EUROCODE SERIES
(Digi50 Controller)

OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS
INSTALLATION DETAILS

These instructions cover the following models:-

EUROCODE 150

EUROCODE 180

EUROCODE 300

Designed and manufactured by:

OPEN DATE EQUIPMENT LIMITED
UNITS 8 & 9 PUMA TRADE PARK
145 MORDEN ROAD
MITCHAM
SURREY
CR4 4DG
UNITED KINGDOM

Tel: 0044 (0) 208 655-4999
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Web site: www.opendate.co.uk

EUROCODE SERIES (Digi50) INDEX.

EC DECLARATION OF CONFORMITY (Passed EMC Tests 24 November 2004)

We hereby declare that the following machinery complies with the essential health and safety requirements of the Machinery Directive 98/37/EC, and the Low Voltage Directive 73/23/EEC and its amendments, and the requirements of the Electromagnetic Compatibility Directive 89/336/EEC and its amendments.

Machine Description:	**Hot Foil Printer with Digi50 Controller.**
Model:	**Eurocode**
Type:	.....
Serial number:	.....
Manufactured by:	**Open Date Equipment Limited.**
Address	**Units 8 & 9, Puma Trade Park,** **145 Morden Road,** **Mitcham,** **Surrey. CR4 4DG** **United Kingdom.**

The following transposed harmonised European standards have been used.

BS EN ISO 12100: part 1, 2003. Safety of machinery. Basic concepts, general principles for design. Basic terminology, methodology.

BS EN ISO 12100: part 2, 2003. Safety of machinery. Basic concepts, general principles for design. Technical principles.

EN294: 1992. Safety of machinery. Safety distances to prevent danger zones being reached by the upper limbs.

BS EN 563:1994. Safety of machinery. Temperatures of touchable surfaces. Ergonomics data to establish temperature limit values for hot surfaces.

EN60204: part 1, 1997. Safety of machinery. Electrical equipment of machines. Specification for general requirements.

BS EN 61000-6: part 4, 2001. Electromagnetic compatibility (EMC). Generic standards. Emission standard for industrial environments.

BS EN 61000-3: part 2, 2000. Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions. (equipment input current up to and including 16 A per phase)

BS EN 61000-3: part 3, 1994. Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection.

BS EN 61000-6: part 2, 2001. Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.

FCC Part 15 Verification , Class A. Conducted and Radiated Emissions.

In addition, this machinery has been designed and manufactured in accordance with:-

PD 5304:2000, Safe use of machinery.

A technical construction file for this machinery is retained at the above address.

Signed: ..... Date: .....

Name K.F. Wingfield. Position Service Manager

Signing on behalf of the manufacturer.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Follow all warnings and instructions marked on the product.
2. Always disconnect the printhead and controller from the mains electricity and air supply before attempting to clean or service it.
3. 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 38).
4. Do not use the product near water. Never spill liquid of any kind on to the product.
5. 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.
6. 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.
7. 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).
8. 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.
9. Use only the power cable supplied with the product. The cable supplied is three core mains cable, utilising one wire as a grounding conductor. This must be connected to a suitable earth 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.
10. Do not allow anything to rest on the power cable. Do not locate the product where persons will walk on the cable.
11. 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.
12. 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.
13. Do not attempt to use to use this product in areas where explosive gases or substances are present.
14. 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 can get very hot, it should only be held by its plastic handle. Never touch the metallic parts, as temperatures could be as high as 220 degrees C.
15. Disconnect the product from the electrical and air supply, referring to servicing by qualified personnel under the following conditions.

    a. If the power cable is damaged or frayed.
    b. If the air pipes are damaged in any way.
    c. If liquid has been spilled into or if the product has been exposed to rain or water.
    d. 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.

Digi50 Operating Instructions

Digi50 Control Unit (see page 6)

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 220ºC (428ºF).

Note! When selecting operating Modes 2, 4 or 6, the printer will not operate on the external trigger until the temperature has reached the pre-programmed set point. (see page 15 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 2000 milli–seconds. (0.010 – 2 Seconds)

Print Switch

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

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

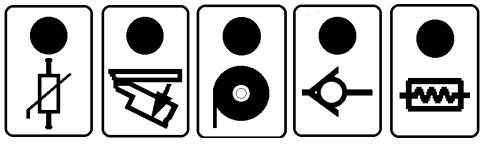
Any Fault condition, will cancel (switch off) the Print Switch automatically.

"This is a safety feature"

Test Button.

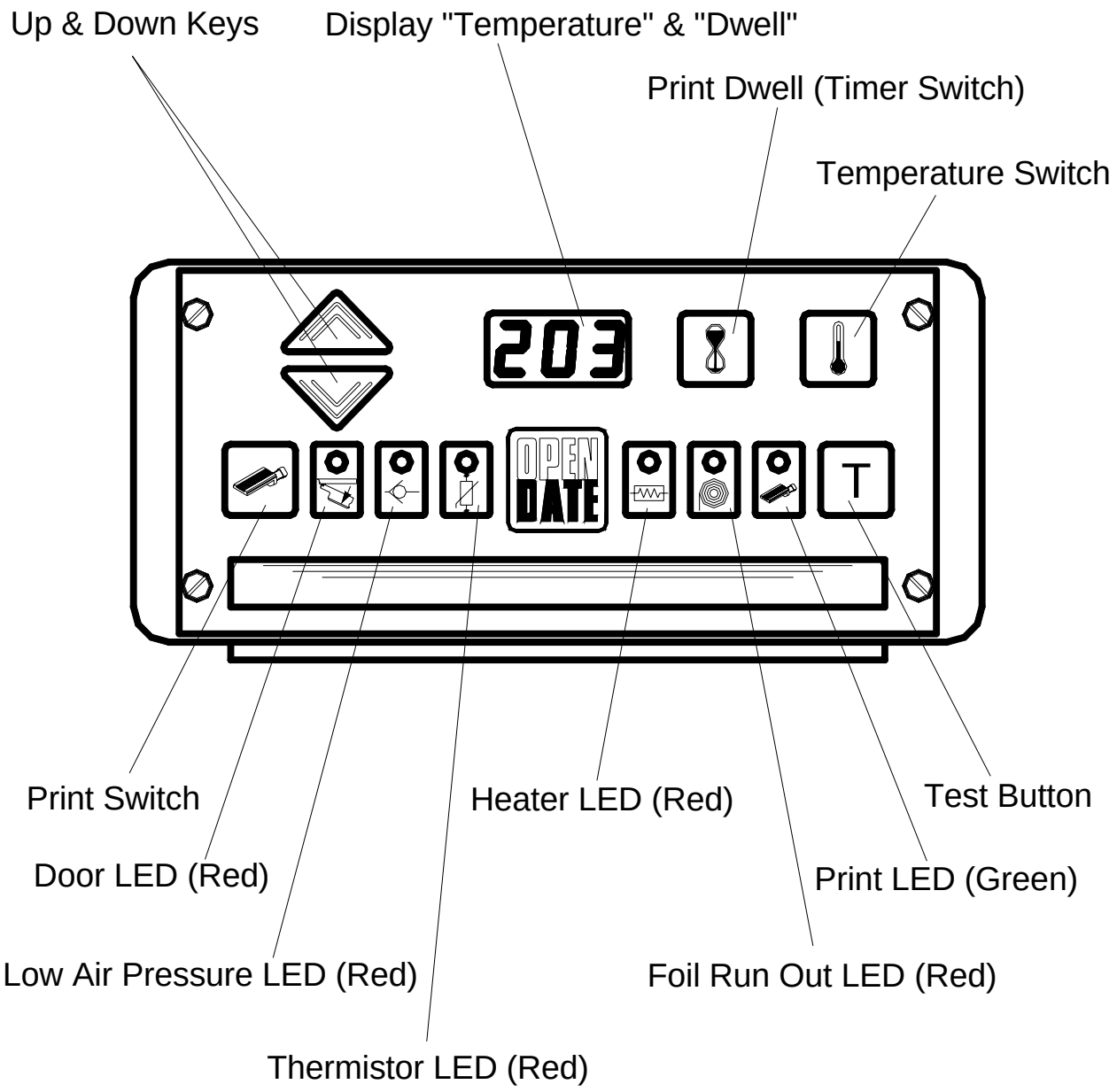
Manually operates the printer (will not operate whilst the Print LED is on).

Fault LED's.



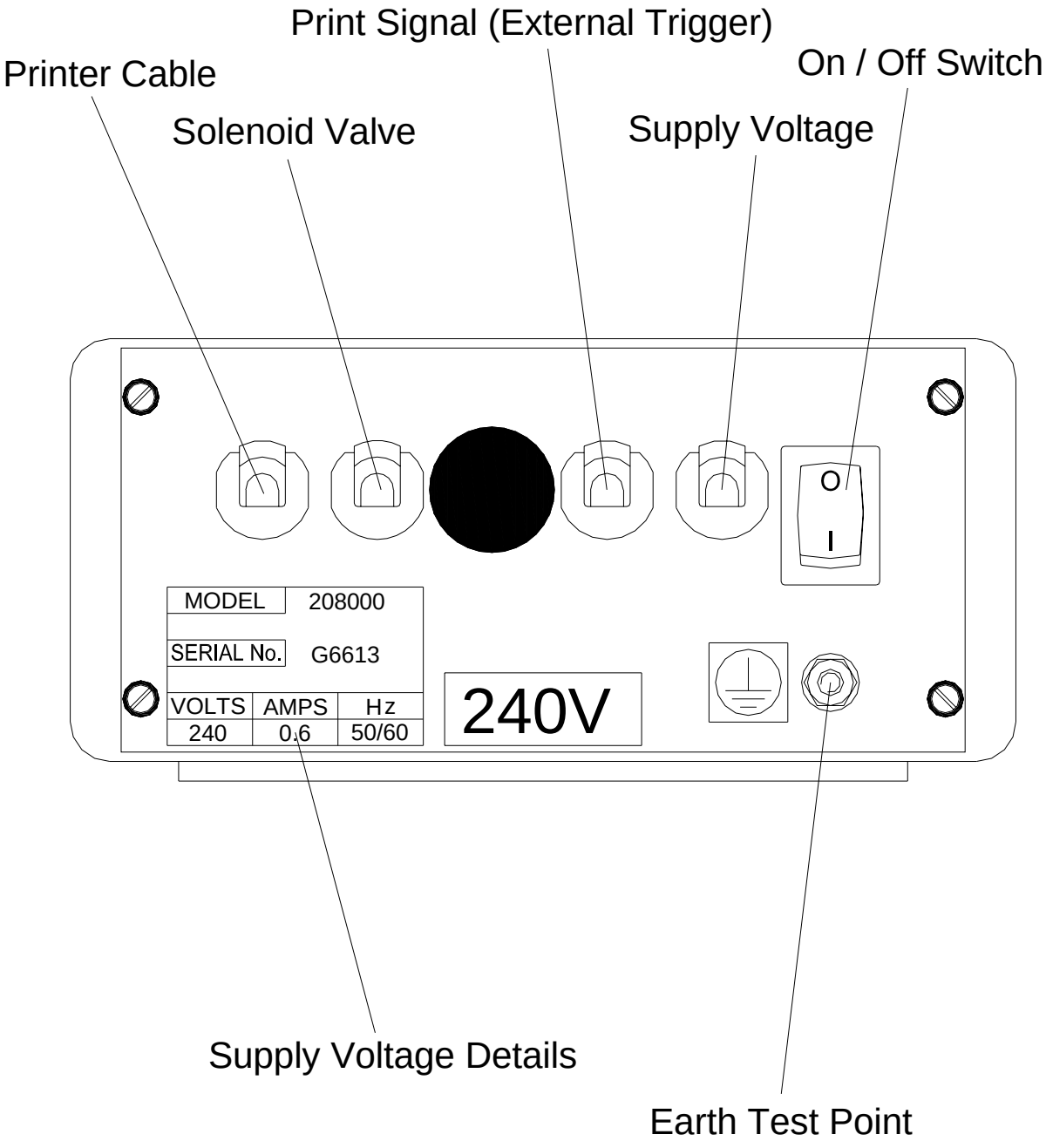
Refer to pages 24 & 25 for system faults.

Digi50 Control Unit Front Panel



Digi50 Control Unit Rear Panel

(Cables Excluded For Clarity)



OPERATING INSTRUCTIONS

MAGAZINE REMOVAL (refer to 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. Press off the **PRINT** switch to silence the audible alarm.

FOIL THREADING (refer to pages 9 & 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.

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

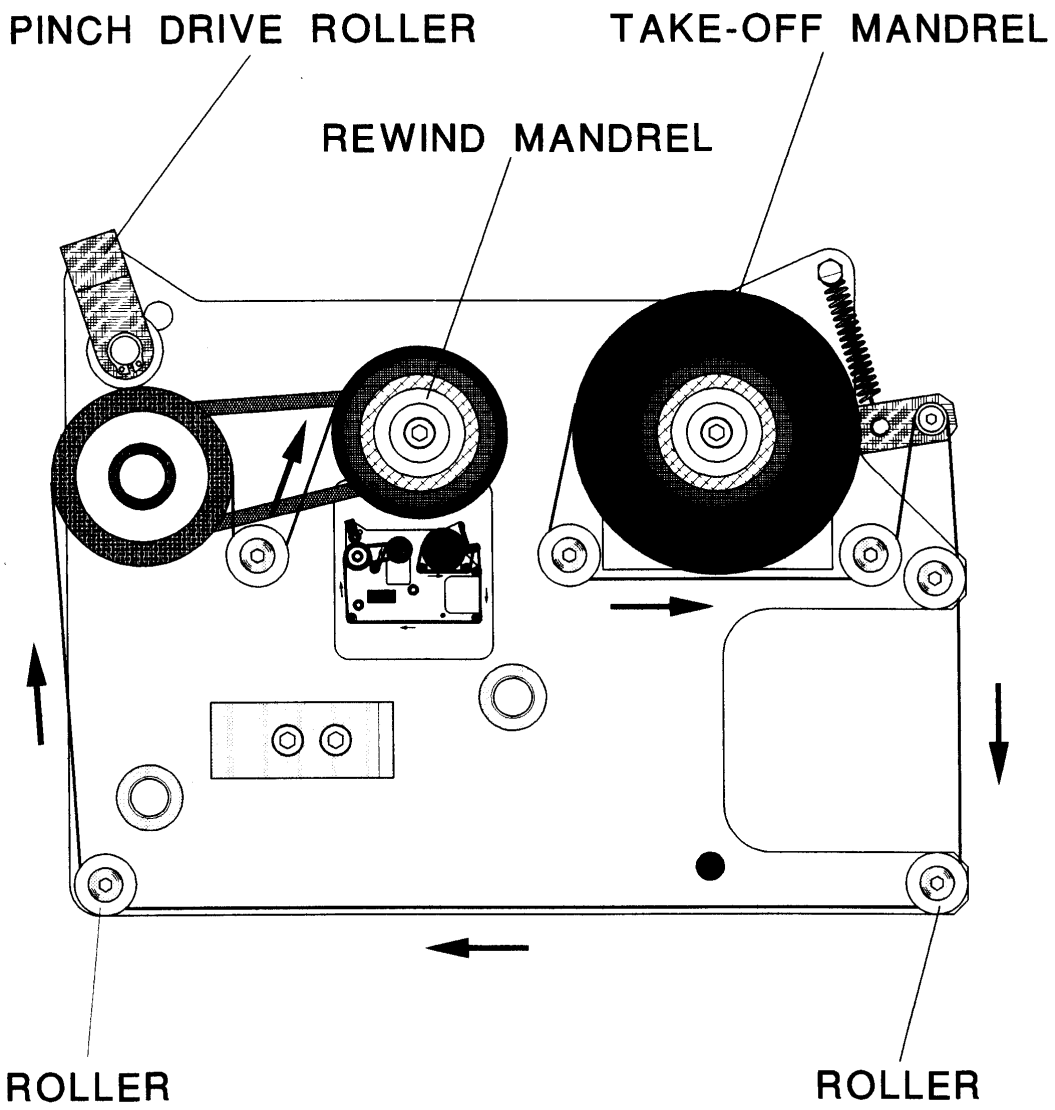
"Never assume that a Type/die holder is cold"

Only pick up a 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 end plate. Close the door.

FOIL FEED ADJUSTING SCREW (refer to page 38)

This is used to adjust the amount of foil used per print, winding it in reduces the foil pull. Ensure that the locking nut is fully tightened after adjustment. A gap of 1 or 2mm is recommended between each section of used foil.

FOIL THREADING DIAGRAM



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. Remove foil magazine and load foil as detailed in this manual.
10. Re-fit foil magazine.
11. Ensure that **PRINT** switch is off.
12. Place a sample of substrate material under printer and press **TEST** button. Inspect resulting print.
13. Adjust print levelling screws until a light, uniform print impression is achieved. Lock levelling screws.
14. Adjust foil metering screw for economic foil use as detailed previously.
15. Tighten thumb nut.
16. Press the **PRINT** switch for automatic operation.

Print Orientation (refer to page 38)

To rotate the printer and therefore turn the overprint through 90 degrees, Remove the foil magazine, unscrew the clamping handle until the location square on top of the printhead is clear of the top rails. Turn the printer to the required position, tighten the clamping handle and replace the magazine.

Temperature Adjustment (refer to page 5)

- 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 10 & 23 for mode & temperature calibration

Initial Setting Procedure (continued)

Print Dwell Adjustment (refer to page 5)

- 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 (refer to page 12)

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 (speed), 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.

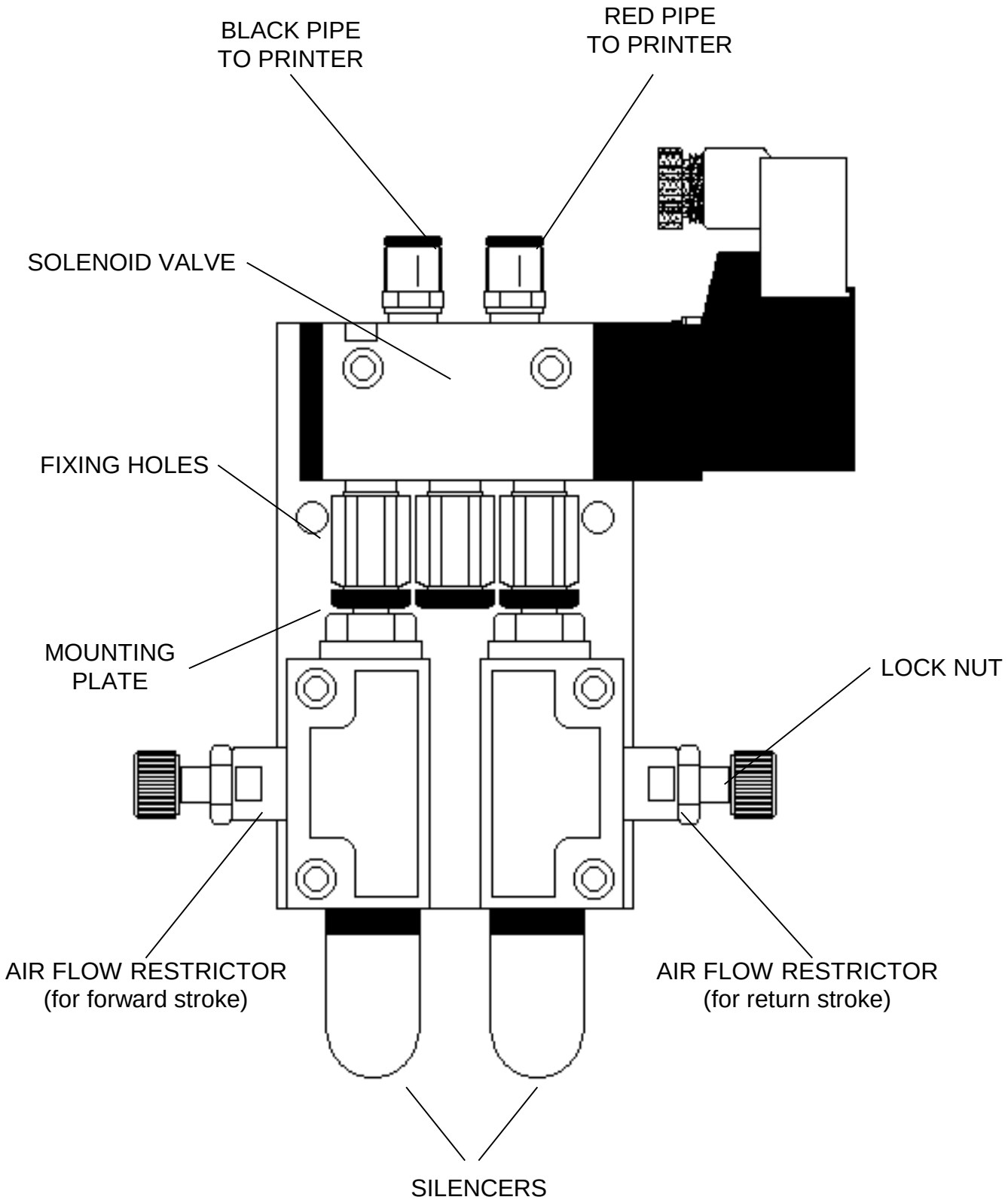
The drive for the printing foil is taken from the return stroke of the print ram. Increasing the exhaust airflow will speed up the foil feed. To ensure efficient foil feeding, the return stroke should be as gentle as possible.

For higher speed operation, the exhaust airflow from both the forward and return strokes will have to be increased.

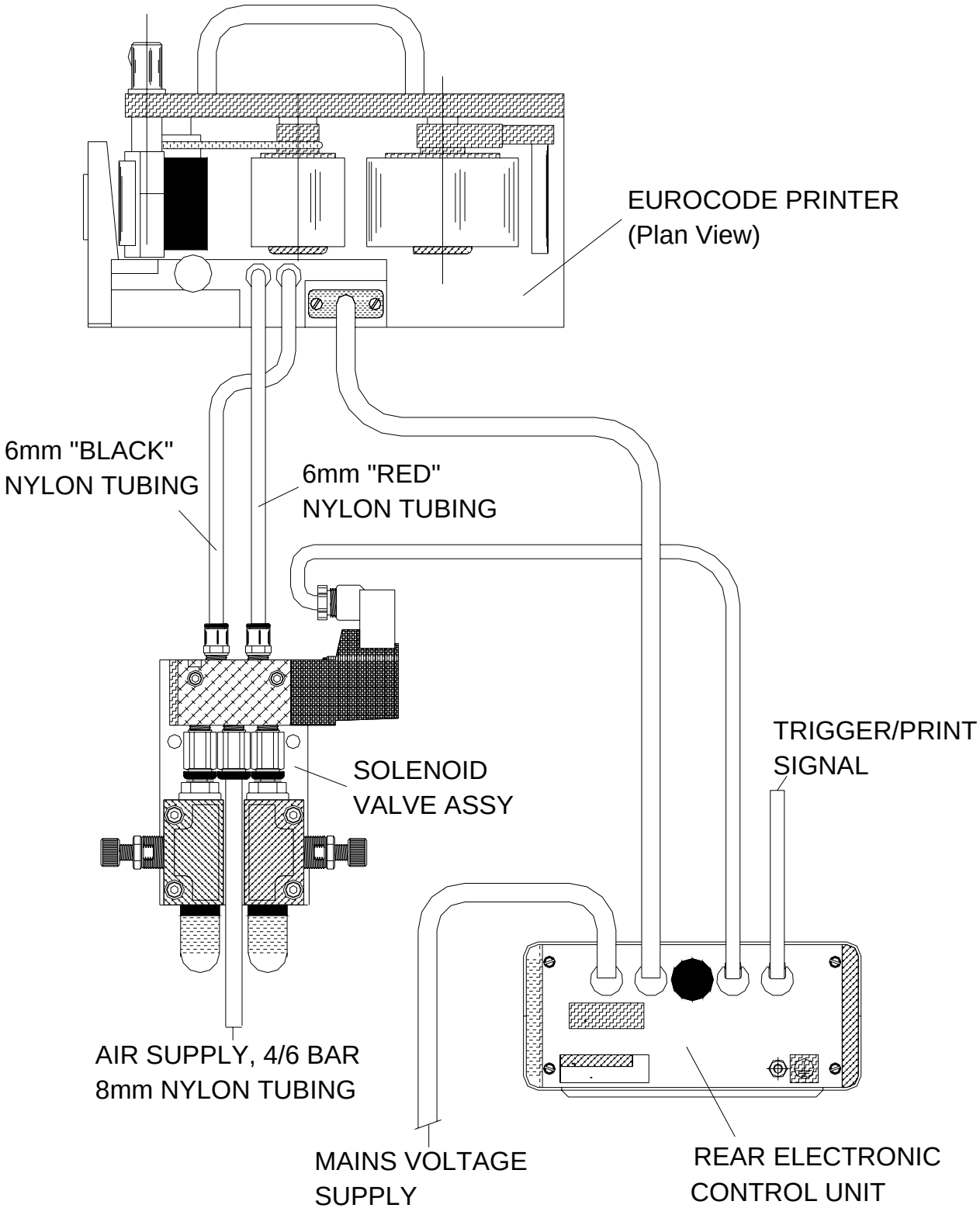
Note !!

It is very important that the print ram returns fully before the next print cycle commences.

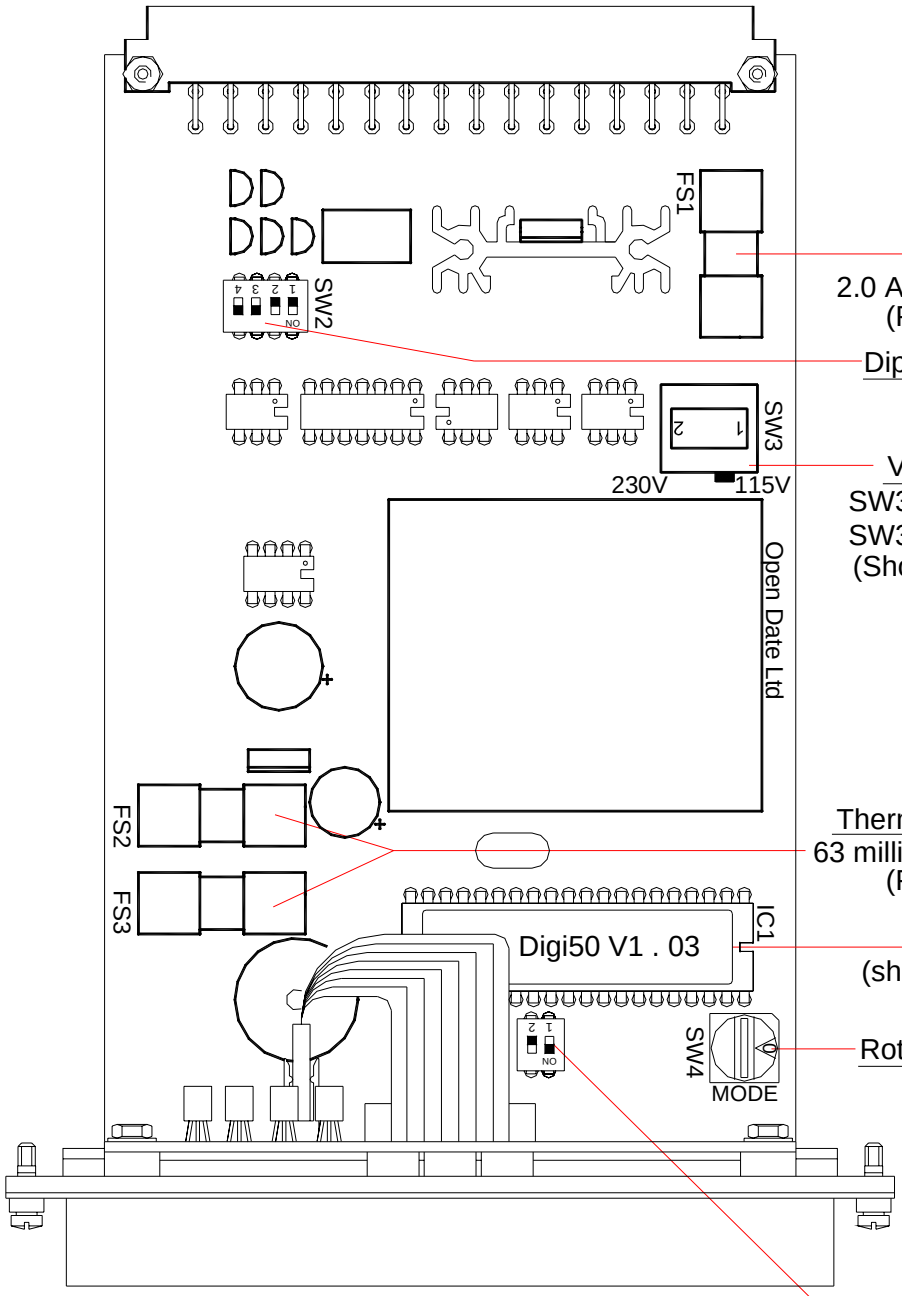
SOLENOID VALVE DETAILS



EUROCODE INTERCONNECTION DETAILS



Setting Up Digi50 Controller



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

Dip Switch Settings (SW2)
(see page 16)

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 Blow)
(Part No. FUS 503511)

Eprom Label
(showing software version)

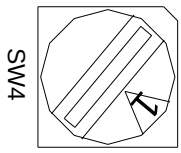
Rotary Mode Switch (SW4)
(see page 15)

Thermistor Dip Switch Settings
(see page 17)

Digi50 Mode Settings for Temperature Tolerance Ranges

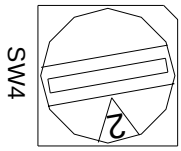
The Mode selector is a Rotary Switch located between the Front Panel and the Transformer.

Mode 1 (Default)



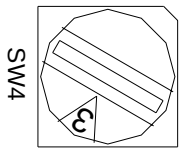
Temperature Range. -5% to +10% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 2



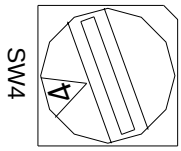
Temperature Range. -5% to +10% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 3



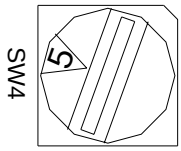
Temperature Range. -5% to +5% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 4



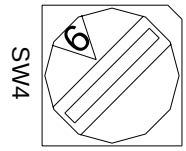
Temperature Range. -5% to +5% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

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

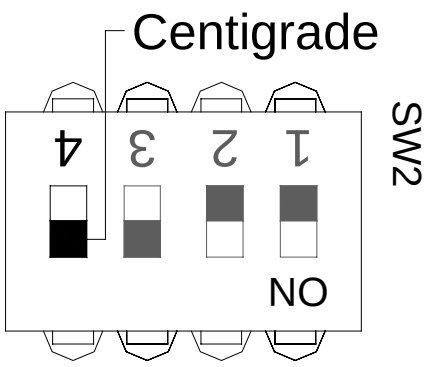


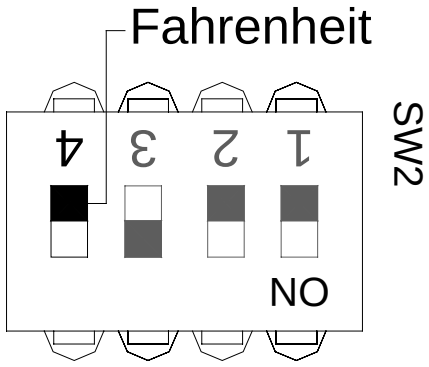
Temperature Range. -10% to +10% of the set point.
Printer operates with in the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

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

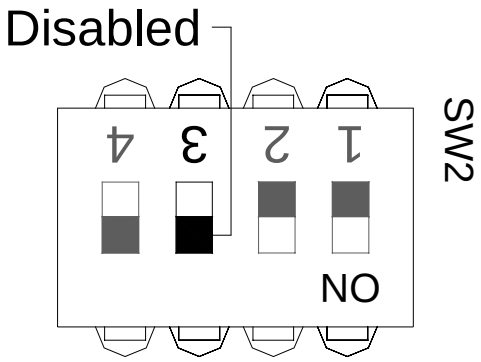
Dip Switch Settings

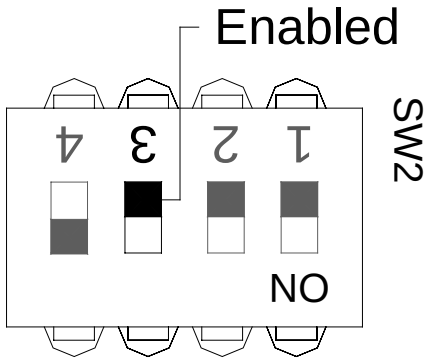
Temperature Range SW2 (No 4)



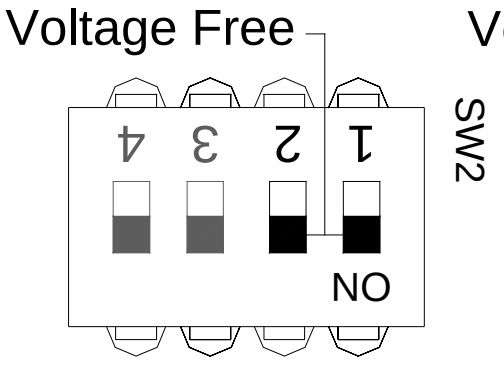


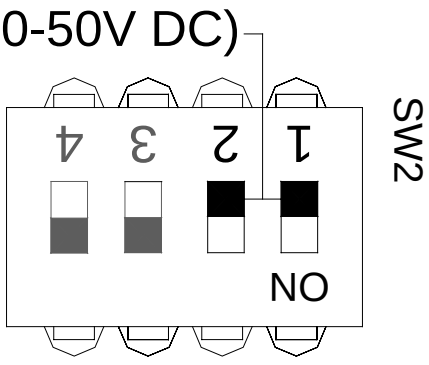
Low Air Configuration SW2 (No 3)





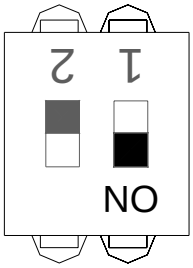
Print Trigger Selection SW2 (No 1 & 2)





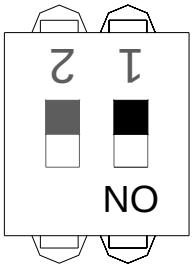
Thermistor Dip Switch Settings (SW1)

Settings for the Standard Thermistor.



Part No. THE 500502 (Standard)
Thermistor Type G55-Bead
White Connection wires.

Settings for optional Thermistor.

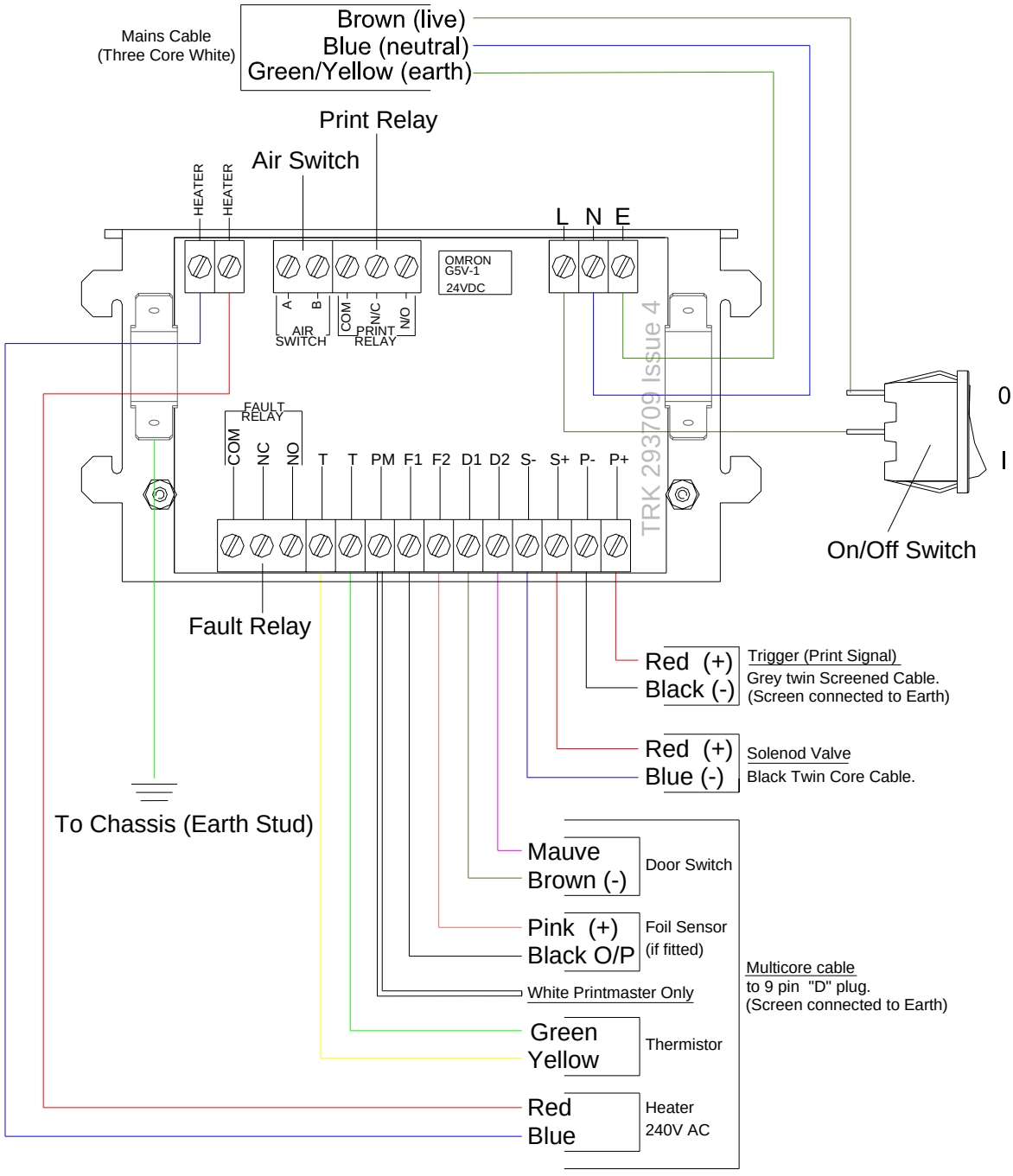


Part No. THE 312080
Thermistor Type USP 5362
Black Connection wires.

NOTE!

If in doubt as to which thermistor is fitted, please contact your local supplier, referring to your printer serial number.

Digi50 Connections shown from rear of the Control Unit



Connection Details - Row “c”

Trigger/Print Signal - Grey twin core screened.

See page 39 for details of “Input Print Signals”

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

Solenoid Valve - Black twin core.

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

Printer – Multi-Core screened to 9 pin D plug. D plug Connections.

D2.	Mauve	Type Holder door safety switch return.	Pin 6
D1.	Brown	Feed to the safety switch & foil sensor, –0v DC.	Pin 5
F2.	Pink	Feed to the foil sensor, +14v DC.	Pin 9
F1.	Black	Output from the foil sensor.	Pin 8
PM.	White	Foil sensor **Printmaster 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

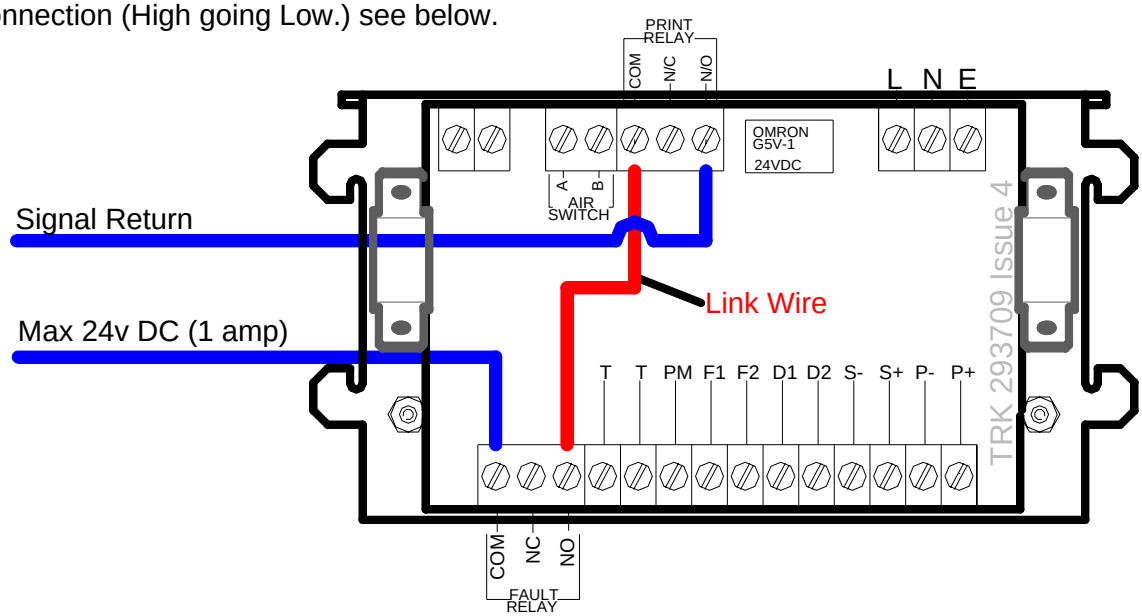
Mains Cable - Three core white.

N.	Blue	Neutral.
L.	Brown	Live.
E.	Yellow/Green	Earth.

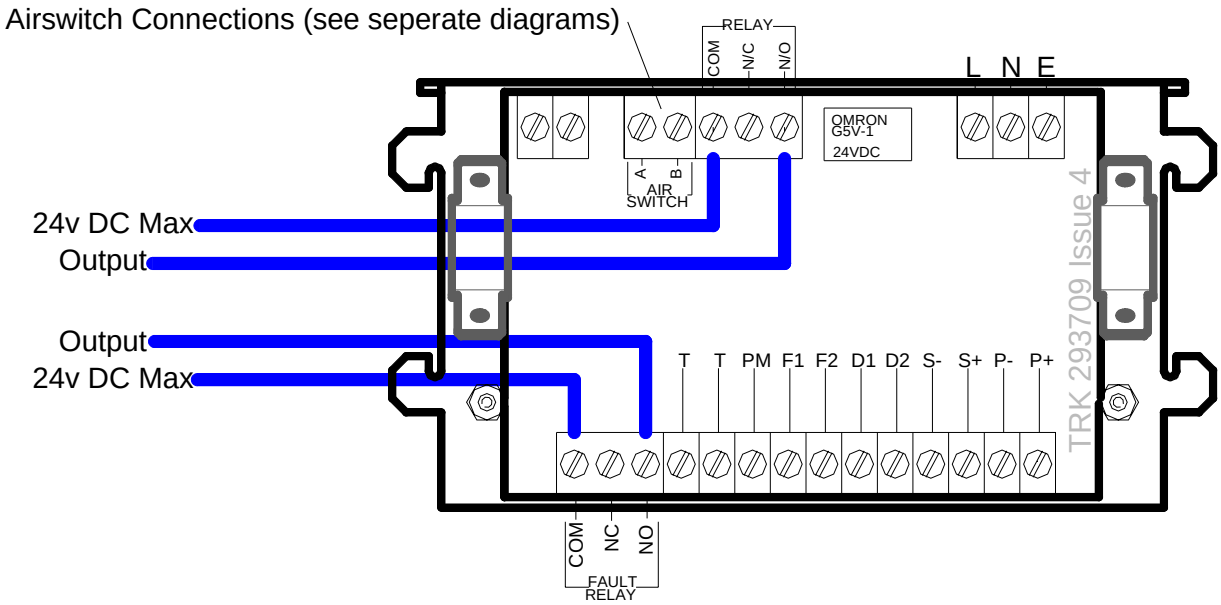
Digi50 Fault and Print Relay Connections

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.



Digi50 Individual Relays & Connections



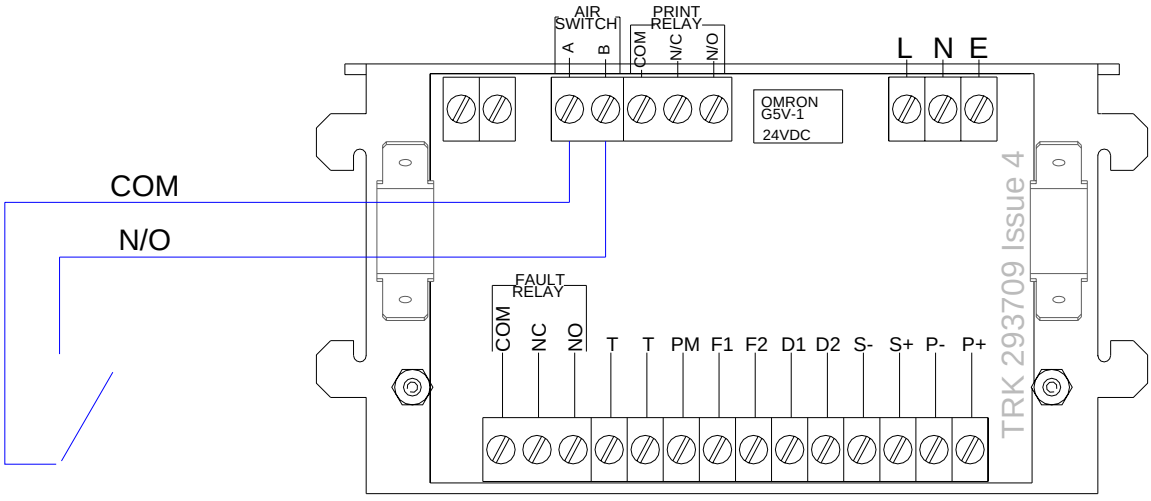
Print Relay:- Rated 24v DC, 1 amp max current

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

Digi50 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)



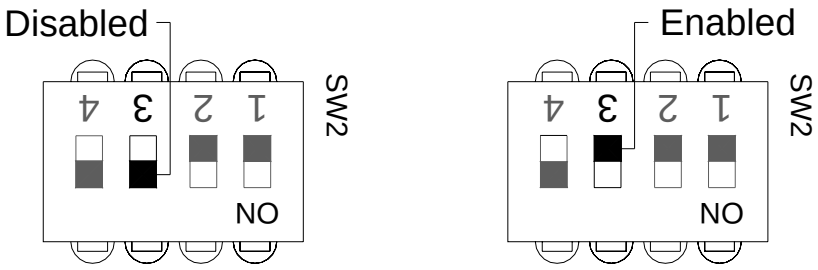
Air Switch Not Supplied

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)



Digital Control Calibration

NOTE!

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

The unit is factory calibrated at 130ºC, and is set up as “MODE 1”supplied as standard. (See page 15 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.

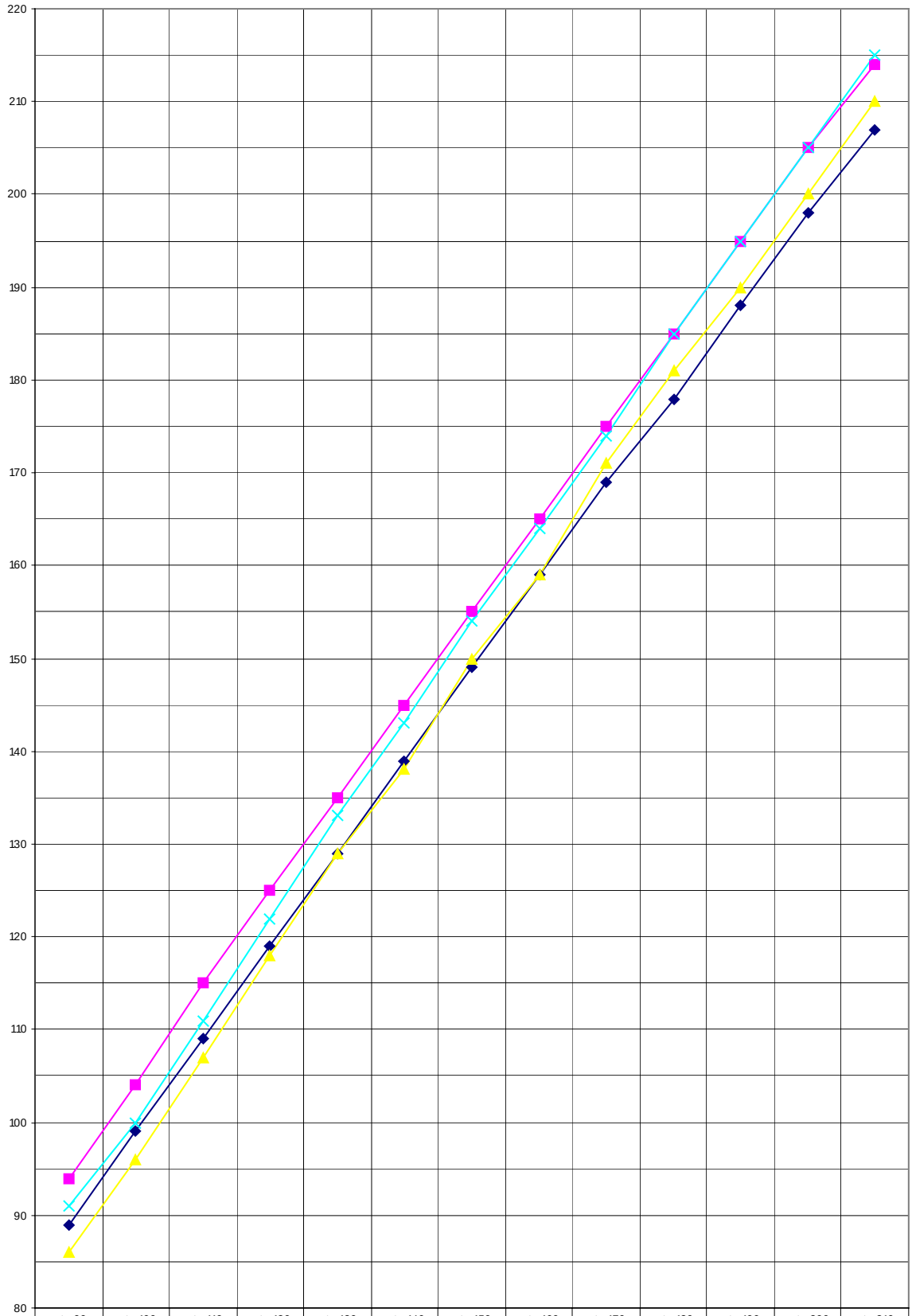
Fitting of an optional thermistor (THE 312080) will require (SW1) position to be altered (See page 17), again this will be accurate to plus or minus 7°C. If accurate temperatures are needed, you should recalibrate to suit the individual thermistor fitted.

For normal running temperatures above 180°C recalibrate at 200°C

External Calibration Method

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

Static Temperature Results. Calibrated at 130° C



	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

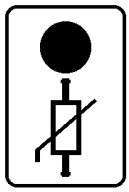
System Faults

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.



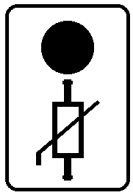
2.7.1

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.

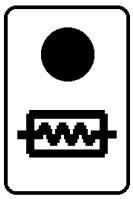


. . 5

Heater

Heater is open circuit, the LED is on.

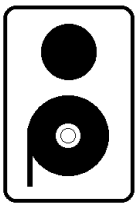
Internal bleeper is sounding.



Foil Run Out

At end of foil roll, the LED is on.

Internal bleeper is sounding.

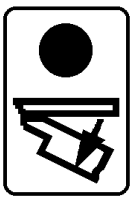


Type Holder Door Opened

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)

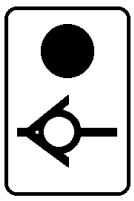
When air pressure is low, the LED is on.

External Pressure switch required.

See separate wiring detail. (see page 21)

Internal Bleeper is sounding.

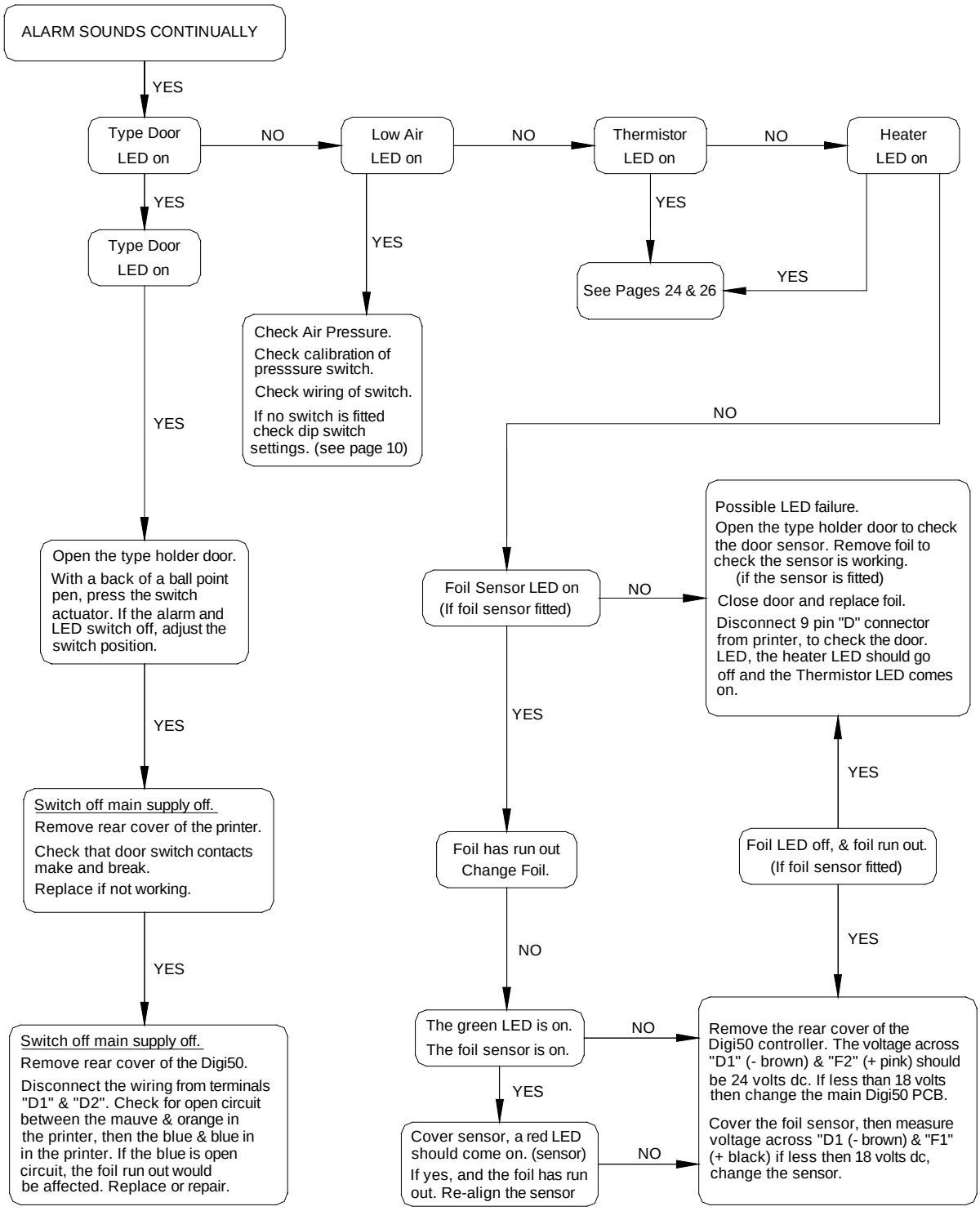
Set Dip Switch to enable this function.(see page 16)



In any of the above fault conditions, the fault relay will be de-energised. See pages 18, 20 & 21 for connection details.

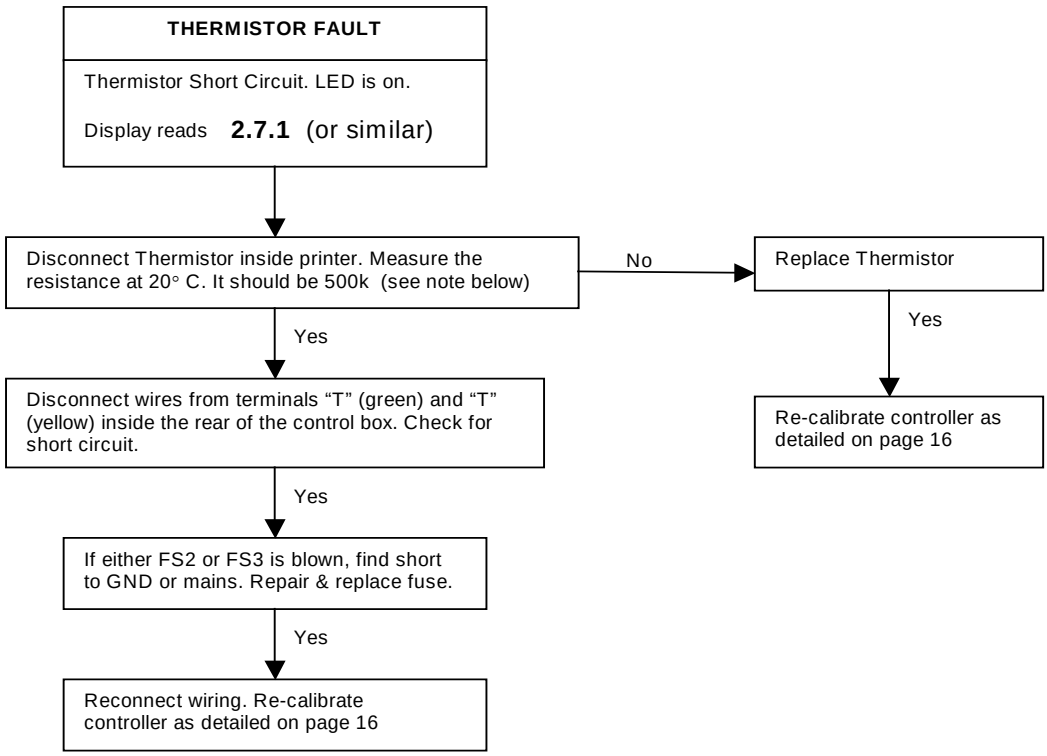
Digi50 Alarm System Faults

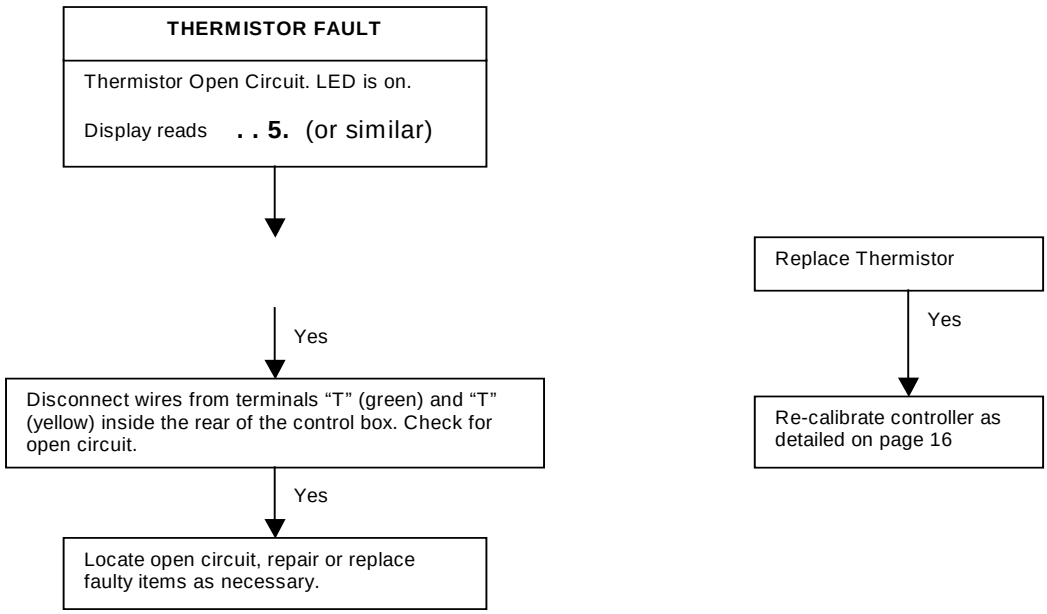
If no LED's are on, check the mains supply and the fuses on the PCB. (for wiring connections see pages 12, 14 & 15)



Thermistor Faults

Digi50 controller utilising the Opendate Printer Range and a Standard Thermistor,





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

MECHANICAL FAULT FINDING

FAULT	POSSIBLE CAUSE
Insufficient foil pull.	Foil adjusting screw wound in too far. Pinch roller not engaged. Torsion spring on body broken. Grub screw loose in cam or lever. Drive roller damaged or dirty. Insufficient clearance between printer and print base. Cam worn. 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 exhausted. 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 print ram, see page 11).
Printer is sluggish.	Insufficient air pressure. Flow restrictors wound in too far. Faulty valve.

PRINT QUALITY DETERIORATION.

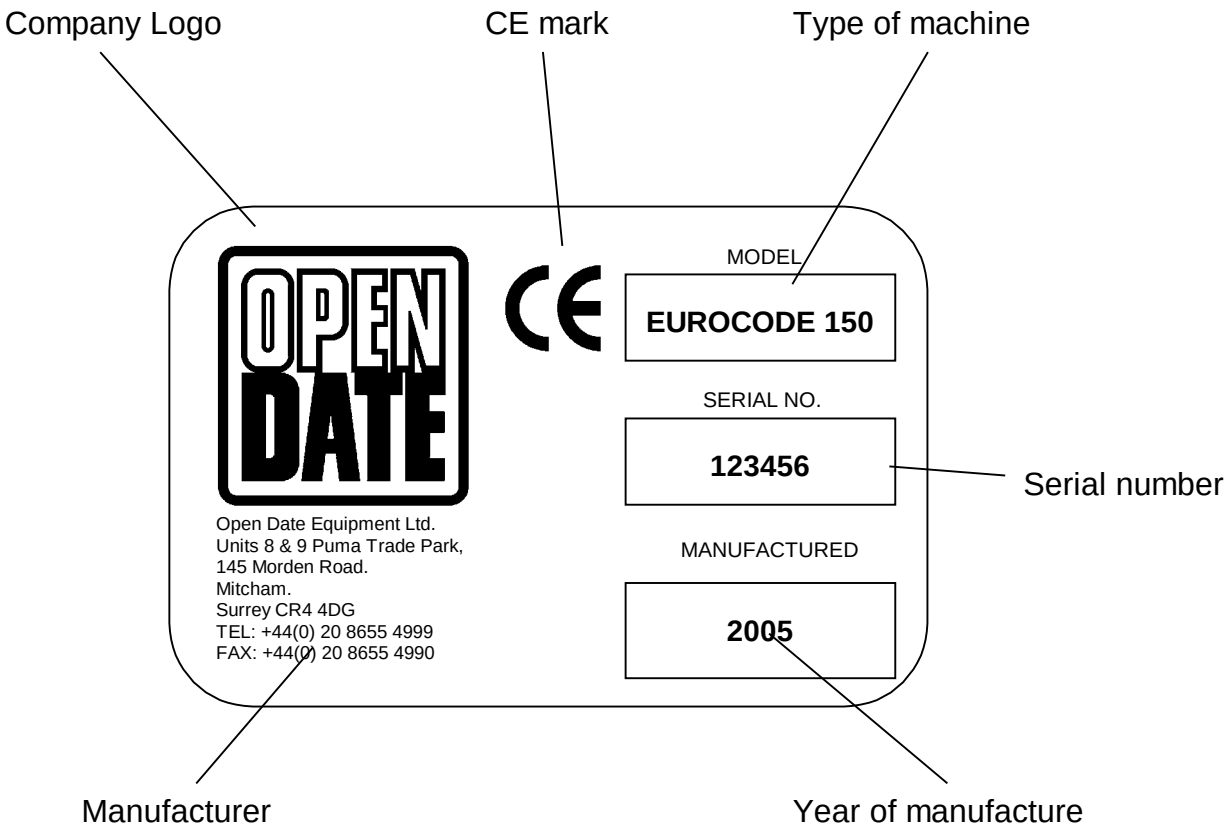
Print quality deterioration can be attributed to any of the following causes;

POSSIBLE CAUSE	CURE
Insufficient foil pull	See pages 8, 9 & 38. (Foil Feed Adjustment)
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 back of the side guard.

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



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

Digi50 Controller

	ELECTRICAL	STOCK REF
8.	Cartridge Heater (240v)	HEA501506
9.	Thermistor Probe	THE500502
10.	Microswitch for Door	SWI395011
11.	Digi50 plug in Card (240v)	CPC293502
12.	Digi50 plug in Card (110v)	CPC293503
13.	Pack of Mains Fuses (5) 2A Anti-Surge	FUS503512
14.	Pack of Thermistor Fuses (10) 63mA Quick Blow	FUS503511
15.	Solenoid Valve without fittings	VAL510524

Note!

The stock reference for the Digi50 plug-in control card listed above, (item 11 or 12) ensure you have selected the correct voltage required. Other variations may be available. If in doubt, please advise the serial number of your existing unit to our sales office.

This list covers machines supplied after 28 June 2005 for the first two years of operation only.

EUROCODE PARTS LIST

MECHANICAL

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

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	

EUROCODE MECHANICAL PARTS LIST (continued)

ITEM	DESCRIPTION	STOCK REF	QTY	NOTES
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	
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		
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
96				
97				
98				
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				
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

EUROCODE MECHANICAL PARTS LIST (continued)

ITEM	DESCRIPTION	STOCK REF	QTY	NOTES
123	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	PLG620037	2	

SUPPLEMENTARY LIST FOR EUROCODE 300 ITEMS 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	

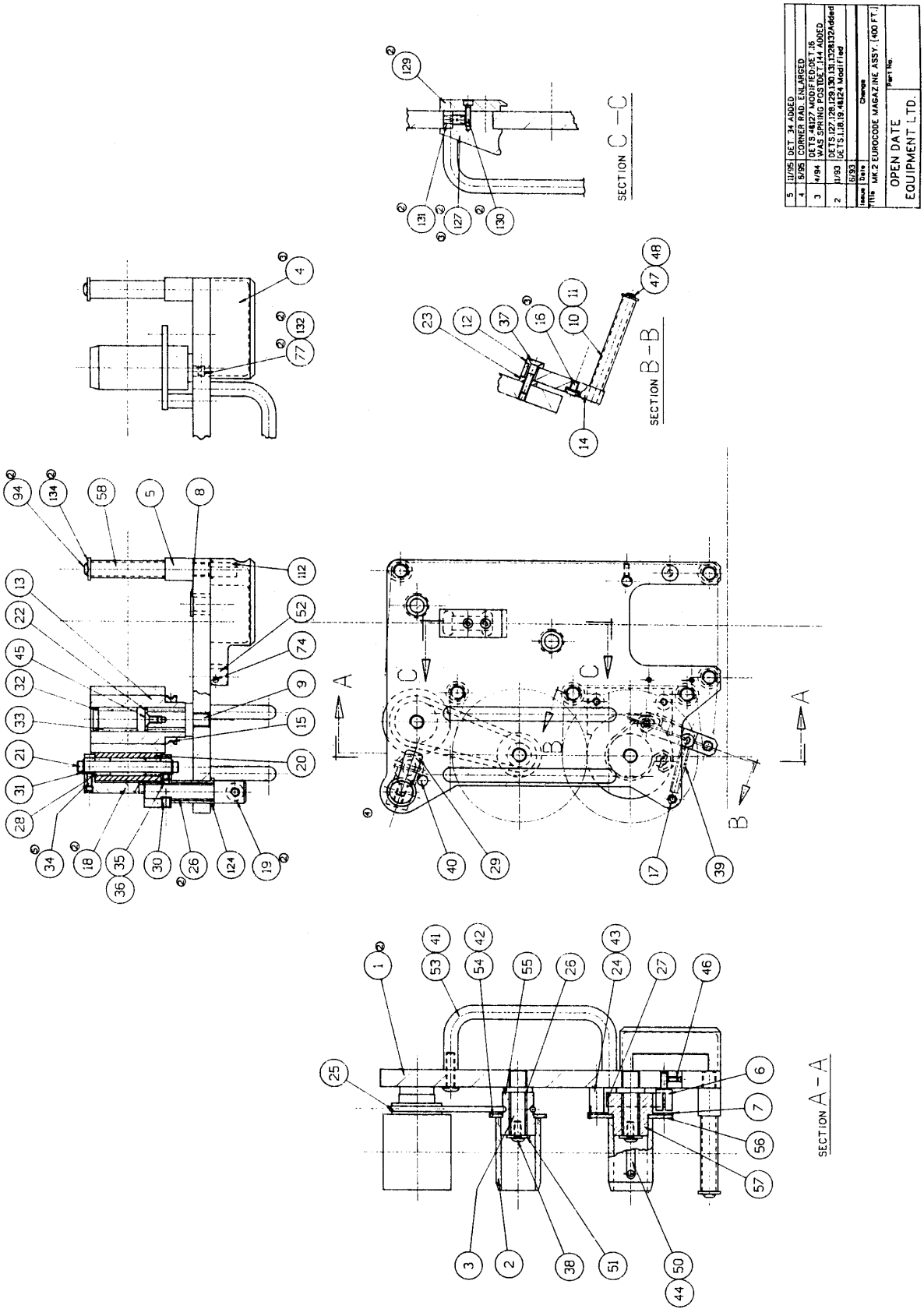
SUPPLEMENTARY LIST FOR EUROCODE 180 ITEMS ONLY.

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

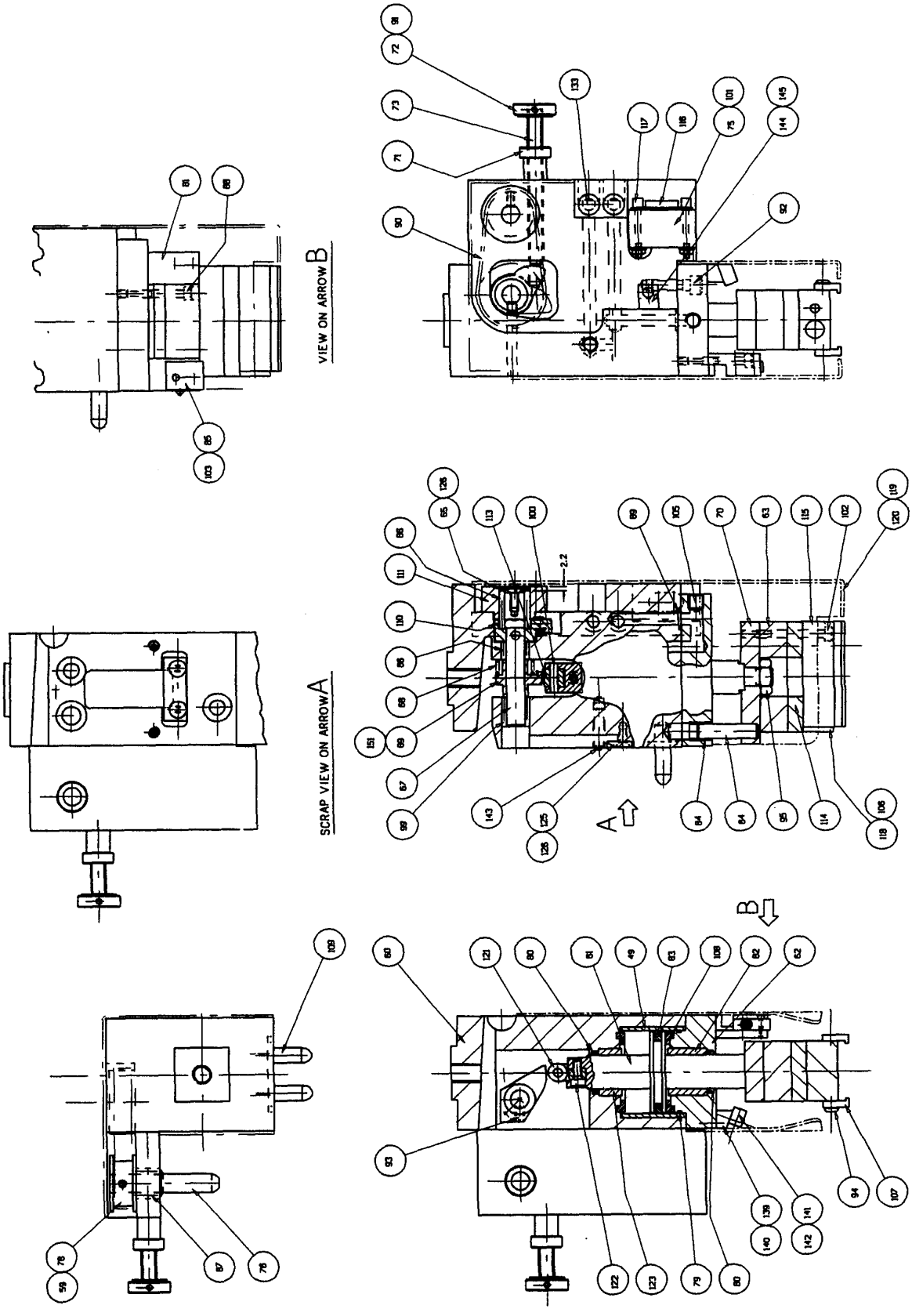
ADDITIONAL SPARE PARTS AND REPAIR KITS

	STOCK REF
PNEUMATIC	
Solenoid valve without fittings.	VAL510524
ELECTRONIC	
Cartridge heater, 240v, 250w.	HEA501506
Thermistor probe.	THE500502
Safety microswitch.	SWI395011
"End of foil alarm" sensor.	ALA395018
Plug-in Digi50 control card, 240v, box mount (horizontal).	CPC293502
Plug-in Digi50 control card, 115v, box mount (horizontal).	CPC293503
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

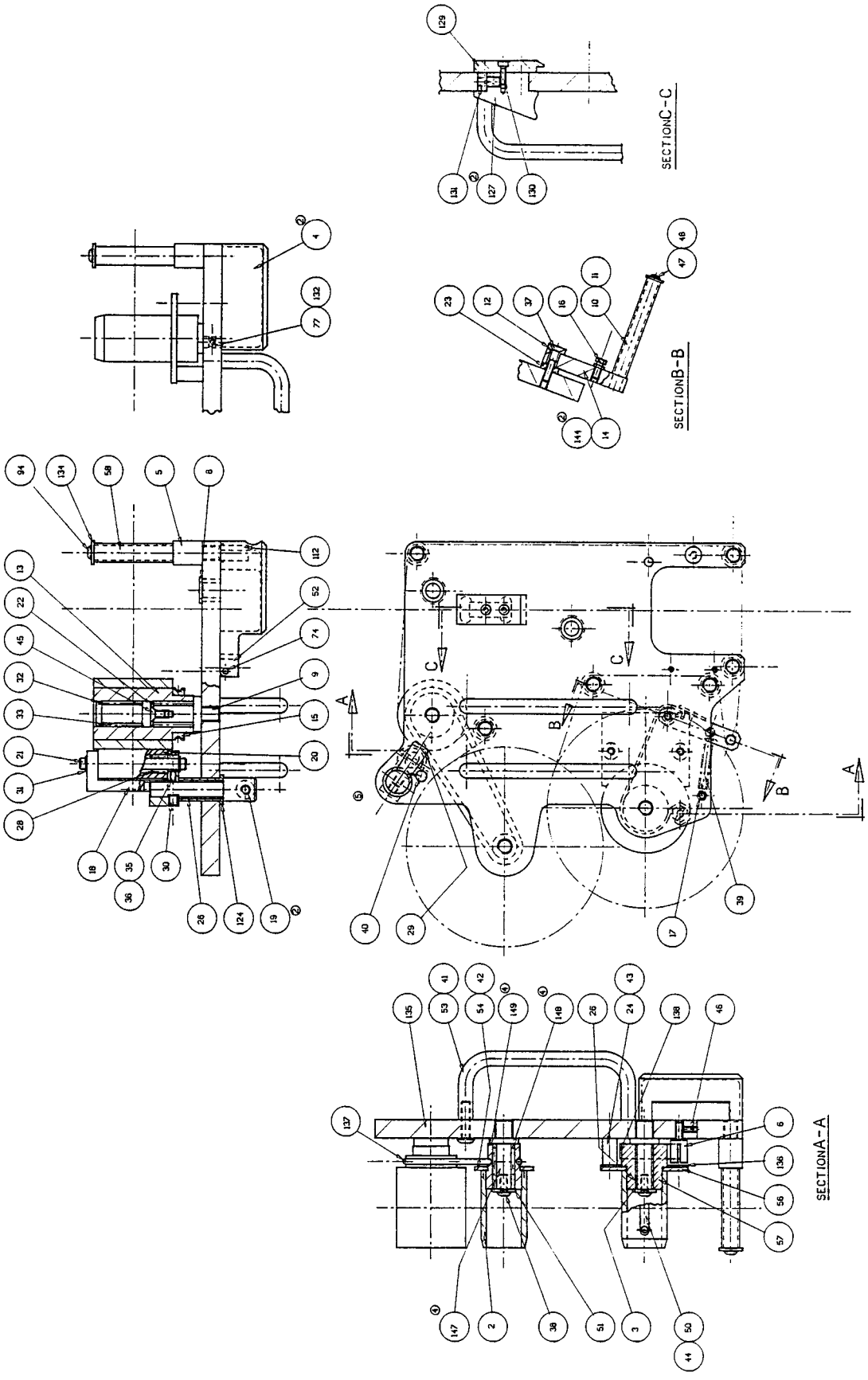
EUROCODE 150/180 MAGAZINE DETAILS



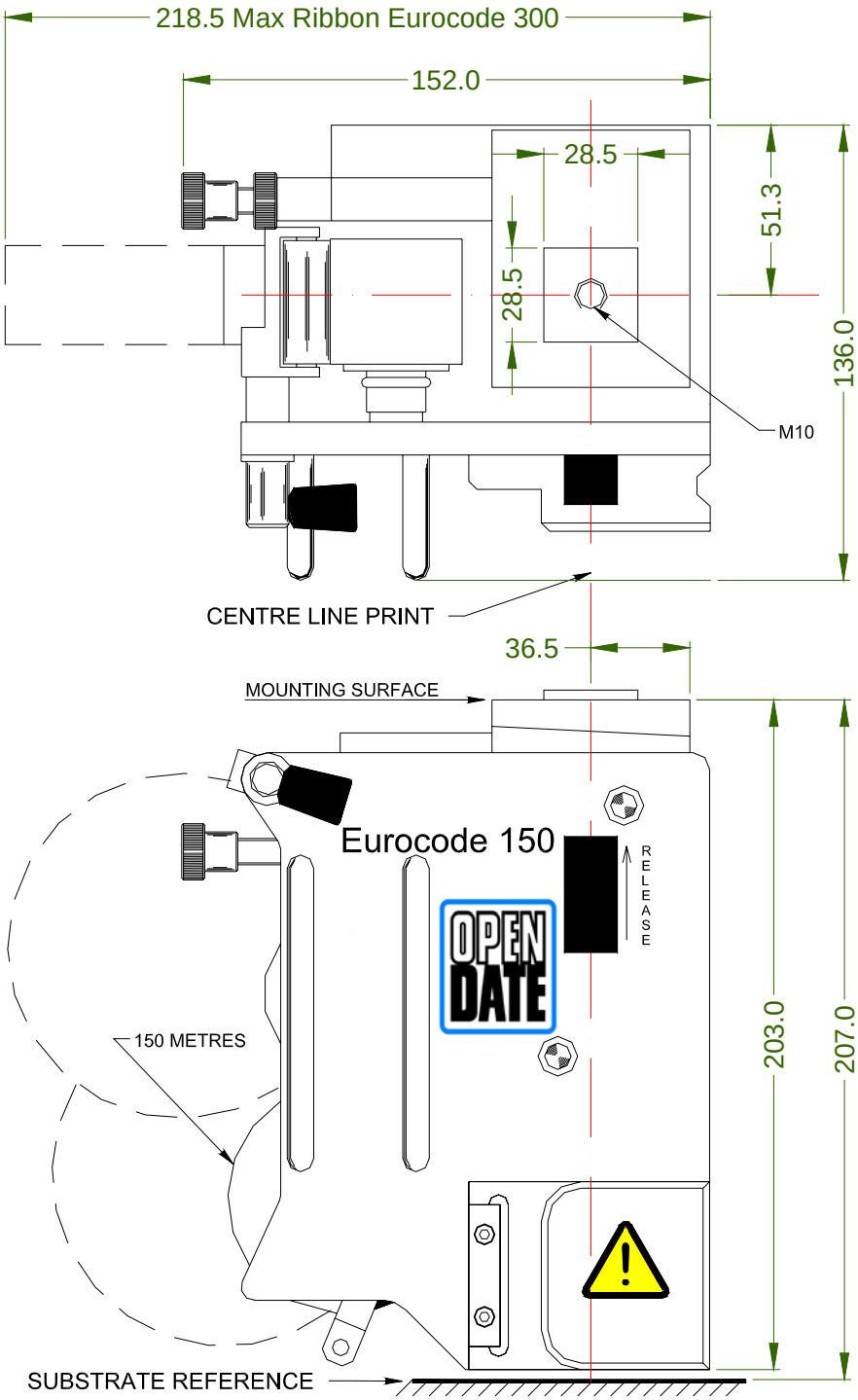
EUROCODE BODY DETAILS



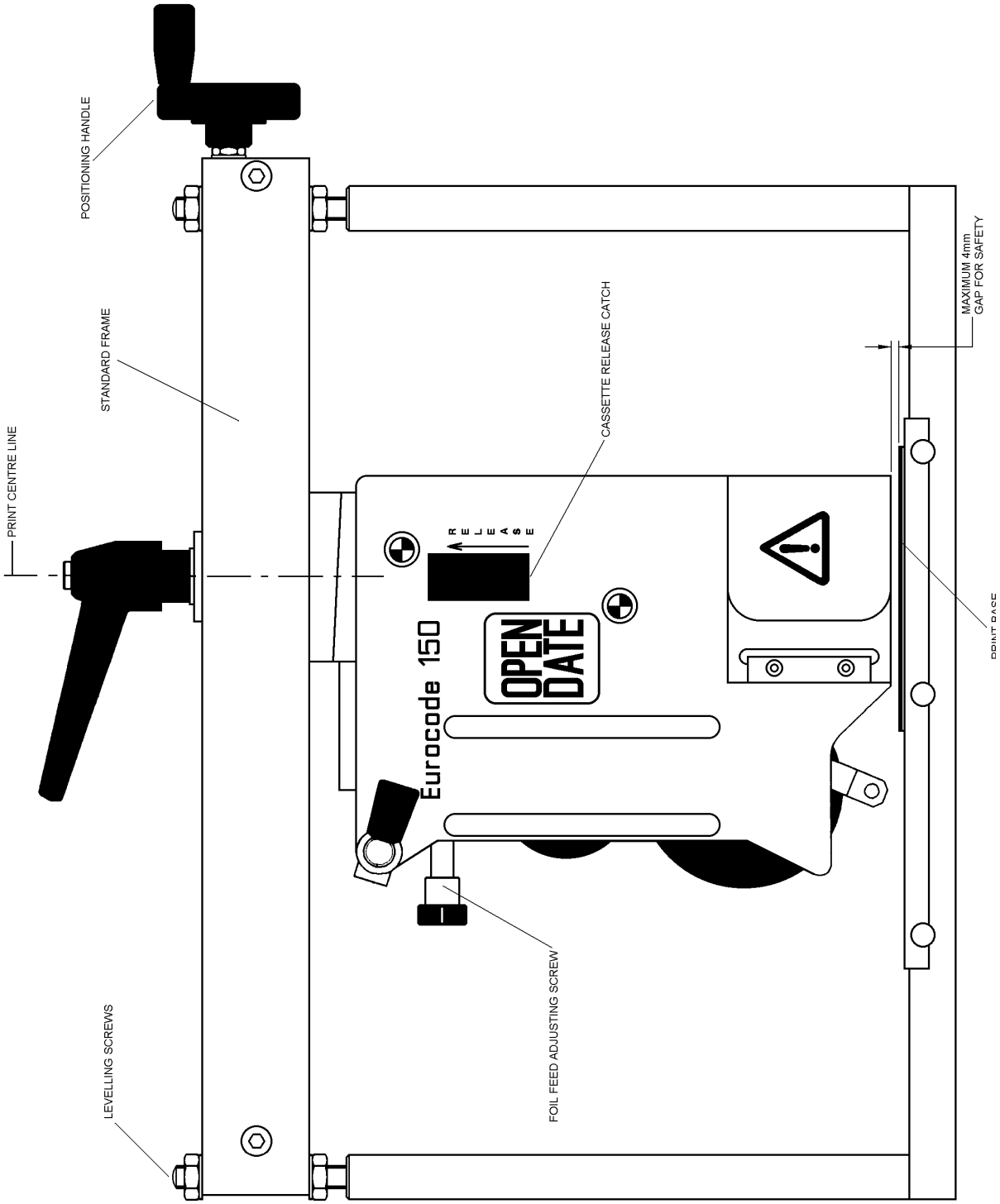
EUROCODE 300 MAGAZINE DETAILS (Iss. 5)



EUROCODE DIMENSIONS



EUROCODE FRAME INSTALLATION



AIRBORNE NOISE EMISSIONS

Comprehensive tests have been carried out with the Eurocode 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	69
300	72
400	75

Specifications for Digi50 Controller

Supply Voltage

Nominal 230v AC, plus or minus 10% tolerance (207 – 253). 50 or 60 Hertz.

Nominal 115v AC, plus or minus 5% tolerance (109 – 121). 50 or 60 Hertz.

Heater

Maximum 4 Heaters. (240 Volt 250 Watt)

Thermistor (Standard)

Model No. G55W (Part No. THE 500502)

Output Relay Contacts

Fault Relay:- Rated at 24V DC, 1 amp current.
Print Relay:- Rated at 24V DC, 1 amp current.
(both relays utilise common, normally open or normally closed contacts)

Input Print Signals

Voltage Free contacts. (relay or plc etc.)

Voltage 10 – 30 Volts AC or DC (polarity unimportant)

Microproccessor

PIC Micro-Processor.

Controlled by a specific designed membrane panel with inbuilt switches etc.
The temperature display, is seen through a translucent red panel on the membrane.

Solenoid Valve Output

24 Volt DC, 80mA current normally.

(Part No's VAL 400017 or VAL 400018 or VAL 400021)

A maximum of 2 Solenoid Valves (Opendate Supplied) can be driven by the Controller.

(Maximum current available 200mA)

STANDARD WARRANTY TERMS AND CONDITIONS – 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. Hardened steel type.

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 problems or faults.

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.

OPEN DATE GROUP COMPANIES

FRANCE

OPEN DATE FRANCE
Z.I. D'Attichy
No.8, Voie Industrielle
60350 Attichy.

Local Tel:- 03 44 42 94 43
Local Fax:- 03 44 42 17 17

International Tel:- 0033 3 44.42.94.43
International Fax:- 0033 3 44.42.17.17

GERMANY

OPEN DATE GmbH
Mittlerer Stämmig 4
D - 97292 Üttingen

Local Tel:- 09369 9824 0
Local Fax:- 09369 9824 24

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International Fax:- 0049 9369 9824 24

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Springfield Road
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Local Tel:- 603 763 3444
Local Fax:- 603 763 4222

International Tel:- 001 603 763 3444
International Fax:- 001 603 763 4222

INTERNATIONAL AGENTS & DISTRIBUTORS

Please visit:

www.opendate.co.uk

for a list of international agents & distributors.