some scenarios an excessive retraction (or mechanical maladjustment) can cause the unwind dancing arm to touch the ribbon alarm sensor. A ribbon alarm can also be triggered by the ribbon warning sensor. If the ribbon alarm comes in fixed intervals (such as every 5 prints) the ribbon warning sensor may be damaged. Use diagnostics to check ribbon warning and ribbon alarm sensor. Check remaining ribbon.
28	Empty Label	The field contains no data or there are no fields in the label. Redesign the label.

102	Start when printer not ready	The printer has received a start signal while printing. Reduce speed or increase distance between start signals.
111	Start when speed too low	The web speed was not fast enough when the start signal was applied. Make sure the web is running before applying the start signal. Alternatively verify the signal is correct for the application.
1013	IM position error	The print head carrier could not locate home position. Make sure the carrier is not obstructed in its movements. Check the magnets on the carrier (using the sensor test). Check the timing belt.
1018 (V120i/ V230i Only)	Head Position error	Set the correct distance of 0.2-2.0mm between the print head and substrate for both CM and IM. Adjust the print head by selecting *Settings> Production Line Setup > Print Head > Print Head Height.*

1019 (V120i/ V230i Only)	Calibration required	*CAUTIONS:* *(1) When calibrating, the print head must be able to extend fully, please ensure enough space is allowed to perform this function. (In CM, the print head position parameter must be set to allow this, in IM, the printing surface should be moved from under the printer, if not possible, remove the printer from the bracket).* *(2) Prior to installing the printer, calibration of the vertical print head movement is required: Go to Settings > Production Line Setup > Head Functions and select the Calibrate Button.* 1019 error indicates that vertical print head movement requires recalibrating - follow the path above. Note that the print head must be able to extend fully in order to successfully complete the calibration. In CM, the head position parameter must be set to allow this - in IM, the printing surface should be moved from under the printer. If either of these scenarios is not possible, the printer will need to be removed from the bracket to allow calibration to take place.
1026	Ribbon Warning	The remaining ribbon has reached the limit specified in the *Error/Warning screen*. On the same screen the event is set to cause an error. Check the *Error/Warning screen*. Check the remaining ribbon.

Ribbon Breaks

Problem	Action
Ribbon breaks may be caused by one of the following issues:	Check that the encoder matches the substrate speed correctly, otherwise the ribbon may be dragged out of the printer and eventually break. IM only: Check that the printer is printing whilst the substrate is stationary. CM only: Check that the energy to the print head is not too high. When increasing the level of ribbon economy, reduce the Print Head Pressure value setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Print Head Pressure value reduces the friction forces that can cause the ribbon to crease, stick to the substrate or break.

REPLACING THE RIBBON

WARNINGS: **(1) Ensure the printer is offline.**

(2) Replace ribbons with care to avoid cutting hands or fingers.

CAUTIONS: *(1) To ensure good quality print, always clean the print head and capstan before fitting a new ribbon to the printer.*

(2) When fitting a new ribbon, ensure loose ribbon is wound up on the rewind spindle to create tension in the ribbon path. If this is not done, the ribbon will not be fed correctly around the guides and rollers in the web path. This will result in poor or no printing.

Setting the Ribbon Type

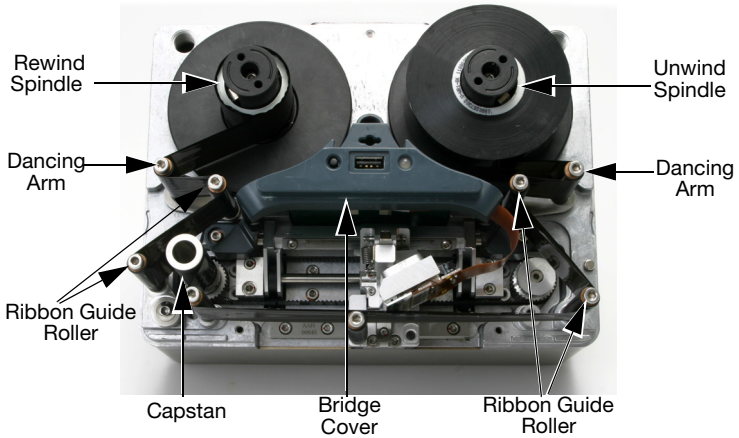
The ribbon type setting is used to set the optimum print parameters for each ribbon type. This allows for faster set up, better print quality and sets the correct ribbon length.

Note: The default ribbon type is Custom, this allows the ribbon diameter and length to be set manually.

(1) Select *Printer Status* > *Ribbon* > *Ribbon Type*.

(2) Choose the correct ribbon type from the list.

V120i Ribbon Threading Procedure



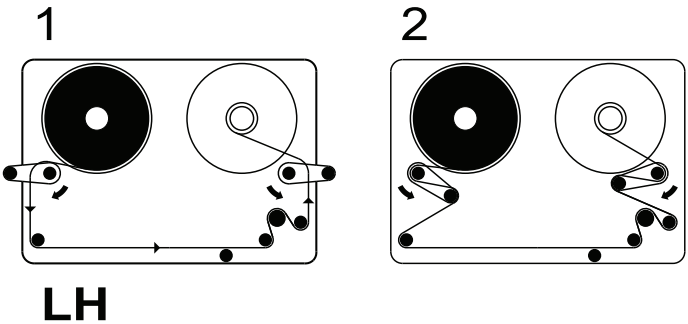
Ribbon-Threading - V120i Right-hand Printer

(1) Rotate the quarter-turn latch anti-clockwise. Gently pull the printer's front cover straight out towards you to remove it.

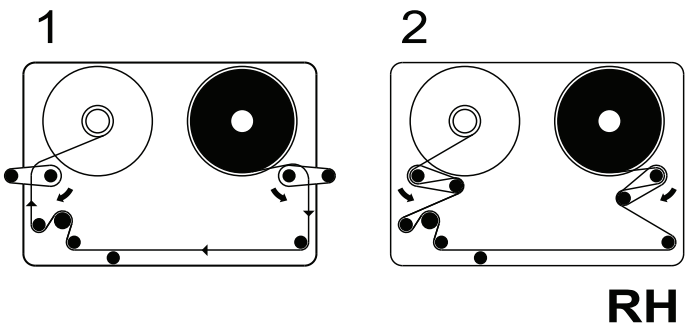
(2) Fit the new ribbon roll on the unwind spindle and the empty core to the rewind spindle.

(3) Open the dancing arms to aid ribbon threading.

(4) The printer will be set up as either a right-hand printer or a left-hand printer. Referring to the ribbon web path diagram labels on the printer cover or in the following diagrams, determine whether the printer is set up for left-hand or right-hand printing and thread the ribbon accordingly.



V120i Ribbon Web Path - Left Hand



V120i Ribbon Web Path - Right Hand

Note: To change the printer from left hand to right hand - or vice versa -see your Product Manual (Part No. 25275), 'Changing Printer Configuration.'

(5) Wrap the ribbon around the empty ribbon core several times, taking up any slack in the ribbon path to complete the operation. Flip the dancing arms back to the closed position.

(6) Fit the cover. Rotate the quarter-turn latch clockwise to lock.

(7) Press the *Reset* button. The printer calibrates.

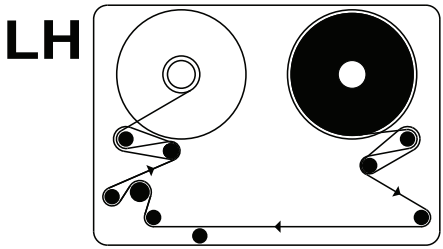
V230i Ribbon Threading Procedure

(1) To remove the cassette, pull the latch down and gently pull the cassette straight out towards you. Place it on a clean flat surface.

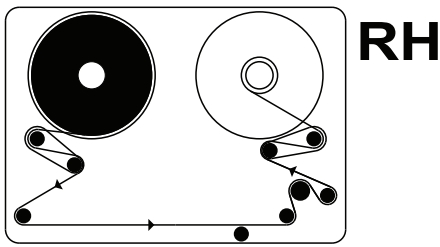
V230i Cassette

(2) Fit the new ribbon roll on the unwind spindle and the empty core to the rewind spindle.

(3) The printer will be set up as either a right-hand printer or a left-hand printer. Referring to the ribbon web path diagram below, determine whether the printer is set up for left-hand or right-hand printing and then thread the ribbon round the dancing arms, according to the appropriate diagram.



V230i Ribbon Web Path - Left Hand



V230i Ribbon Web Path - Right Hand

Note: To change the printer from left hand to right hand - or vice versa - see your Product Manual (Part No. 25275), 'Changing Printer Configuration.'

(4) Wrap the ribbon around the empty ribbon core several times, taking up any slack in the ribbon path and between the bottom guide rollers to complete the operation.

(5) Ensure that the print head is in the fully retracted position by manually adjusting if necessary. Normally this is achieved automatically when the cassette is removed with the power on and the printer has the status 'Printer open'.

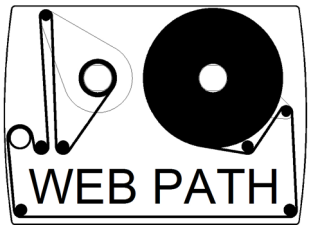
(6) Fit the cassette to the printer.

(7) Push the latch closed to lock it.

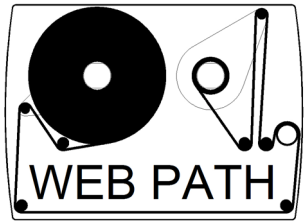
(8) Press the *Reset* button. The printer calibrates.

Note: If an audible clicking or banging noise is heard during calibration, the ribbon is threaded incorrectly. Remove the cassette to halt the calibration. Review the ribbon web path diagrams, then repeat the Ribbon threading procedure until the noise stops.

V320i Ribbon Threading Procedure

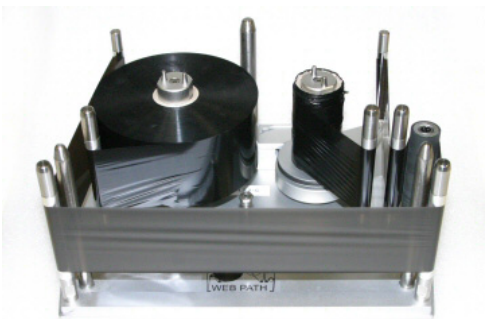


Left Hand Ribbon Web Path



Right Hand Ribbon Web Path

Follow the instruction diagram on the cassette unit to fit a new ribbon. Ensure any slack is taken up and the ribbon is tensioned before inserting the cassette to the printer. Failure to do so will result in poor quality print and the ribbon creasing or breaking. Shown below is a cassette with the ribbon fitted correctly.



Note: After replacing the ribbon, always clean the print head using Cleaning Pens Part No. VPR0223.

CLEANING THE PRINT HEAD

Always use the following parts when cleaning the print head:

- Cleaning Pens - P/N VPR0223
- Cleaning Fluid - P/N WJ-111
- Print Head Cleaning Wipes - P/N MT25215

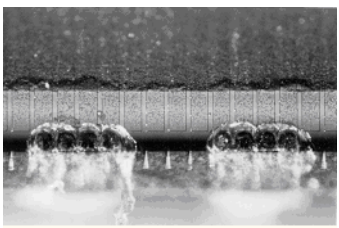
WARNING: **Power off the printer and allow head to cool before cleaning.**

CAUTIONS:

(1) Always clean a new print head before use.

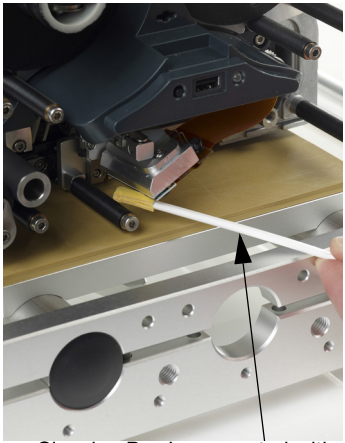
(2) Clean the print head only after it is installed in the printer and just before use.

(3) Always clean the print head after replacing the ribbon.



Damaged Print Head

Some of the dots on the print head can get damaged during use. Overheated dots can result in disintegration of the ceramic material as shown in the picture on the left. Follow the instructions below to prevent this and prolong print head life.



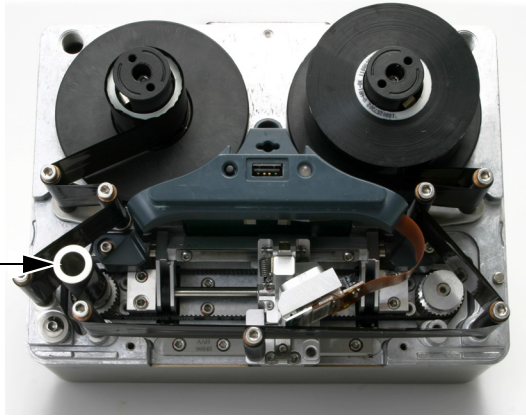
Cleaning Pen Impregnated with Cleaning Fluid

During printing, the print head temperature will increase, and label debris, adhesive and scraps of paper will melt and clog the surface and the corners of the print head. A dirty print head will result in poor print quality or can result in total print head destruction.

Move the cleaning pen from side to side over the print head as shown in these pictures to clean the head.

Note: Do not try to solve the problem of poor quality print by increasing the contrast settings.

CLEANING THE CAPSTAN ROLLER



WARNING: Power off the printer before cleaning.

Clean the capstan roller daily, using Cleaning Fluid (P/N WJ-111) and Print Head Cleaning Wipes (P/N MT25215).

Maintenance Schedule

The V120i / V230i / V320i do not require component replacement as part of a preventative maintenance routine. We recommend regular checks to ensure optimum performance is maintained and to allow any parts requiring future replacement to be identified early.

Frequency	Recommended Actions
Regularly (or if print quality deteriorates)	Check condition and clean Print Head and Rubber capstan roller each time the ribbon is replaced (or at least once per day).
	Check condition of the rubber platen / rubber roller within the printer bracket. the rubber surface must be smooth, flat and free of debris. This should be a weekly check.
	As part of any fault finding routine, check that settings such as 'Contrast' and 'Print Head Pressure' have not been modified in away from the original values. Once set, these settings do not generally need to be changed. Any changes may have been made to compensate for other problems. For example, the contrast or pressure settings may have been set higher to compensate for a print head that needs cleaning.
Every Year	Check condition of the Ribbon guide rollers (including those on the dancing arms). Check that the plastic rollers rotate smoothly.

DOMINO

Domino V-Series User Guide- Part No. 25276

Domino Printing Sciences plc has a policy of continuous product improvement, the Company therefore reserves the right to modify the specification contained within this document without notice.

For additional documentation, including other available languages, either scan the QR code, or go to **https://mydomino.domino-printing.com**

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