EUROCODE SERIES HOT FOIL PRINTER WITH DIGI-50 CONTROLLER

OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS
INSTALLATION DETAILS

Covering the following models;

EUROCODE 150
EUROCODE 180
EUROCODE 300

INDEX

DECLARATION OF CONFORMITY

<u>IMPORTANT SAFETY INSTRUCTIONS</u>

- Read these instructions carefully. Follow all warnings and instructions marked on the product.

- Always disconnect the printhead and controller from the mains electricity and air supply before attempting to clean or service it.

- Never operate the printhead unless it is installed within the mounting frame supplied. When installed correctly the gap between the printer and print base should not be greater than 4mm (see page 35).

- Do not use the product near water. Never spill liquid of any kind on to the product.

- Do not place this product on an unstable stand, table or machine. It may fall causing serious damage to the product or injury to the operator.

- Never insert objects of any kind into this product through any openings or gaps as they may touch dangerous voltage points or short circuit parts that could result in fire or electric shock.

- This product should only be operated from the type of electrical supply as indicated on the rear of the printhead control unit (see page 7).

- Ensure that the printhead connection cable is fully secured to the printhead with the screws attached to the "D" connector cover. Failure to do this will result in the machine not being properly earthed.

- Use only the power cable supplied with the product. The cable supplied is three core, utilising one wire as a grounding conductor. This must be connected to a suitable earthing point at the electrical supply This is a safety feature. If any doubt arises in trying to connect the power cable, please contact the manufacturer or agent who supplied the product.

- Do not allow anything to rest on the power cable. Do not locate the product where persons will walk on the cable.

- If an extension cable is used with this product, make sure that the total ampere ratings of the equipment plugged into the extension cable does not exceed the extension cable ampere rating. Also make sure that the total rating does not exceed the fuse rating.

- Do not service this product yourself as opening or removing guards may expose you to dangerous voltage points, major burns and other risks. Refer all servicing to qualified personnel.

- Do not attempt to use to use this product in areas where explosive gases or substances are present.

- Once the product is under normal working conditions, care must be taken when removing the type holder as you can easily burn yourself. There is a yellow warning sign on the type holder access door indicating a danger. Open the door by gripping it at the side. The type holder should be held by its plastic handle only. Never touch metal parts as temperatures could be as high as 220 degrees C.

- Disconnect the product from the electrical and air supplies and refer servicing to qualified personnel under the following conditions.
    If the power cable is damaged or frayed.
    If the air pipes are damaged in any way.
    If liquid has been spilled into or if the product has been exposed to rain or water.
    If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the instructions. Improper adjustment may result an damage needing qualified technicians to restore the product to normal operating conditions.

DIGI-50 OPERATING INSTRUCTIONS
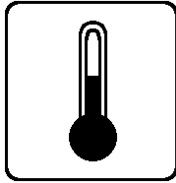
Temperature Button

To adjust the temperature setting, press and hold down the temperature button and use the up/down arrow keys to the left of the display to increase or decrease the set point. (Required Temperature)

Range:- Minimum 70ºC (158ºF), Maximum 240ºC (464ºF).

Note! When selecting operating Modes 1, 3 or 5, the printer will not operate on the external trigger until the temperature has reached the pre-programmed set point. (see page 13 for ranges of the mode settings etc.)

In normal operation, the temperature will fluctuate by up to ±4ºc from the set point.
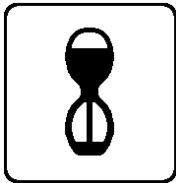
Print Dwell Button

To adjust the print dwell setting, press and hold down the print dwell button and use the up/down arrow keys to the left of the display to increase or decrease.

This adjustment controls the time the type/die face is in contact with the substrate. Higher numbers indicate longer dwell times.

Range:- 10 to 4000 milli–seconds. (0.010 – 4.0 Seconds)

Print Switch

Switches the print signal between external trigger (automatic print cycle) and the test button feature (manual operation).

Switches the audible alarm off when a system fault occurs whilst operating from an external trigger (automatic print cycle).

Note! The Print LED (green) is illuminated when switched for external triggering (automatic print cycle).
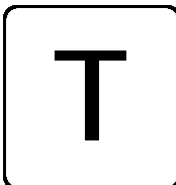
Test Button.

Manually operates the printer (will not operate whilst the Print LED is on).

Fault LEDs.
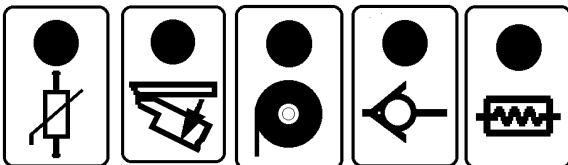
Refer to pages 22 & 23 for system faults.

Digi50 Control Unit Front Panel

Up & Down Keys   Display "Temperature" & "Dwell"

Print Dwell (Timer Switch)

Temperature Switch

203

Print Switch   Heater LED (Red)   Test Button

Door LED (Red)   Print LED (Green)

Low Air Pressure LED (Red)   Foil Run Out LED (Red)

Thermistor LED (Red)
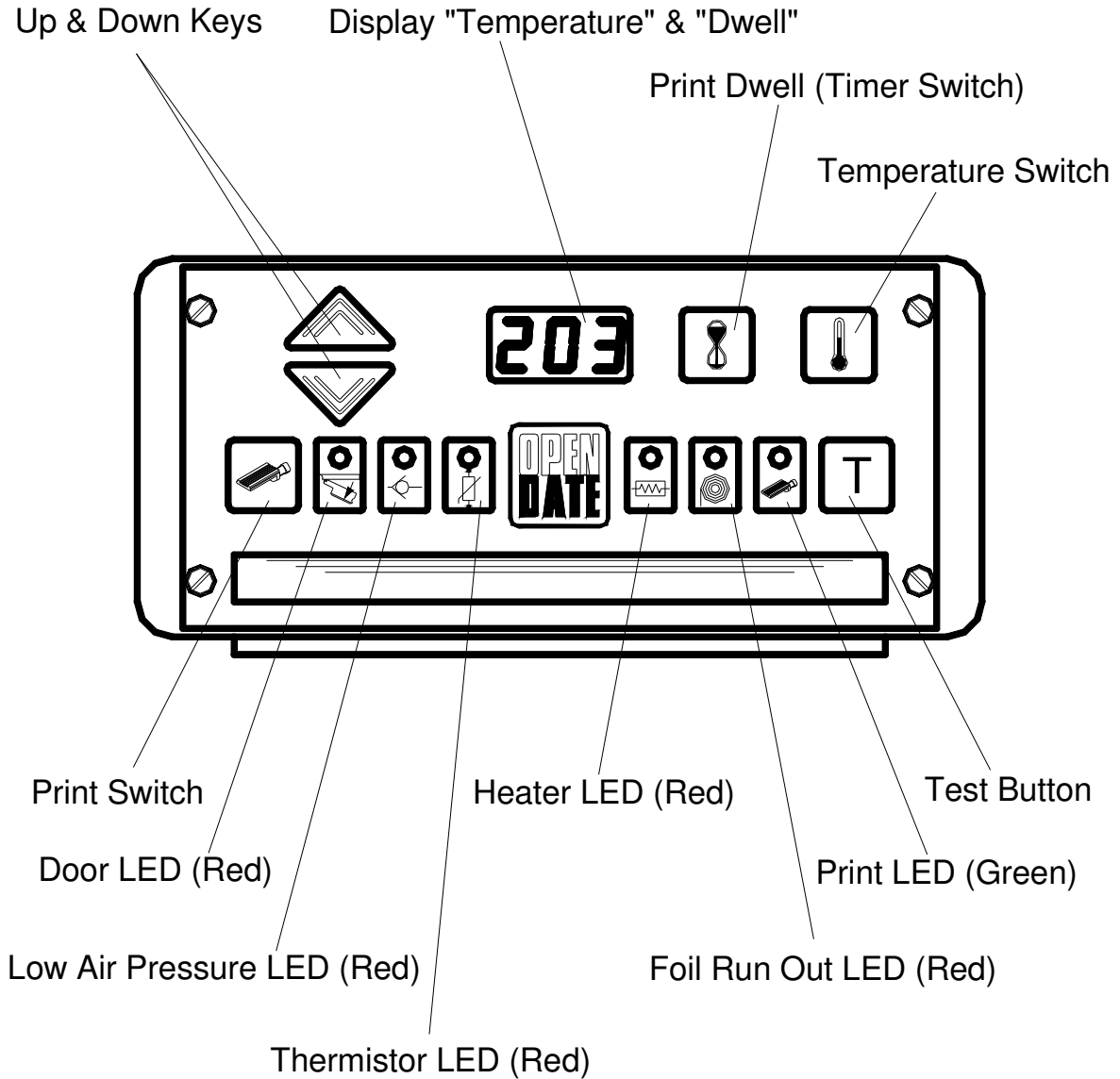
Digi50 Control Unit Rear Panel

(Cables Excluded For Clarity)

Print Signal (External Trigger)

Printer Cable

On / Off Switch

Solenoid Valve

Supply Voltage

MODEL	208000	
SERIAL No.	G6613	

VOLTS	AMPS	Hz
240	0.6	50/60

O

I

240V

Supply Voltage Details

Earth Test Point
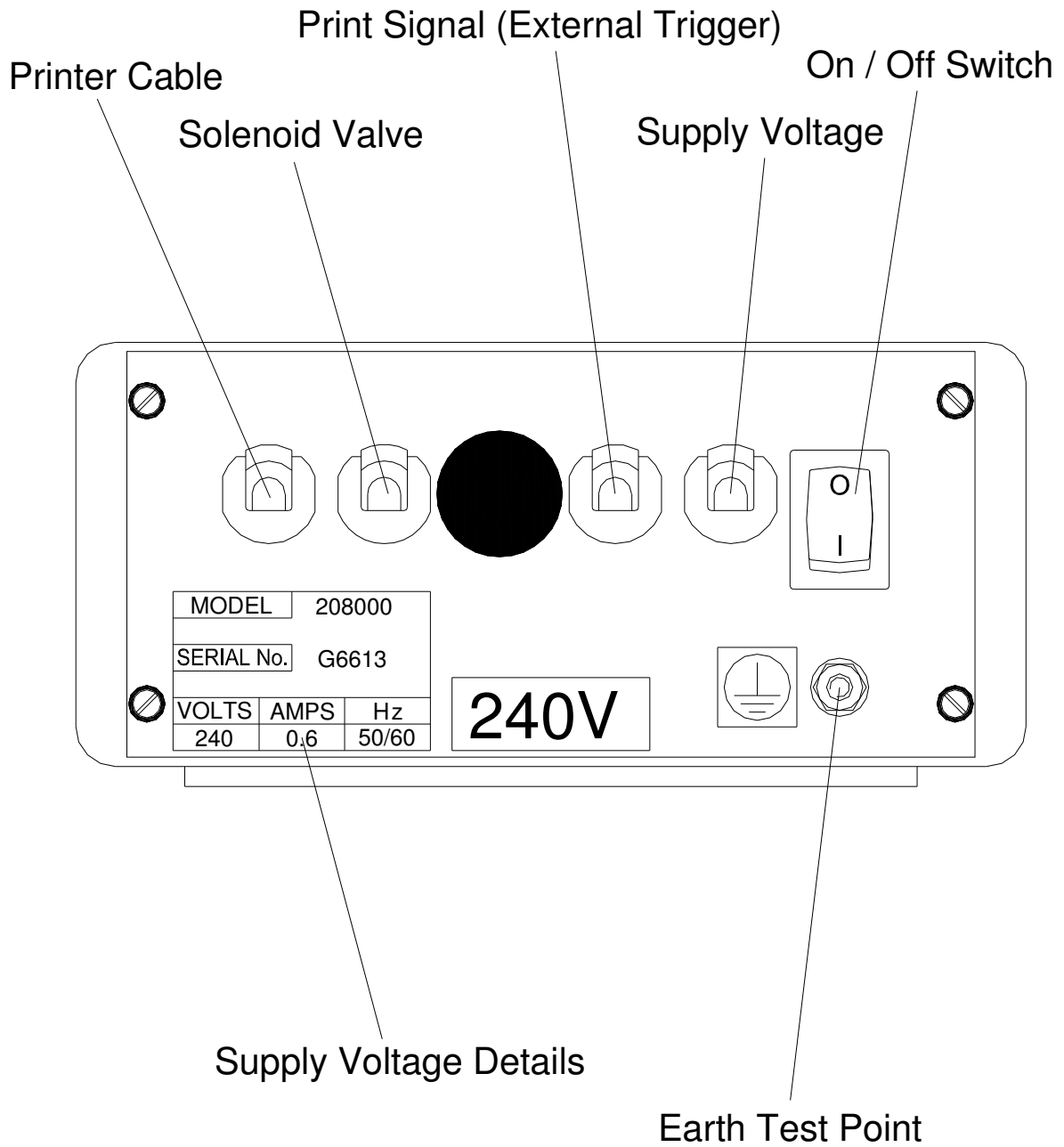
OPERATING INSTRUCTIONS

MAGAZINE REMOVAL (see page 38)
To remove the foil magazine, slide the catch away from the type holder access door, hold in place and withdraw the magazine using the two handles. If the printer is on-line (Print LED on) the alarm will sound. Press the **PRINT** switch to silence this.

FOIL THREADING (refer to diagram below & page 38)
1.   Fit an empty foil core onto the rewind mandrel.
2.   Disengage the pinch drive roller.
3.   Remove label from a new roll of foil.
4.   Fit new roll of foil onto take-off mandrel (note unwind direction as shown on threading diagram).
5.   Thread foil around all rollers as shown on threading diagram. Note, the gloss side of the foil should face inwards throughout the foil path.
6.   Attach end of foil to empty core on rewind mandrel, gloss side facing inwards.
7.   Wind foil on a few turn to track and tension it.
8.   Engage pinch drive roller.

FOIL THREADING DIAGRAM
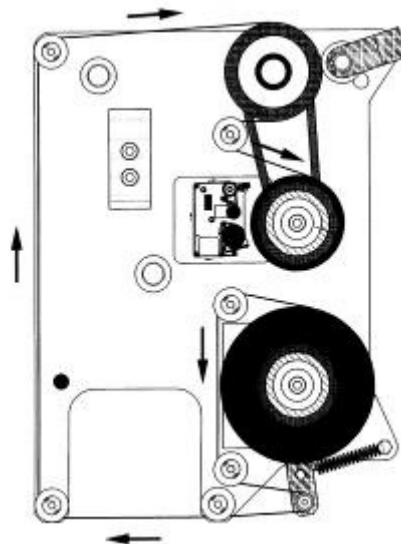
RE-FITTING FOIL MAGAZINE
Hold the magazine by the two handles, slide in onto the locating pins and push to lock in place. Press the **PRINT** switch on.

FITTING TYPE/DIE HOLDER
NEVER ASSUME THAT A TYPE/DIE HOLDER IS COLD.
Only pick up the type/die holder by its handle. Ensure that the face of the magnetic catch is clean, open the red type holder access door (the alarm will sound unless the print switch is off), align the type/die holder within the two side locators and slide in until the magnet catches on the keep plate. Close the door.

FOIL FEED ADJUSTING SCREW (refer to page 35)
This adjusts the amount of foil used per print. Winding the adjusting screw in in reduces the foil pull and vice versa. Ensure that the locking nut is fully tightened after adjustment. A gap of 1 to 2mm is recommended between each portion of used foil.

INITIAL SETTING PROCEDURE

1. Ensure that printing foil and substrate are compatible. If in doubt, contact foil supplier for assistance.
2. Remove Type Holder from printhead.
3. Ensure that rubber print base is clean, undamaged and securely retained in position under printer.
4. Set air pressure regulator. 4 to 7 Bar is recommended (60 to 100 PSI).
5. Switch controller on.
6. Set print dwell time to 120 milli-seconds and temperature to 125ºc (257ºF). 3 to 4 minutes should be allowed for printer to reach working temperature.
7. Load type or die into holder, centrally if possible and fasten securely. Make sure that typeface is clean.
8. Load type/die holder into printer and close door. If cold, allow 3 to 4 minutes for holder to heat up before printing.
9. Ensure that **PRINT** switch is off.
10. Place a sample of substrate material under printer and press **TEST** button. Inspect resulting print.
11. Adjust print levelling screws until a light, uniform print impression is achieved. Lock levelling screws.
12. Adjust foil metering screw for economic foil use as detailed previously and
13. tighten thumb nut.
14. Press the **PRINT** switch for automatic operation.

PRINT ORIENTATION
To rotate the printer and therefore turn the overprint through 90 degrees, remove the foil magazine (if applicable), unscrew the clamping handle until the location square on top of the printhead is clear of the top rails, turn it to the required position, tighten the clamping handle and replace the magazine.

TEMPERATURE ADJUSTMENT - REFER TO PAGE 6
- Normal setting is about 125ºc. (257ºF).
- Should the print not fully adhere to the substrate then a higher setting may be used.
- Small, fine detail print generally requires a lower temperature.
- Thermoplastic films and especially polyethylene generally require a lower temperature.
- Aluminium foils, paper and untreated polyester require a higher temperature.

See pages 13 & 20 for temperature mode & calibration

PRINT TIMER ADJUSTMENT - REFER TO PAGE 6
- Normal setting is about 120 milli-seconds.
- Generally, the larger the print, the higher the setting.
- Should the print not adhere fully to the substrate, a higher setting may be used.
- Remember, the printhead can only operate during the stationary cycle of the web, if the print time is longer than this the web may break.
- Should the dwell time have to be decreased to accommodate higher production speeds, it may be necessary to compensate by increasing the temperature setting.

AIR FLOW CONTROLS

The airflow restrictors are usually attached to the solenoid valve exhaust ports. They work by regulating the speed at which air is exhausted from the air cylinder.
Turning the adjusting screws will alter the exhaust airflow and consequently the print ram velocity, it will also affect noise levels.
Increasing the exhaust airflow from the forward stroke of the print ram will increase the print pressure. Decreasing the exhaust airflow will reduce print pressure and the resulting print will be lighter.
The drive for the printing foil is taken from the return stroke of the print ram. Increasing the exhaust airflow will speed up the foil feed. To ensure efficient foil feeding, the return stroke should be as gentle as possible.
For higher speed operation, the exhaust airflow from both the forward and return strokes will have to be increased.

Note, it is very important that the print ram returns fully before the next print cycle commences.

SOLENOID VALVE DETAILS

Black 5mm air pipe to printer

Red 5mm air pipe to printer

Air flow restrictor for print stroke

Air flow restrictor for return stroke
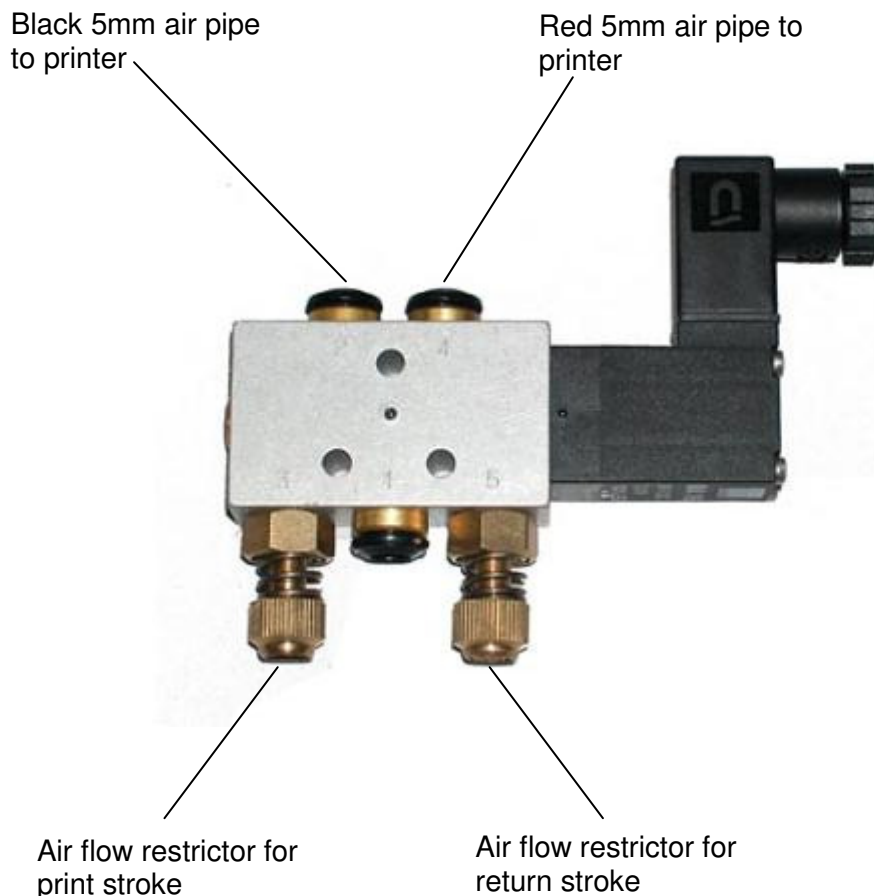
EUROCODE CONNECTION DETAILS

EUROCODE PRINTER
(Plan View)

PRINTER CABLE

6mm "BLACK"
NYLON TUBING

6mm "RED"
NYLON TUBING

SOLENOID VALVE

SOLENOID
VALVE ASSY

TRIGGER/PRINT SIGNAL

VOLTAGE SUPPLY

AIR SUPPLY, 4/6 BAR
6mm NYLON TUBING

REAR ELECTRONIC
CONTROL UNIT
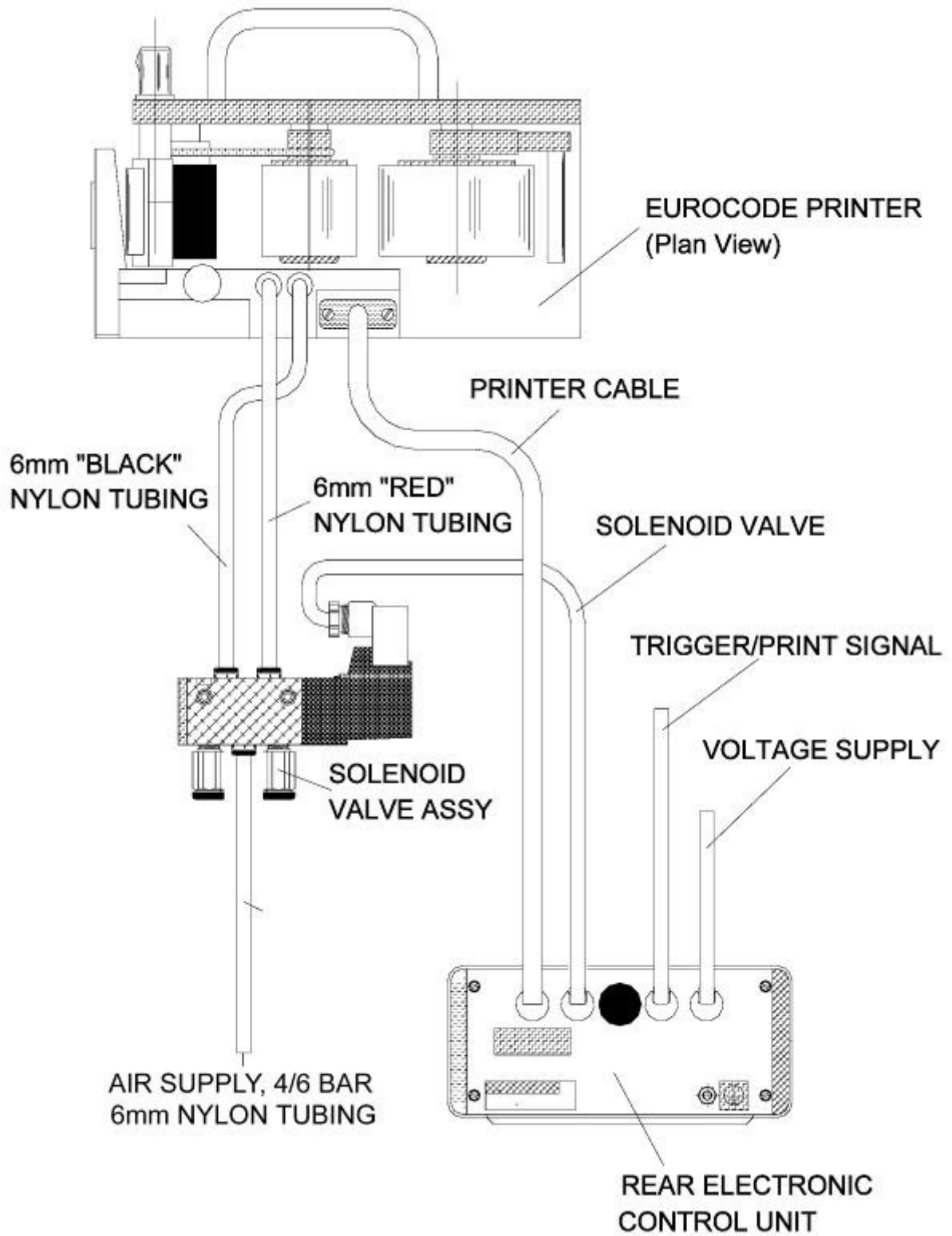
SETTING UP DIGI-50 CONTROLLER

Mains Fuse (FS1)
2.0 Amp, 250 Volt (Anti-Surge)
(Part No. FUS 503512)

Dip Switch Settings (SW2)
See page 14

Voltage Selector (SW3)
SW3 - Position 1 = 115 Volts
SW3 - Position 2 = 230 Volts
(Shown as 115 Volt selected)

Thermistor Fuses (FS2 & FS3)
63 milliamp, 250 Volt (Quick Blov
(Part No. FUS 503511)

Eprom Label
(showing software version)

Rotary Mode Switch (SW4)
See page 13

Thermistor & On Line Dip Switch Settings
See page 15

DIGI-50 MODE SETTINGS FOR TEMPERATURE TOLERANCE RANGES

The Mode selector is a Rotary Switch located between the Front Panel and the Transformer.

Mode 1 (Default)
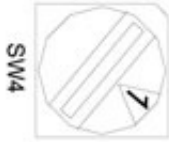
Temperature Range. -5% to +10% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 2
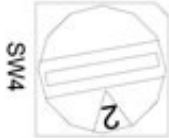
Temperature Range. -5% to +10% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 3
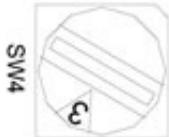
Temperature Range. -5% to +5% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 4
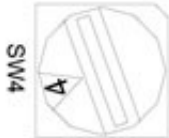
Temperature Range. -5% to +5% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 5
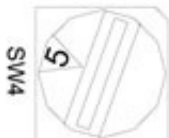
Temperature Range. -10% to +10% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 6

Temperature Range. -10% to +10% of the set point.
Printer operates with in the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Modes 7, 8, 9 and 0 are the same as the default value. (Mode 1)

DIGI-50 DIP SWITCH SETTINGS

Temperature Range SW2 (No 4)

Centigrade

Fahrenheit

Low Air Configuration SW2 (No 3)

Disabled

Enabled
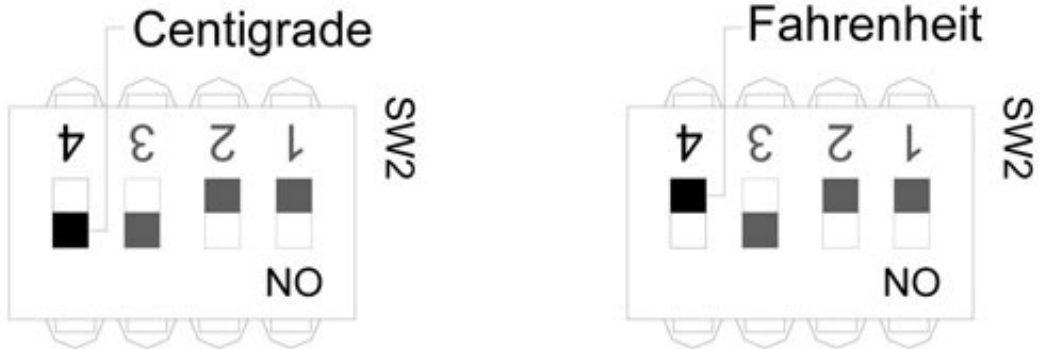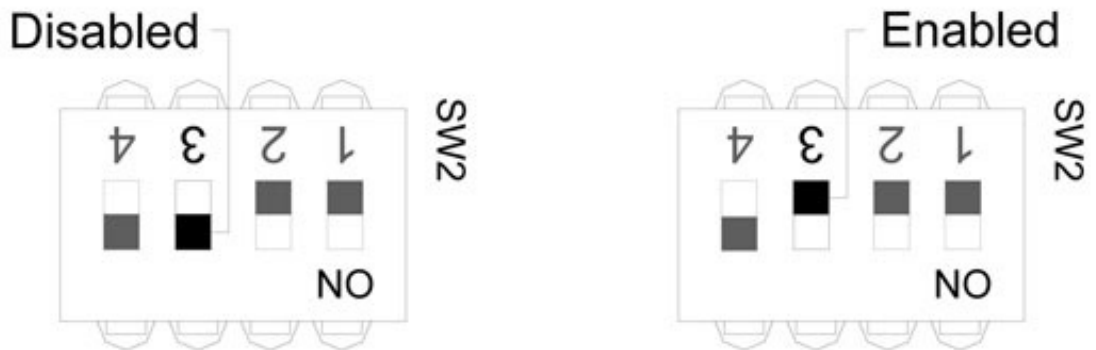
Print Trigger Selection SW2 (No 1 & 2)

Voltage Free

Voltage (10-50V DC)
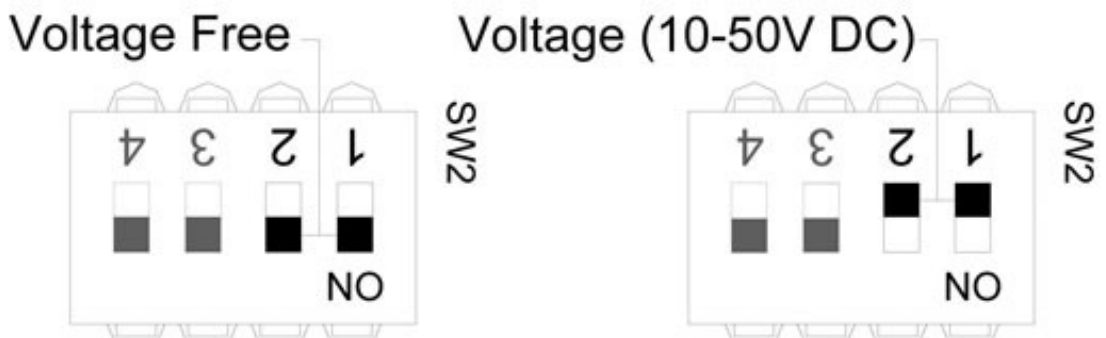
THERMISTOR & ON-LINE DIP SWITCH SETTINGS (SW1)

Settings for the Standard Thermistor. (see note below)
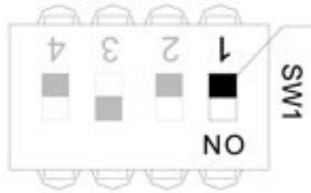
Set switch No. 1 to "OFF"
Part No. THE 312080
Thermistor Type USP 5362
Black Connection wires.

Settings for optional Thermistor.
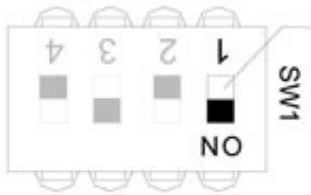
Set switch No. 1 to "ON"
Part No. THE 500502 (Optional)
Thermistor Type G55-Bead
White Connection wires.

NOTE!
Boards supplied before 21 July 2005 were fitted with the optional sensor
Part No. THE 500502, if you have any doubt contact your supplier.

Settings for the "ON LINE" options (With Eprom Versions 3.0 or later)
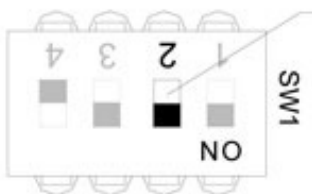
Set switch No. 2 to "ON"
The printer automatically, leaves the
printer "ON LINE" ready for printing.
(once the fault is corrected)
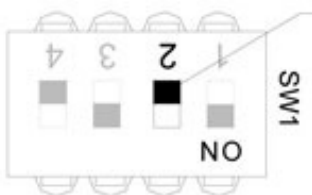
Set switch No. 2 to "OFF"
The printer automatically, puts the
printer "OFF LINE" .
Correct the fault, and press the "PRINT" Switch.

NOTE!
Boards supplied before March 2006 only have 2 switches. (Not 3 + 4)
Switches 3 & 4 are reserved for future use.

DIGI-50 CONNECTIONS
SHOWN FROM THE REAR OF THE CONTROL UNIT
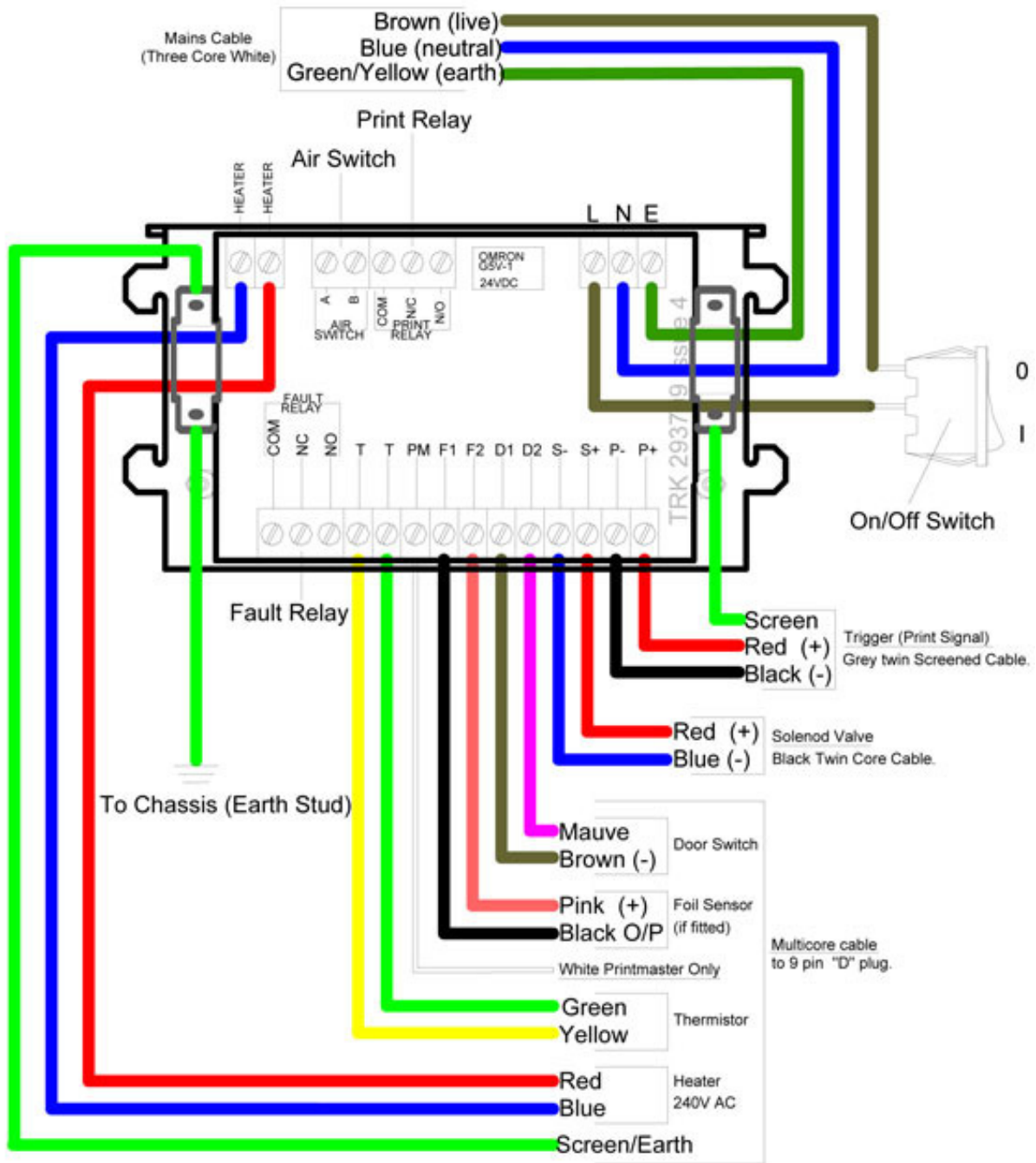
DIGI-50 CONNECTION DETAILS - ROW C

Trigger/Print Signal - Grey twin core screened.

See page 14 for details of Print Trigger Selection

P+	Red	External trigger input. + volts connection.
P-	Black	External trigger input. - volts connection.

Solenoid Valve - Black twin core.

S+	Red	Solenoid valve output. + volts connection.
S-	Blue	Solenoid valve output. - volts connection.

Printer - Multi-core screened to 9 pin D connector.

D2	Mauve	Type holder door safety switch return.	Pin 6
D1	Brown	Feed to safety switch and foil sensor, 0v DC.	Pin 5
F2	Pink	Feed to foil sensor, +27v DC (see note below).	Pin 9
F1	Black	Output from foil sensor.	Pin 8
PM	White	Used for Printmaster foil sensor only.	Pin 7
T	Green	Thermistor connection.	Pin 2
T	Yellow	Thermistor connection.	Pin 1
H	Red	Heater element.	Pin 3
H	Blue	Neutral ac heater element.	Pin 4

Note. Units supplied before October 2005 had only 14v DC supply for the foil sensor. If in doubt contact your supplier.

Mains Cable - Three core white.

N	Blue	Neutral
L	Brown	Live
E	Yellow/Green	Earth

DIGI-50 FAULT & PRINT RELAY CONNECTIONS

Note.

Linking the Fault & Print Relay will achieve optimum security. If the Print Switch is switched off, or when any printer fault occurs the relays will change state. This will break the Signal Return connection (High going Low.) see below.

Signal Return

Max 24v DC (1 amp)

Link Wire
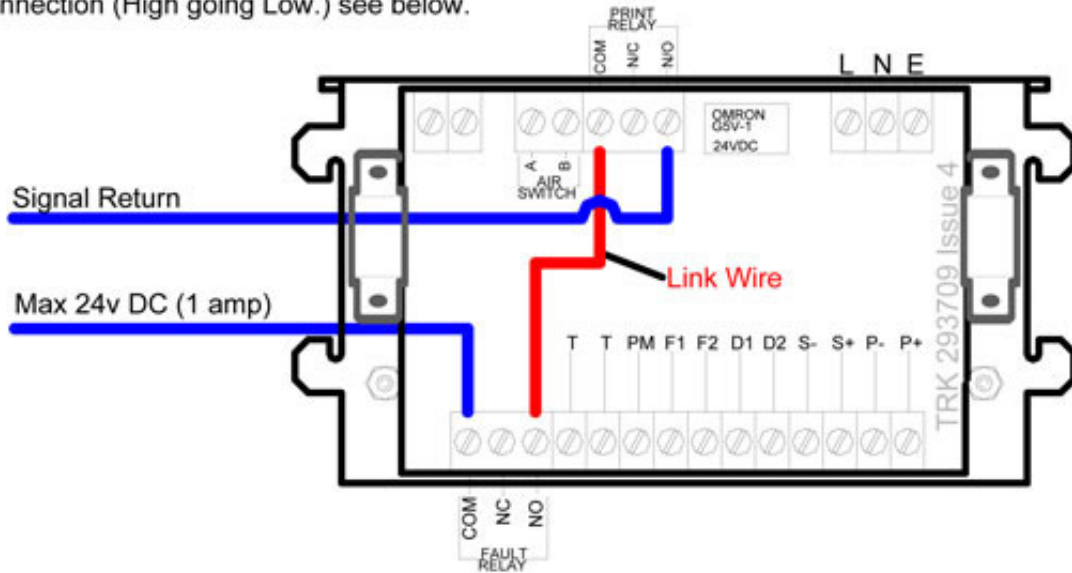
Digi50 Individual Relays & Connections

Airswitch Connections (see seperate diagrams)

24v DC Max
Output

Output
24v DC Max
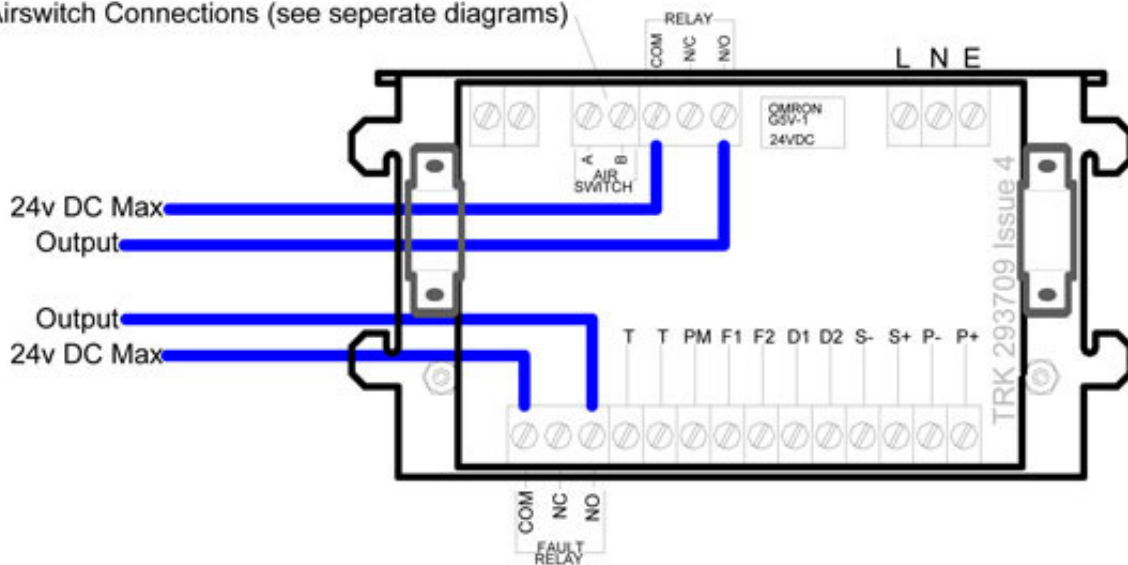
Print Relay:- Rated 24v DC, 1 amp max current

Fault Relay:- Rated 24v DC, 1 amp max current

DIGI-50 LOW AIR PRESSURE OPTION

Note.
The low air pressure switch connections are to Air Switch "A" and "B" and can be found on the terminal board mounted in the rear section of the enclosure. (See Below)
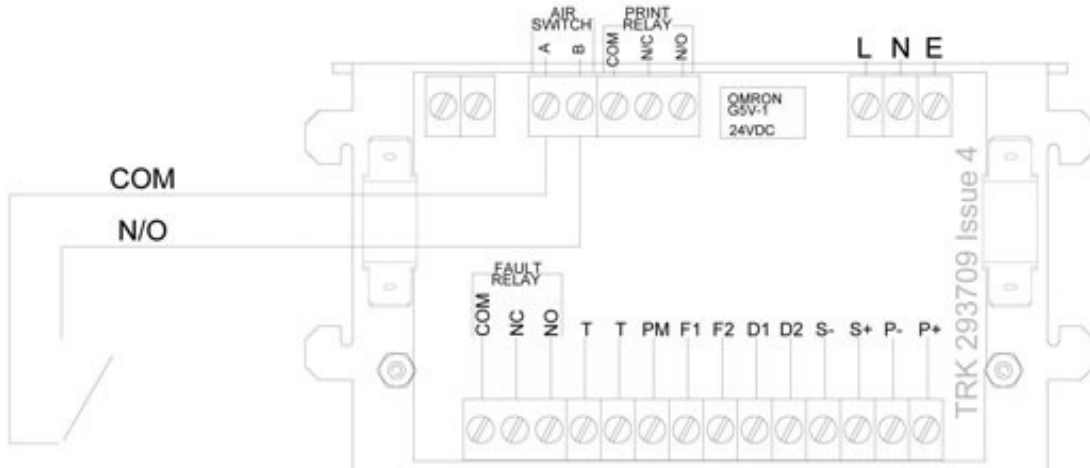
Air Switch Not Supplied

Adjust the Air Pressure Switch to suit the application.

See specification sheet to suit the printer, should be in the front of this manual.

Ensure the Dip Switch settings are correct. (See below)

Low Air Configuration SW2 (No 3)
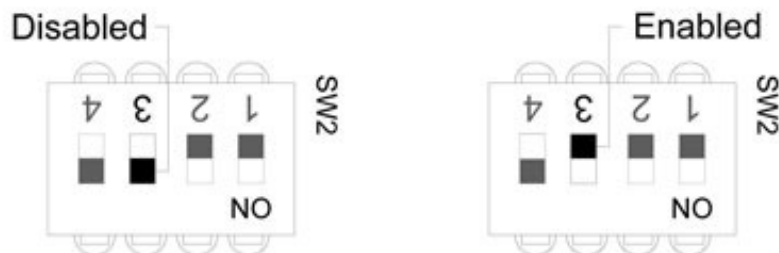
<u>DIGI-50 CALIBRATION METHOD</u>

Note: Calibration Temperature Range = 70ºC to 220ºC (158ºF to 428ºF)

The control unit is factory calibrated at 130ºC, and is set up in "MODE 1"supplied as standard. See page 13 for a list of the different modes available.

Unless you are running temperatures outside the range 70ºC to 180ºC (158ºF to 356ºF), the default calibration should not be altered.

Fitting of an optional thermistor (THE 515002) will require (SW1) position to be altered (See page 15), again this will be accurate to plus or minus 7°C. If accurate temperatures are needed, you should recalibrate to suit the individual thermistor fitted.

For normal running temperatures above 180°C you should recalibrate at 200°C.

External Calibration Method
Switch the Digi50 unit on and adjust the temperature setting to 130ºc or 266ºF.
Leave on for 10 to 15 minutes, allowing the temperature to stabilise.
Measure the temperature at the type face using a temperature probe.
Allow the temperature probe to stabilise before noting the reading.
Adjust the Digi50's set point to match the temperature probe reading.
Press the both the up and down arrow keys at the same time then press the print switch.
The controller is now calibrated.

STATIC TEMPERATURE RESULTS
CALIBRATED AT 130℃

	set p 90	set p 100	set p 110	set p 120	set p 130	set p 140	set p 150	set p 160	set p 170	set p 180	set p 190	set p 200	set p 210
display low	89	99	109	119	129	139	149	159	169	178	188	198	207
display high	94	104	115	125	135	145	155	165	175	185	195	205	214
probe low	86	96	107	118	129	138	150	159	171	181	190	200	210
probe high	91	100	111	122	133	143	154	164	174	185	195	205	215
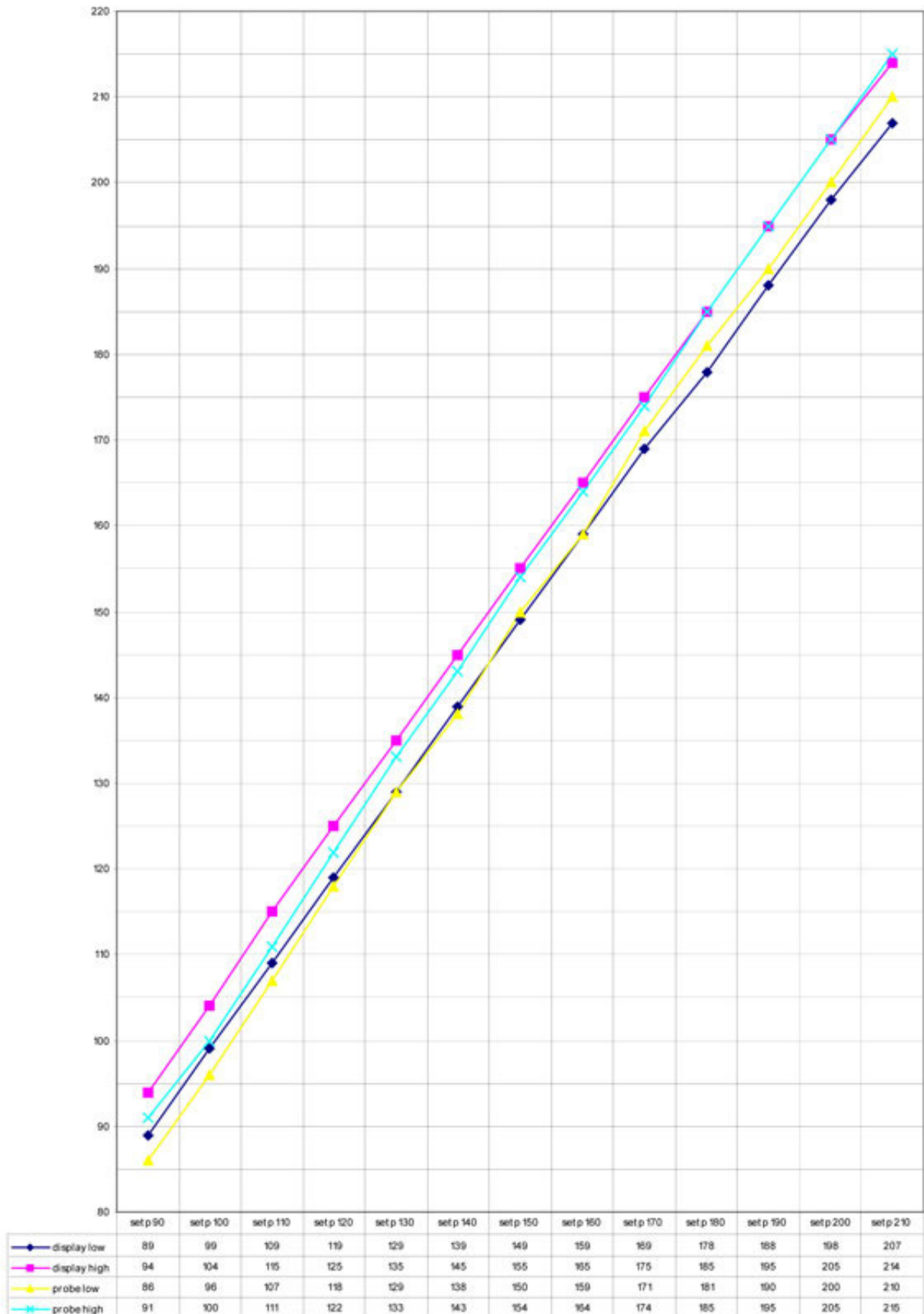
DIGI-50 SYSTEM FAULTS

Thermistor
Thermistor short circuit; the LED is on and digital display reads similar to, or the same as that shown (the figures may be different depend upon calibration values). The heater is switched off. Internal bleeper is sounding.
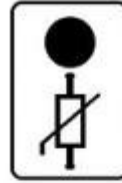
2.7.1

Thermistor
Thermistor open circuit, the LED is on and the display reads similar to or the same as that shown (the figures may change). The heater is switched off. Internal bleeper is sounding.
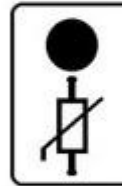
. . 5

Heater
Heater is open circuit, the LED is on. Internal bleeper is sounding.
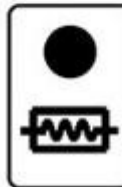
Foil Run Out
At end of foil roll, the LED is on. Internal bleeper is sounding.
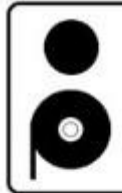
Type Holder Door Opened
Type holder door is open, the LED is on. Print & Test trigger signals, are disabled. Internal bleeper is sounding.

Low Air Pressure Switch (If connected)
When air pressure is low, the LED is on. External Pressure switch required. See separate wiring detail. (see page 19) Internal Bleeper is sounding. Set Dip Switch to enable this function (see page 14).

In any of the above fault conditions, the fault relay will be de-energised. See pages 16, 18 & 19 for connection details.

DIGI-50 ALARM SYSTEM FAULTS

If no LEDs are on, check the mains supply and the fuses on the PCB. For wiring connections see pages 16, 18 & 19.

ALARM SOUNDS CONTINUALLY

YES

| Type Door LED on | NO → | Low Air LED on | NO → | Thermistor LED on | NO → | Heater LED on |

YES — Type Door LED on

Low Air: YES → Check Air Pressure. Check calibration of pressure switch. Check wiring of switch. If no switch is fitted check dip switch settings. (see page 10)

Thermistor: YES → See Pages 18 & 20 ← YES

YES

Open the type holder door. With a back of a ball point pen, press the switch actuator. If the alarm and LED switch off, adjust the switch position.

YES

Switch off main supply off. Remove rear cover of the printer. Check that door switch contacts make and break. Replace if not working.

YES

Switch off main supply off. Remove rear cover of the Digi50. Disconnect the wiring from terminals "D1" & "D2". Check for open circuit between the mauve & orange in the printer, then the blue & blue in in the printer. If the blue is open circuit, the foil run out would be affected. Replace or repair.

Heater NO →

Foil Sensor LED on (If foil sensor fitted) — NO → Possible LED failure. Open the type holder door to check the door sensor. Remove foil to check the sensor is working. (if the sensor is fitted) Close door and replace foil. Disconnect 9 pin "D" connector from printer, to check the door. LED, the heater LED should go off and the Thermistor LED comes on.

YES

Foil has run out Change Foil.

YES ← Foil LED off, & foil run out. (If foil sensor fitted)

NO

The green LED is on. The foil sensor is on. — NO →

YES ↓ YES

Cover sensor, a red LED should come on. (sensor) If yes, and the foil has run out. Re-align the sensor — NO →

Remove the rear cover of the Digi50 controller. The voltage across "D1" (- brown) & "F2" (+ pink) should be 24 volts dc. If less than 18 volts then change the main Digi50 PCB. Cover the foil sensor, then measure voltage across "D1" (- brown) & "F1" (+ black) if less then 18 volts dc, change the sensor.

THERMISTOR FAULTS

Digi50 controller utilising the Open Date printer range and a standard thermistor.

```
┌─────────────────────────────────┐
│        THERMISTOR FAULT         │
├─────────────────────────────────┤
│ Thermistor Short Circuit. LED is on. │
│                                 │
│ Display reads  2.7.1 (or similar) │
└─────────────────────────────────┘
```

Disconnect Thermistor inside printer. Measure the resistance at 20° C. It should be 500k (see note below) — **No** → Replace Thermistor

Yes (Replace Thermistor) → Re-calibrate controller as detailed on page 20

Yes → Disconnect wires from terminals "T" (green) and "T" (yellow) inside the rear of the control box. Check for short circuit.

Yes → If either FS2 or FS3 is blown, find short to GND or mains. Repair & replace fuse.

Yes → Reconnect wiring. Re-calibrate controller as detailed on page 16

```
┌─────────────────────────────────┐
│        THERMISTOR FAULT         │
├─────────────────────────────────┤
│ Thermistor Open Circuit. LED is on. │
│                                 │
│ Display reads   . . 5. (or similar) │
└─────────────────────────────────┘
```

Replace Thermistor

Yes → Re-calibrate controller as detailed on page 16

Yes → Disconnect wires from terminals "T" (green) and "T" (yellow) inside the rear of the control box. Check for open circuit.

Yes → Locate open circuit, repair or replace faulty items as necessary.

NOTE. Results may vary, depending on type of Thermistor and actual temperature.

MECHANICAL FAULTS

FAULT	POSSIBLE CAUSE
Insufficient foil pull.	• Foil adjusting screw wound in too far. • Pinch roller not engaged. • Broken torsion Spring in body. • Grub screw loose in cam or lever. • Rubber drive roller damaged or dirty. • Foil feed air flow restrictors incorrectly set. • Clutch bearing failure in gear or body. • Cam and/or fork end roller worn.
Solenoid operates but printer does not.	• No air. • Air pipe damaged.
Printer operates but does not print, i.e. impression but no print.	• Printing foil has run out. • Printing foil not being driven through. • Printing foil not suitable for substrate. • Little or no heat.
Printing foil tracks over to one side.	• Bent spindle on foil magazine. • Brake arm loose. • Pinch roller misaligned with drive roller.
Foil rewind is loose.	• Green Drive Belt worn out or dirty. • Foil feed too rapid (slow down return stroke of piston, see page 10). • Foil retaining discs misaligned.
Printer is sluggish.	• Insufficient air pressure. • Faulty valve. • Incorrect flow restrictor settings.

PRINT QUALITY DETERIORATION

POSSIBLE CAUSE	CURE
Insufficient foil pull	See page 8.
Insufficient air pressure.	Check pressure regulator setting. See that pipes are not damaged.
Printer not level with print base.	Adjust levelling screws.
Too much or too little heat.	Check that settings are correct.
Dirty, worn or damaged dies or type.	Clean or replace.
Damaged or out of position print base rubber.	Replace or re-position.
Printing foil not compatible with substrate.	Contact foil supplier.
Substrate surface altered, i.e. different coating.	Contact substrate or foil supplier.
Print ram not completing full stroke.	Open forward flow restrictor (where fitted). Increase print dwell time.
Substrate moving before print head is clear.	Reduce print dwell time.
Print Dwell incorrectly set.	Adjust as necessary.

MACHINE SERIAL NUMBER IDENTIFICATION

The identification label can be found on the outside of the printer, usually on the rear guard.

Always quote the model and serial number when ordering spare parts.

Company Logo   CE mark   Type of machine

MODEL

OPEN DATE

EUROCODE 300

SERIAL NO.

123456   Serial number

Open Date Equipment Ltd.
Puma Trade Park,
Mitcham, Surrey
CR4 4DG. UK
TEL: (020) 8655 4999
FAX: (020) 8655 4990

MANUFACTURED

2010

Manufacturer   Year of manufacture
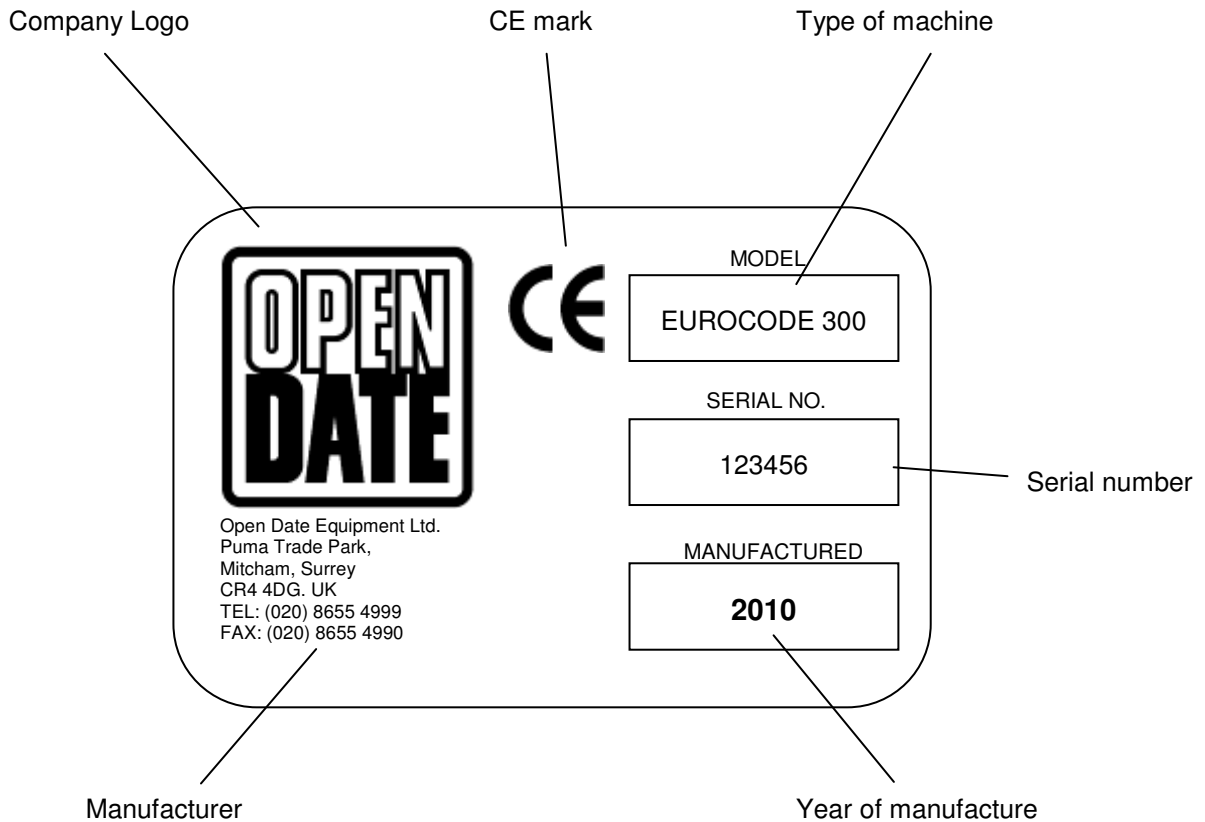
RECOMMENDED SPARES LIST

Covering:

EUROCODE 150 / 180 / 300

MECHANICAL   STOCK REF

	1.	Spring Set (Eurocode 150)	SPR620216
or		Spring Set (Eurocode 180)	SPR620215
or		Spring Set (Eurocode 300)	SPR620217
	2.	Drive Belt (Eurocode 150)	DRI110022
or		Drive Belt (Eurocode 180)	DRI620048
or		Drive Belt (Eurocode 300)	DRI620049
	3.	Drive Roller Assembly	DRI620204
	4.	Fork End Roller Assembly	FOR620208
	5.	Brake Strap (Eurocode 150/180)	BRA620038
or		Brake Strap (Eurocode 300)	BRA620051
	6.	Grey Self Adhesive Print Base 300 x 450mm sheet	SABASE
or	7.	White Silicone Rubber Print Base 300 x 300 x 3mm thick sheet	SRBASE

ELECTRICAL

1.	Cartridge Heater (240v)	HEA501506
2.	Thermistor Probe	THE500522
3.	Microswitch for Door	SWI395011
4.	Plug-In Control Card (see note below)	CPC293504
5.	Pack of Fuses (5)	FUS393500
6.	Solenoid Valve without fittings	VAL400020

Note. The stock reference for the plug-in Digi-50 control card listed above refers to the standard 240v, unit. Other variations are available which your printer may have been supplied with. If in doubt, please advise the serial number of your existing unit to our sales office.

EUROCODE PARTS LISTS (1 of 3)

When ordering spare parts please use the Stock Reference.
Item numbers refer to those on the following assembly drawings.

ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
1	Magazine plate	N/A	1	
2a	Take-off hub assy	HUB620201	1	Includes items 26,44,50,56,57.
2b	Rewind hub assy	HUB620202	1	Includes items 26,42,44,50,54,55 **See supplementary list for Eurocode 300.**
3	Hub spindle	SPI620003	2	**See supplementary list for Eurocode 300.**
4	Door assy	DOO620203	1	Includes items 52,74,112.
5	Roller spindle	SPI620005	6	
6	Anchor	ANC190006	1	
7	Foil guide	GUI620006	1	**See supplementary list for Eurocode 300.**
8	Bush	BUS190008	2	
9	Drive roller spindle	SPI620007	1	
10	Dancing bar	DAN620008	1	
11	Roller	ROL620009	1	
12	Bush	BUS190012	1	
13	Drive roller assy	DRI620204	1	Includes items 15,22,32,33,45.
14	Dancing arm	ARM620011	1	
15	Pulley	PUL190015	1	
16	Spring post	SPR190016	2	
17	Spring post	SPR190017	1	
18	Yoke	YOK620012	1	
19	Spindle	SPI620013	1	
20	Pinch roller assy	PIN620205	1	Includes item 28.
21	Pinch roller spindle	SPI620015	1	
22	Washer	WAS620016	1	
23	Spacer	SPA120042	1	
24	Support	SUP190024	2	
25	Drive belt	DRI110022	1	Part of Spring Set. **See supplementary list for EC 300 & 180.**
26	Bearing	BEA520003	6	**See supplementary list for Eurocode 300.**
27	Brake strap	BRA620038	1	**See supplementary list for Eurocode 300.**
28	Bearing	BEA521006	2	
29	Handle	HAN530502	1	
30	Grub screw		1	M5x6
31	Circlip	CLI530024	2	
32	Seal	SEA512034	1	Part of Seal Kit.
33	Clutch bearing	BEA521504	2	
34	Spring	SPR530034	1	Part of Spring Set
35	Spring	SPR530035	1	Part of Spring Set.
36	Grub screw		2	M4x4
37	CSK screw		1	M4x20
38	Button screw		7	M4x8
39	Spring	SPR530008	1	Part of Spring Set.
40	Dowel pin		1	6 dia x 28
41	Button screw		4	M5x20
42	Pan head screw		2	No.2-56 x 1/4"
43	CSK screw		2	M4x25
44	Pan head screw		4	No.2-56 x 1/8"
45	CSK screw		1	M4x8
46	Grub screw		1	M3x6
47	Button screw		1	M3x6
48	Washer		1	M3
49	Cylinder liner	LIN620017	1	
50	Spring clip	SPR530001	2	Part of Spring Set.
51	Washer	WAS120035	8	
52	Hinge block	HIN122006	1	
53	Handle	HAN120079	2	
54	Back disc	DIS121009	1	
55	Drive boss	DRI120052	1	**See supplementary list for Eurocode 300.**
56	Back disc	DIS121008	1	
57	Brake hub	BRA120063	1	
58	Roller	ROL620018	6	
59	Grub screw		1	M4x5
60	Main body	N/A	1	
61	Piston	PIS620020	1	Piston/Seal assy ref. PIS620200
62	Bottom cap	N/A	1	
63	Databox packing	PAC190028	1	
64	Guide pin	PIN620022	1	

EUROCODE PARTS LISTS (2 of 3)

When ordering spare parts please use the Stock Reference.
Item numbers refer to those on the following assembly drawings.

ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
65	Washer	WAS620065	1	
66	Needle Bearing	BEA521008	1	
67	Spindle	SPI620059	1	
68	Spring	SPR530033	1	Part of Spring Set.
69	Cam	CAM620025	1	
70	Mounting plate	PLA620026	1	
71	Lock nut	NUT620027	1	
72/73	Foil adjusting screw assy	ADJ620207	1	Includes item 91.
74	Dowel pin		2	3 dia x 10
75	Plug housing	HOU130023	1	
76	Drive spindle	SPI620029	1	
77	Strike plunger	PLU620036	1	
78	Timing pulley	PUL620030	1	
79	"O" ring	O-R512005	1	Part of Seal Kit.
80	Rod seal	SEA512038	2	Part of Seal Kit.
81	Microswitch support	SUP620031	1	
82	Nose bearing	BEA620070	1	
83	Piston seal	SEA512036	1	Part of Seal Kit.
84	Bush	BEA520017	1	
85	Microswitch	SWI395010	1	
86	Clutch Bearing	BEA521507	1	
87	Needle bearing	BEA521001	1	
88	Cap screw		2	M4x30
89	"O" ring	O-R512030	1	Part of Seal Kit.
90	Timing belt	BEL522512	1	
91	Roll pin		1	3 dia x 20
92	Cap screw		4	M6x20
93	Grub screw		1	M5x8
94	Button screw		10	M4x8
95	Lock nut		1	M10
99	Needle bearing	BEA520018	1	
100	Dowel pin		1	
101	Cap screw		2	M3x25
102	Cap screw		4	M4x45
103	Cheese head screw		2	M2x10
104				
105	Grub screw		1	M8x8
106	CSK screw		2	M3x6
107	Side locator	SID120014	2	
108	Cushion	DAM120074	2	
109	Location pin	LOC620032	2	
110	lever	LEV620110	1	
111	Timing pulley assy	PUL620219	1	Includes item 86.
112	Magnet	MAG531001	1	
113	Roller	N/A	1	Part of item 121.
114	Insulating plate	INS120012	1	
115	Heater block	HEA120013	1	
116	Plug Assembly	PLU399415	1	
117	Mounting screw	SCR120070	2	
118	Keep plate	KEE120030	1	
119	Button screw		4	M5x8
120	Cover	COV620034	1	
121	Fork end assy	FOR620208	1	Includes items 100,113.
122	Cap screw		1	M4x12
123	Top Cylinder Bearing	BEA620064	1	
124	Bush	BUS620035	1	
125	Keep plate	CAT620125	1	
126	CSK screw		3	M4x10
127	Thumb plate	THU620127	1	
128				
129	Locking plate	LOC620129	1	
130	Cap screw		2	M4x20
131	Spring	SPR530032	1	Part of Spring Set.
132	Grub screw		1	M3x8
133	Plug	PLU620037	2	
134	Washer	WAS120035	5	

EUROCODE PARTS LISTS (3 of 3)

When ordering spare parts please use the Stock Reference.
Item numbers refer to those on the following assembly drawings.

SUPPLEMENTARY LIST FOR EUROCODE 300 ONLY

ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
2c	Rewind hub assy	HUB620203	1	Includes items 42,44,50,54,148,149.
135	Magazine Plate	N/A	1	
136	Foil Guide	GUI620040	1	
137	Drive Belt	DRI620049	1	Part of Spring Set.
138	Brake Strap	BRA620051	1	
147	Hub Spindle	SPI620147	1	
148	Clutch Bearing	BEA521505	1	
149	Drive Boss	DRI620149	1	

SUPPLEMENTARY LIST FOR EUROCODE 180 ONLY

ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
25	Drive Belt	DRI620048	1	Part of Spring Set.
150	Magazine Plate	N/A	1	

ADDITIONAL SPARE PARTS & REPAIR KITS

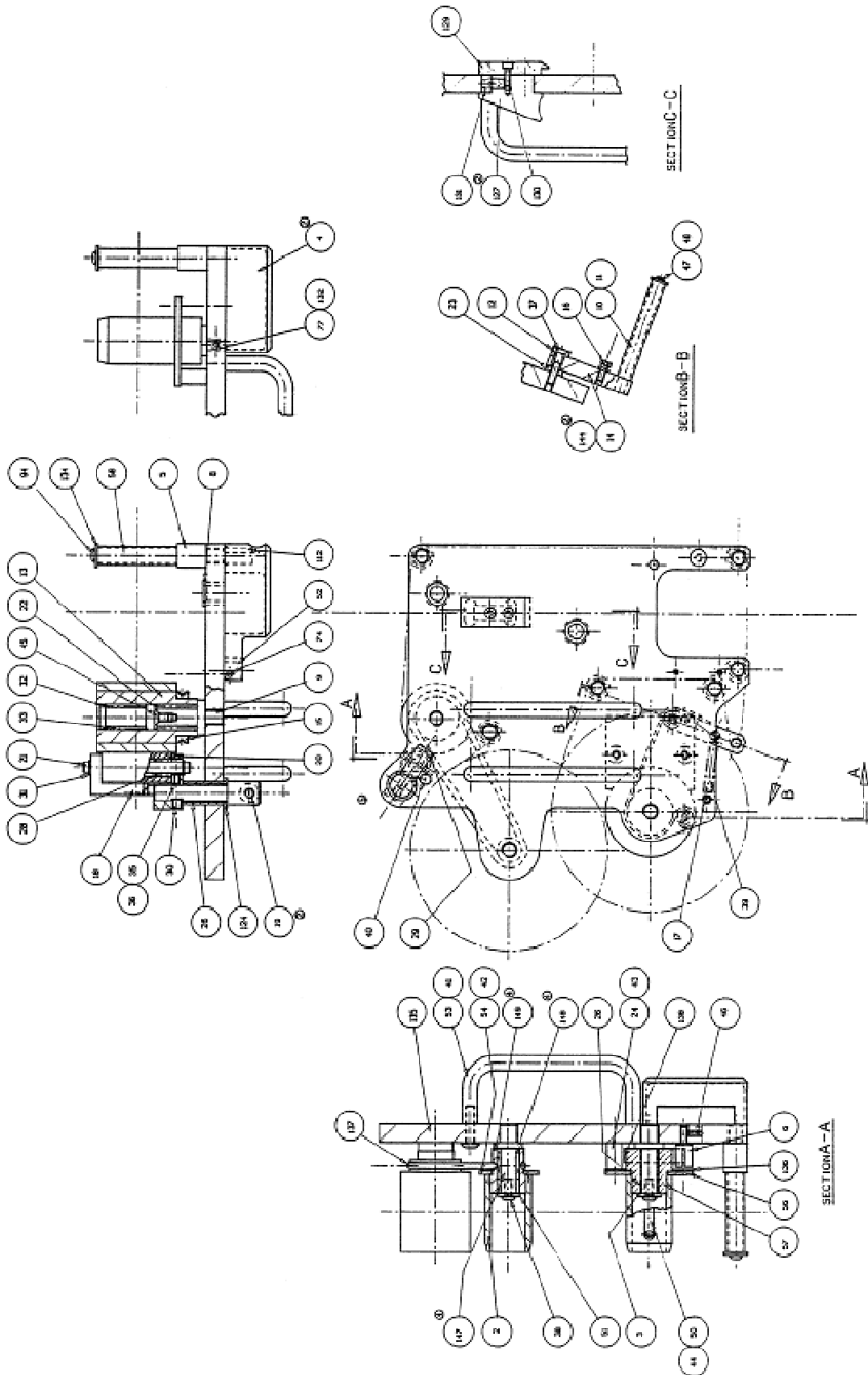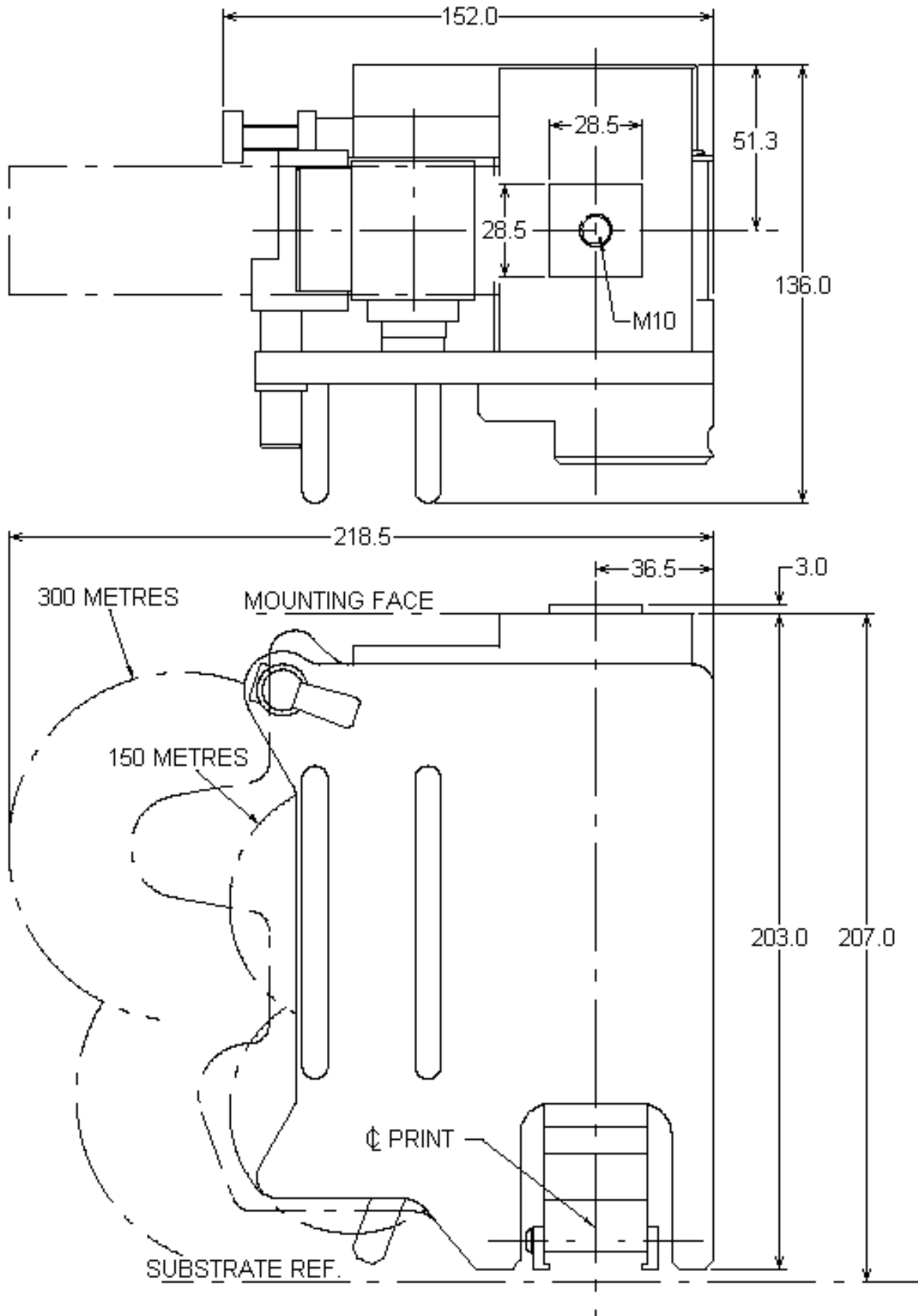|	STOCK REF
PNEUMATIC	
Solenoid valve without fittings.	VAL400020
ELECTRONIC	
Cartridge heater, 240v, 250w.	HEA501506
Thermistor probe.	THE500522
Safety microswitch.	SWI395011
"End of foil alarm" sensor.	ALA395018
Plug-in Digi-50 printer control card, 240v.	CPC293504
For other control card variants please contact the sales office.	
REPAIR KITS	
Seal kit containing all seals.	SEA620209
Spring set containing all springs and drive belt (Eurocode 150).	SPR620216
Spring set containing all springs and drive belt (Eurocode 300).	SPR620217
Spring set containing all springs and drive belt (Eurocode 180).	SPR620215

EUROCODE 150/180 MAGAZINE ASSEMBLY (iss 5)
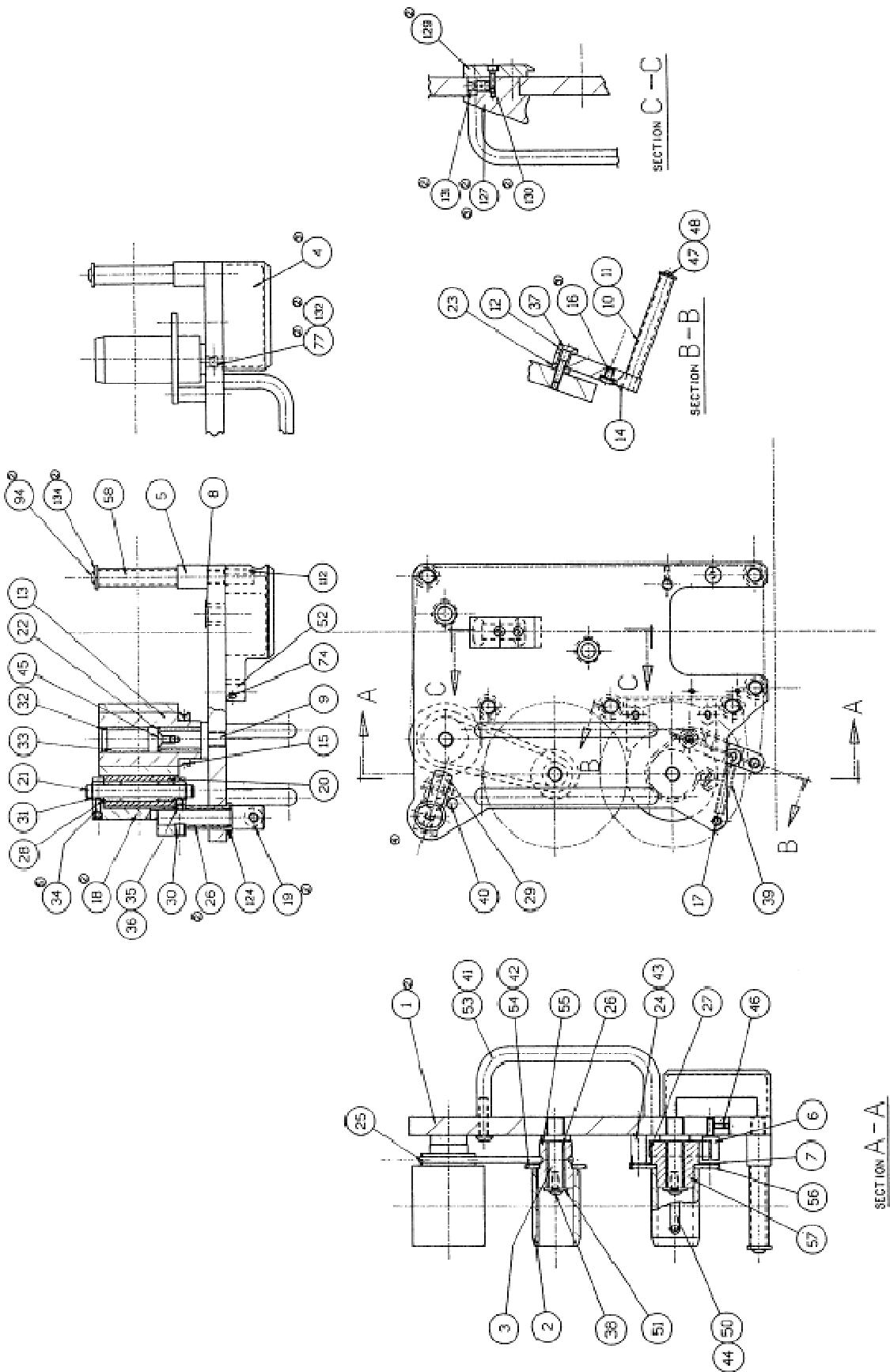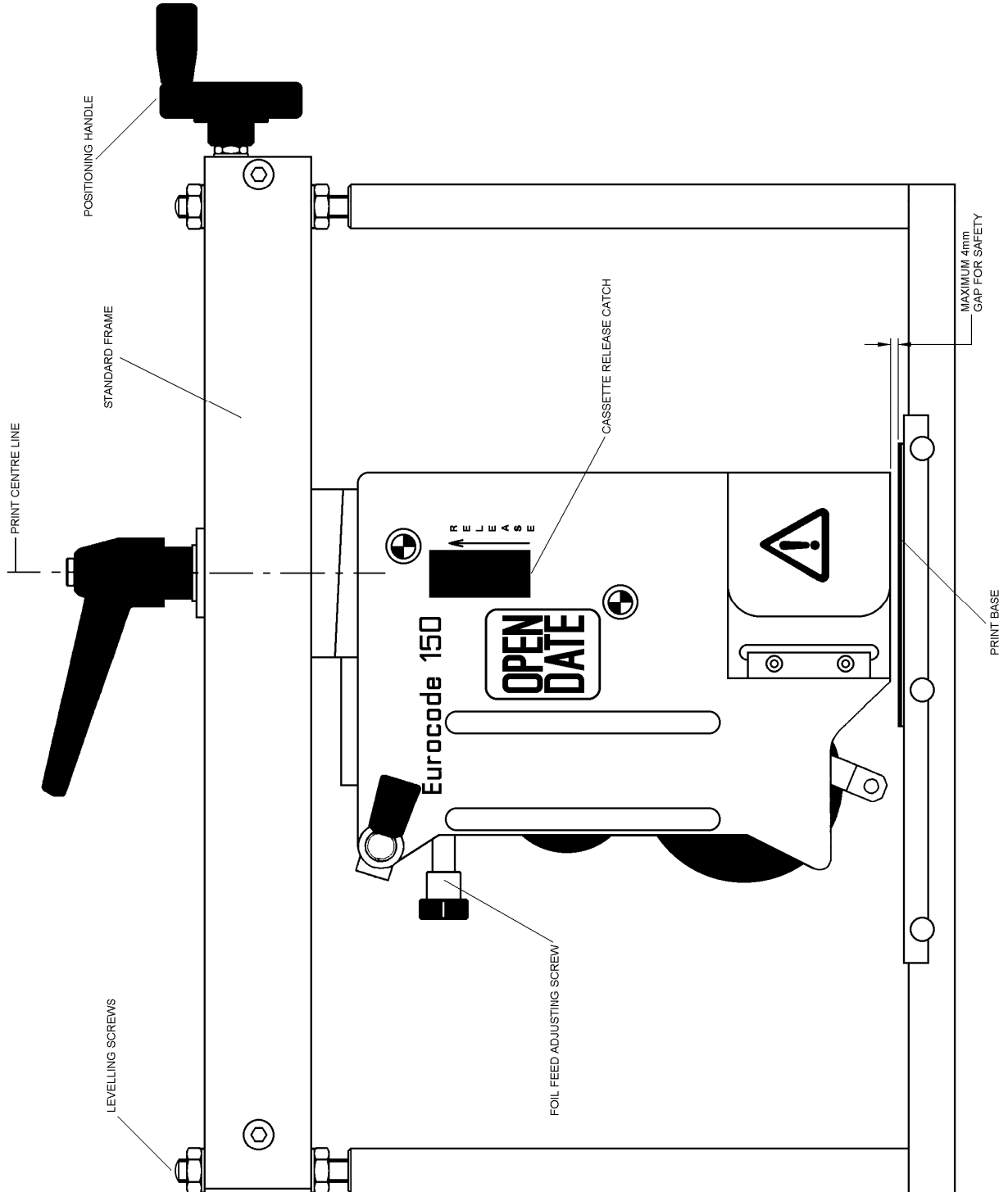
EUROCODE BODY ASSEMBLY
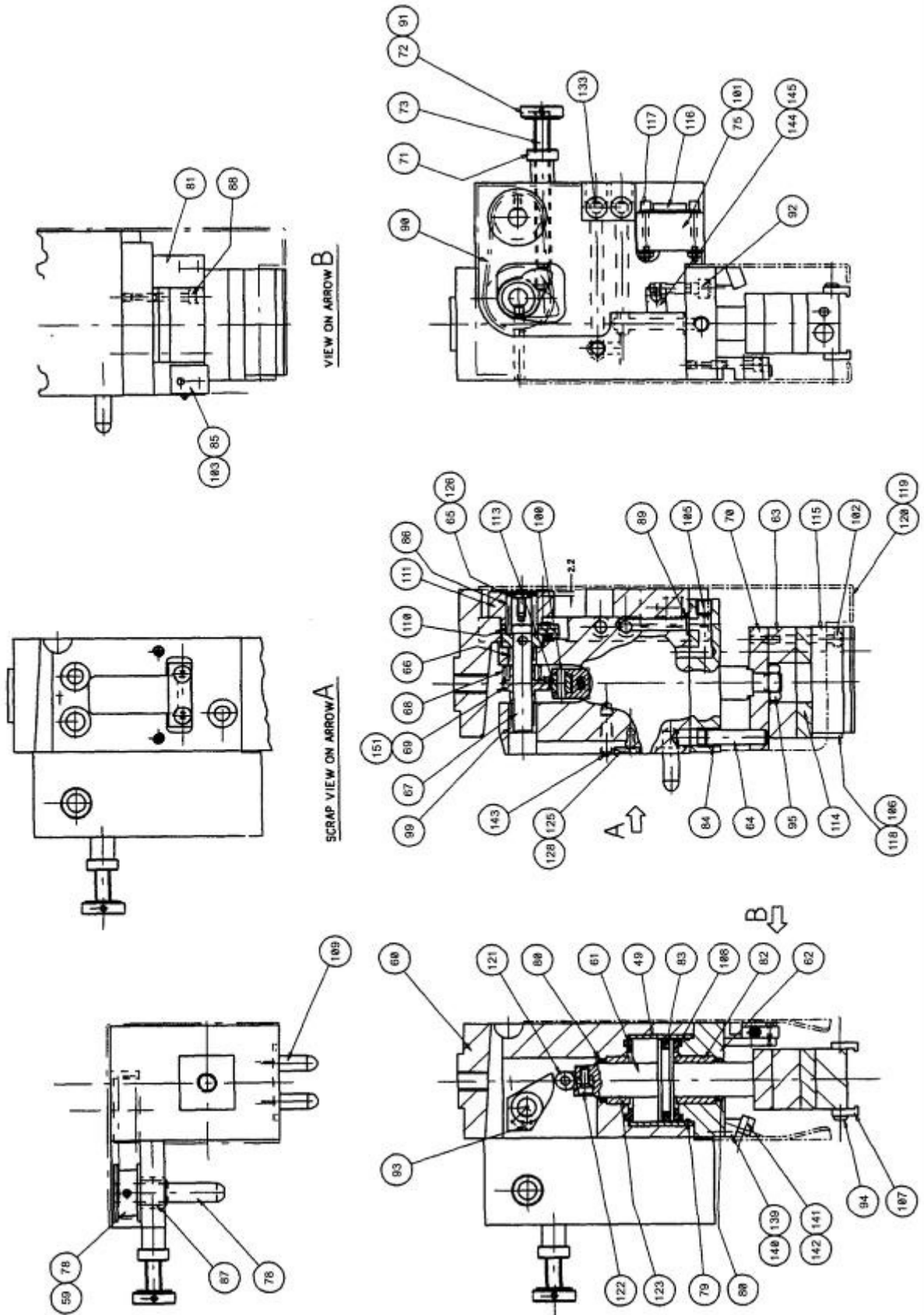
EUROCODE 300 MAGAZINE DETAILS (iss. 5)

EUROCODE SERIES DIMENSIONAL DRAWING

152.0

28.5

51.3

28.5

136.0

M10

218.5

36.5

3.0

300 METRES

MOUNTING FACE

150 METRES

203.0   207.0

₵ PRINT

SUBSTRATE REF.

EUROCODE - STANDARD FRAME INSTALLATION

POSITIONING HANDLE

STANDARD FRAME

PRINT CENTRE LINE

CASSETTE RELEASE CATCH

MAXIMUM 4mm
GAP FOR SAFETY

RELEASE

Eurocode 150

OPEN DATE

PRINT BASE

LEVELLING SCREWS

FOIL FEED ADJUSTING SCREW

EUROCODE AIRBOURNE NOISE EMISSIONS

Comprehensive tests have been carried out with the Sprint fitted in a standard printer frame and mounted onto a typical label applicator. Measurements were taken at 1.6 metres above floor level and approximately 1 metre away from the printer in all directions.

The measuring equipment used for conducting the tests was a Digital Sound Level Meter, type d-1405E supplied by Lucas CEL. Before the tests were carried out the instrument was calibrated and fitted with a foam windshield.

The results shown below are based upon a standard type installation for the printer, the operating air pressure was set at 6 bar and the air flow restrictors correctly adjusted.
The noise levels shown below are the equivalent continuous "A-weighted" sound pressure levels in decibels "dB(A)".

PRINTS PER MINUTE	NOISE LEVEL - DECIBELS (dB)
100	65
200	68
300	70
400	74

STANDARD WARRANTY TERMS & CONDITIONS FOR HOT FOIL PRINTERS

All Open Date Hot Foil Printers Carry a twelve (12) month return to base (at our discretion) warranty. Open Date printers should be installed and operated according to the instructions given in the operating manual. No liability will be accepted for faults caused by incorrect installation or operation of the equipment or if the product has been altered or subjected to unreasonable use.

The following components are not covered by the warranty as they will be subject to wear and tear: -
1.   Print base rubber.
2.   Type characters, dies and rotary databox wheels.

Should you have cause to claim for repair under warranty then please contact our service department stating the model, serial number of the product and the nature of the problem or fault.

We reserve the right to charge for components replaced during the warranty period, which are subsequently found to be damaged due to any of the above conditions not being followed.

Any items repaired or replaced under warranty will carry the balance of the original warranty period only.

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