

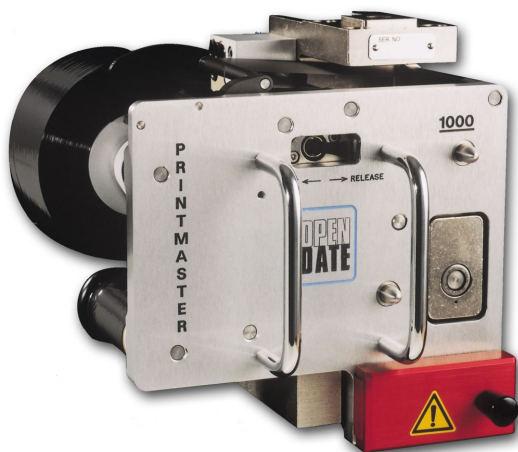


PRINTMASTER HOT FOIL PRINTER WITH DIGI-50 CONTROLLER

OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS
INSTALLATION DETAILS

Covering the following models;

**PRINTMASTER 400
PRINTMASTER 1000
PRINTMASTER PLUS**



Designed and manufactured by:

**OPEN DATE EQUIPMENT LIMITED
PUMA TRADE PARK
145 MORDEN ROAD
MITCHAM
SURREY, CR4 4DG.
UNITED KINGDOM.**

**Tel: +44 (0)20 8655-4999
Fax: +44 (0)20 8655-4990
Email: sales@opendate.co.uk
Web site: www.opendate.co.uk**

INDEX

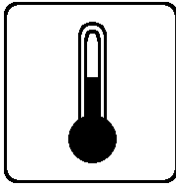
Declaration of Conformity.	3
Safety Instructions.	4
Operating Instructions.	
Digi-50 Electronic Controller	5
Electronic Control - Front Panel Layout	6
Electronic Control - Rear Panel Layout	7
Foil magazine Removal	8
Foil Threading	8
Re-fitting Foil Magazine	8
Type Holder Removal and Replacement	8
Foil Feed Adjustment	8
Printhead - Foil Threading Diagram.	8
Initial Setting.	9
Print Orientation	9
Temperature Adjustment	9
Print Dwell Timer Adjustment	9
Air Flow Controls	10
Interconnection Details - Electrical and Pneumatic	11
Setting Up Digi-50 Controller	12
Temperature Mode Settings	13
Dip Switch Settings	14 & 15
Controller Connection Details	16, 17, 18 & 19
Temperature Calibration	20
Temperature Chart	21
Fault Finding.	
System Faults	22
Alarm Faults	23
Thermistor Faults	24
Mechanical Faults	25
Print Quality Problems	25
Machine Serial No. Identification	26
Recommended Spares Kit	27
Foil Magazine Assembly Drawing	28
Foil Magazine Parts Lists	29 & 30
Body Assembly Drawing	31
Body Parts Lists	32 & 33
Printmaster Dimensions Datasheet.	34
Frame Installation Datasheet.	35
Airborne Noise Emissions.	36
Warranty	37
Open Date Group Companies, Agents & Distributors.	38

DECLARATION OF CONFORMITY

IMPORTANT SAFETY INSTRUCTIONS

- 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 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 in 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 70°C (158°F), Maximum 240°C (464°F).

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 $\pm 4^{\circ}\text{C}$ 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)

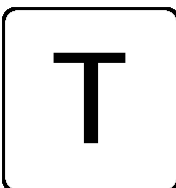


Print Switch

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).

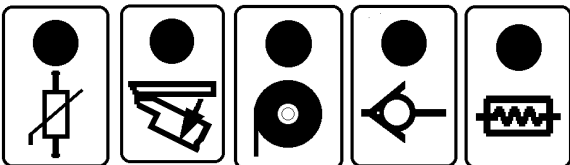
Note! The Print LED (green) is illuminated when switched for external triggering (automatic print cycle).



Test Button.

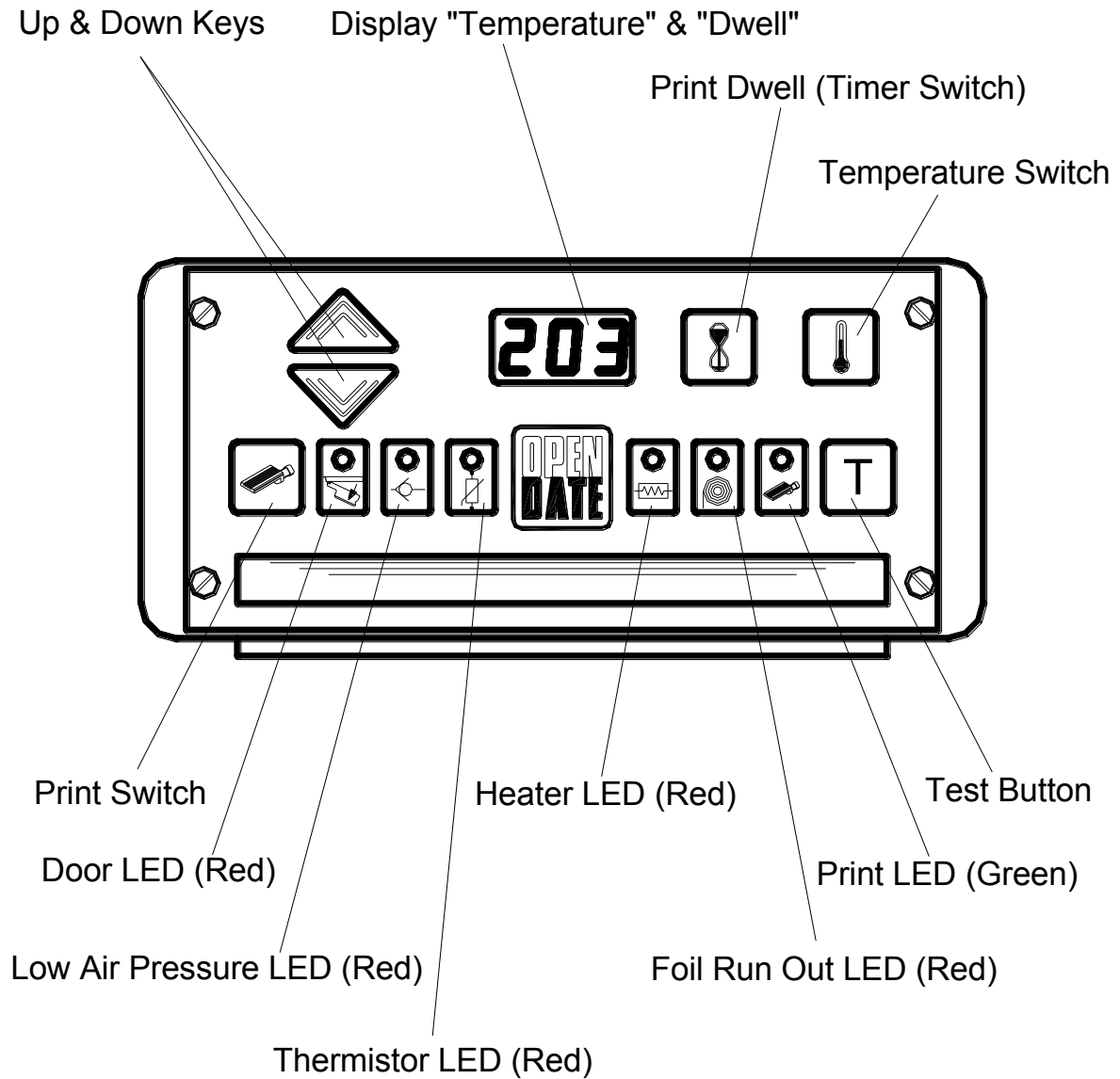
Manually operates the printer (will not operate whilst the Print LED is on).

Fault LEDs.



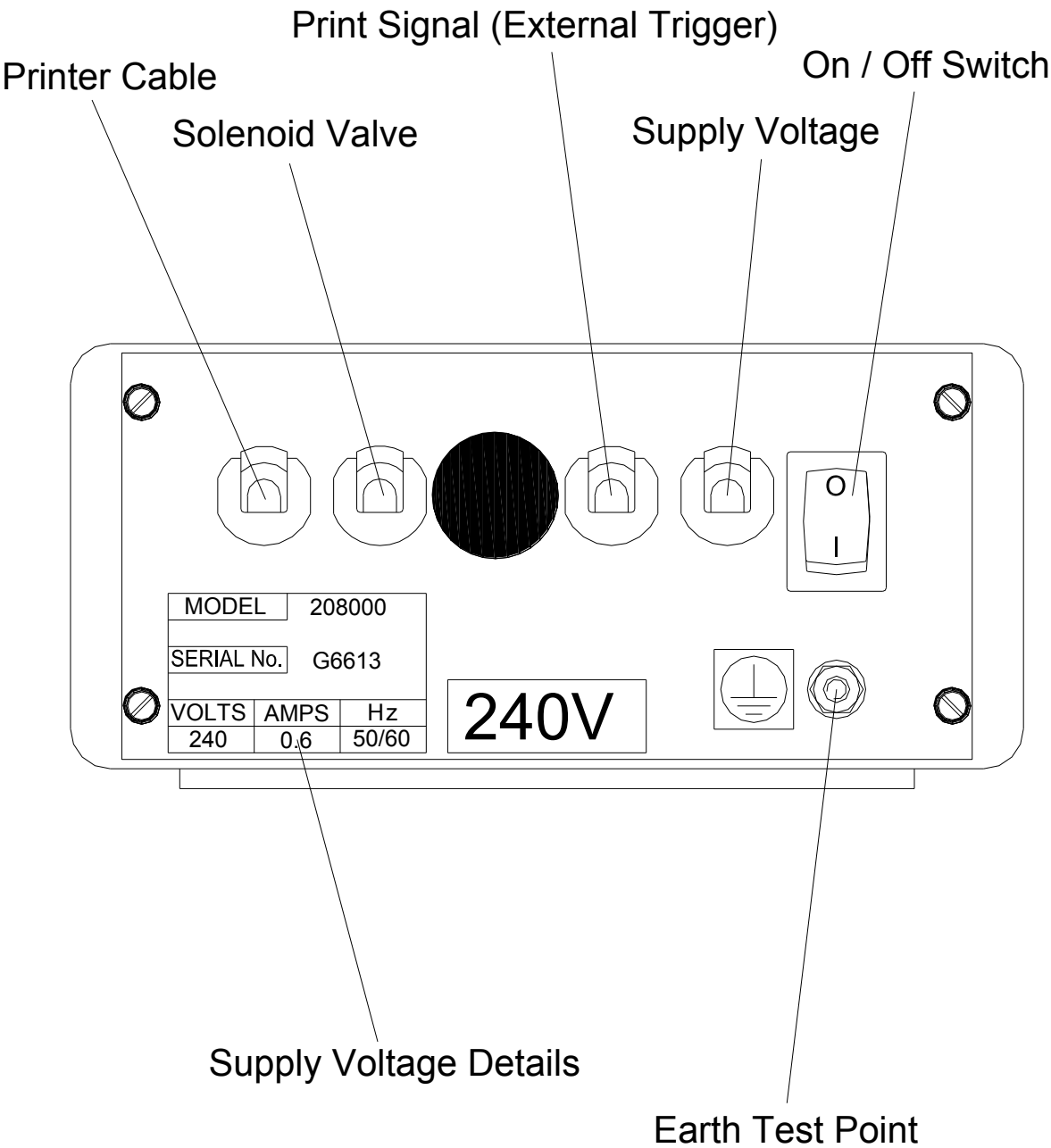
Refer to pages 22 & 23 for system faults.

Digi50 Control Unit Front Panel



Digi50 Control Unit Rear Panel

(Cables Excluded For Clarity)



OPERATING INSTRUCTIONS

MAGAZINE REMOVAL (refer to page 35)

To remove the foil magazine, switch the "LOCK/RELEASE" lever to "RELEASE", this disengages the air bolt and pinch drive and withdraw the magazine using the two handles. Turn off the **PRINT** switch to silence the audible alarm.

FOIL THREADING (see diagrams below)

1. Fit an empty foil core onto the rewind mandrel.
2. Remove label from a new roll of foil.
3. Fit new roll of foil onto take-off mandrel (note unwind direction as shown on threading diagram).
4. Thread foil around all rollers as shown on threading diagram.
5. Attach end of foil to empty core on rewind mandrel, gloss side facing outwards.
6. Wind foil on a few turn to track and tension it.

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.

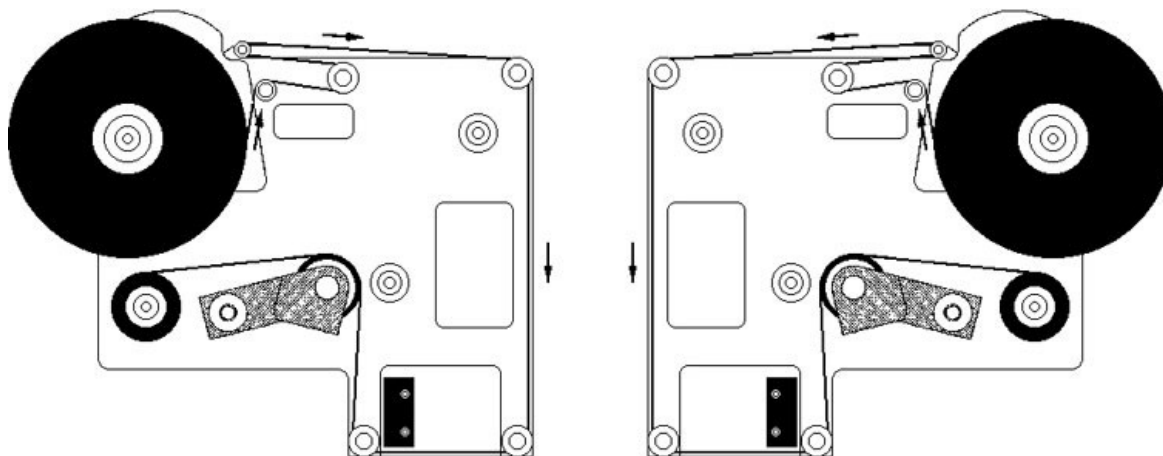
RE-FITTING FOIL MAGAZINE

Hold the magazine by the two handles, slide in onto the locating pins, push firmly home, switch the "LOCK/RELEASE" lever to "LOCK". Turn the **PRINT** switch on.

FOIL FEED ADJUSTING SCREW (refer to page 35)

This adjusts the amount of foil used per print and is located towards the rear of the printer body adjacent to the air pipe entry points. Winding 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 portion of used foil.

FOIL THREADING DIAGRAMS



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 125°C (257°F). 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 125°C. (257°F).
- 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.

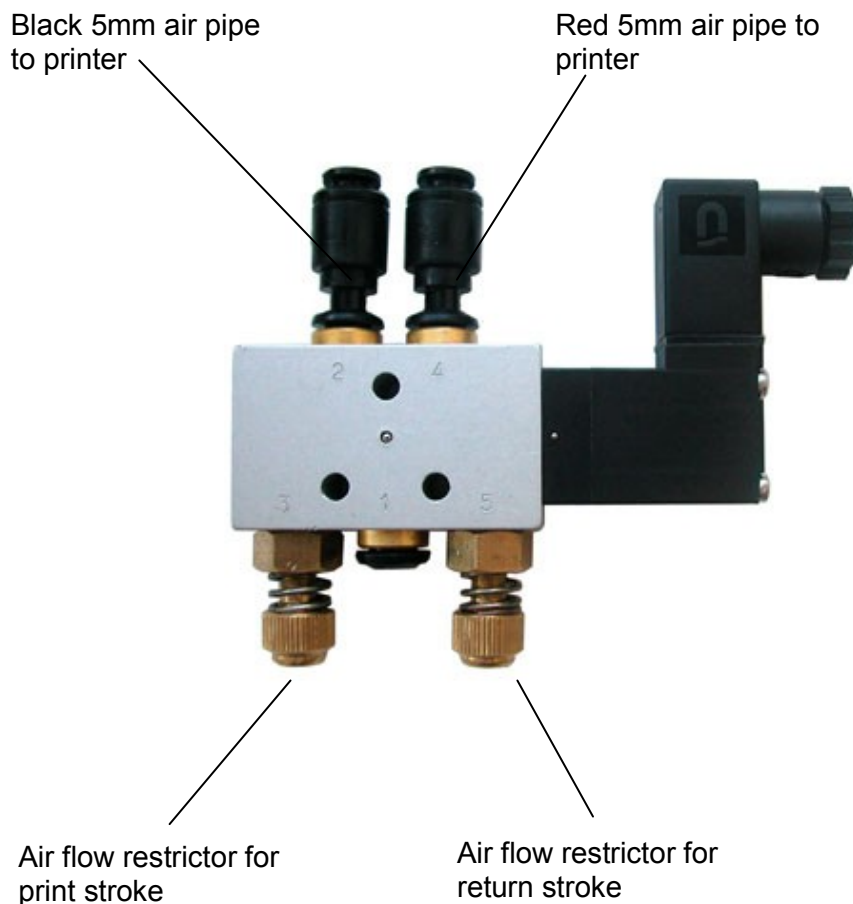
Increasing the exhaust airflow from the forward stroke of the print ram will increase the print pressure. Decreasing the exhaust airflow will reduce print pressure and the resulting print will be lighter.

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.

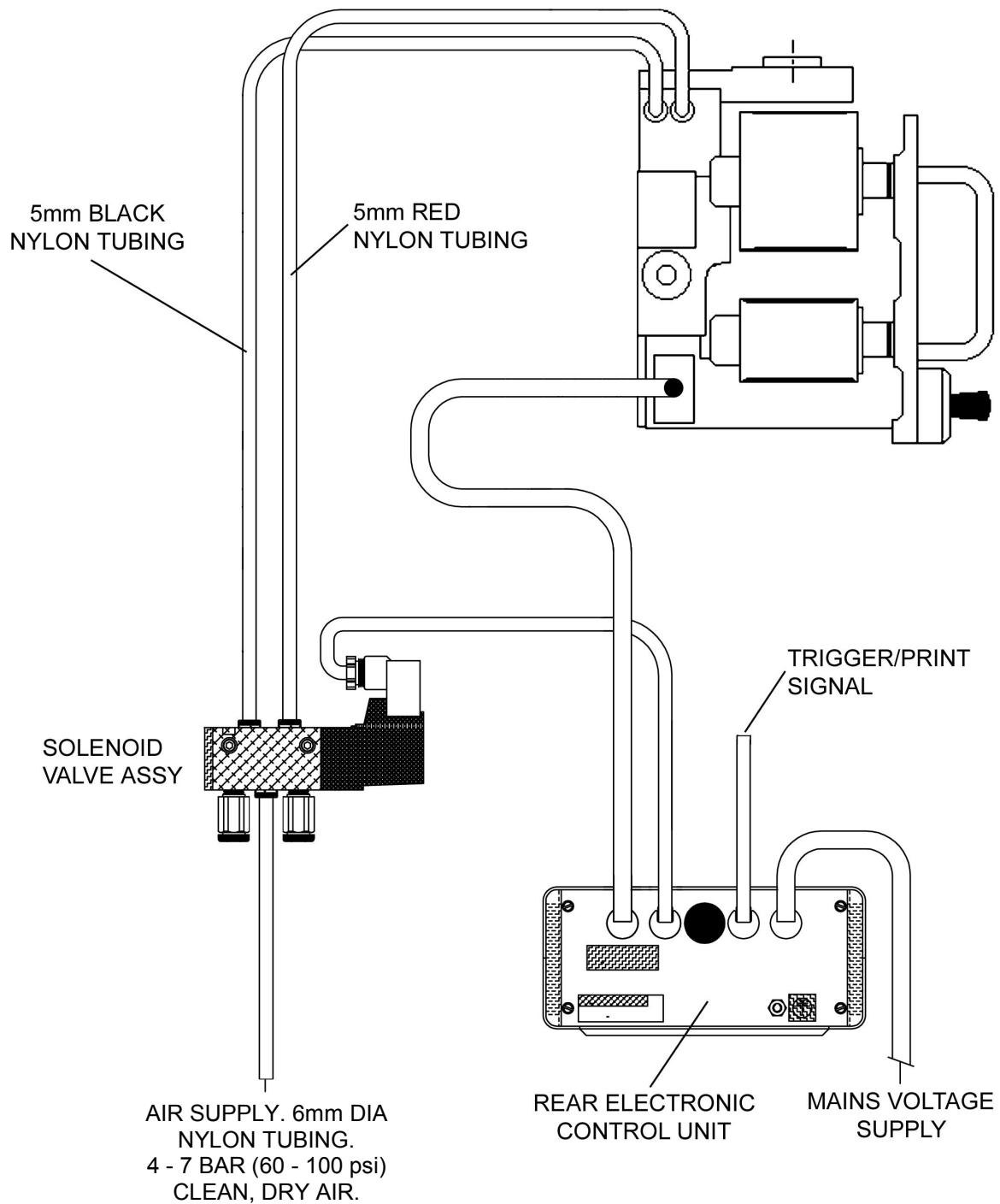
For higher speed operation, the exhaust airflow from both the forward and return strokes will have to be increased.

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

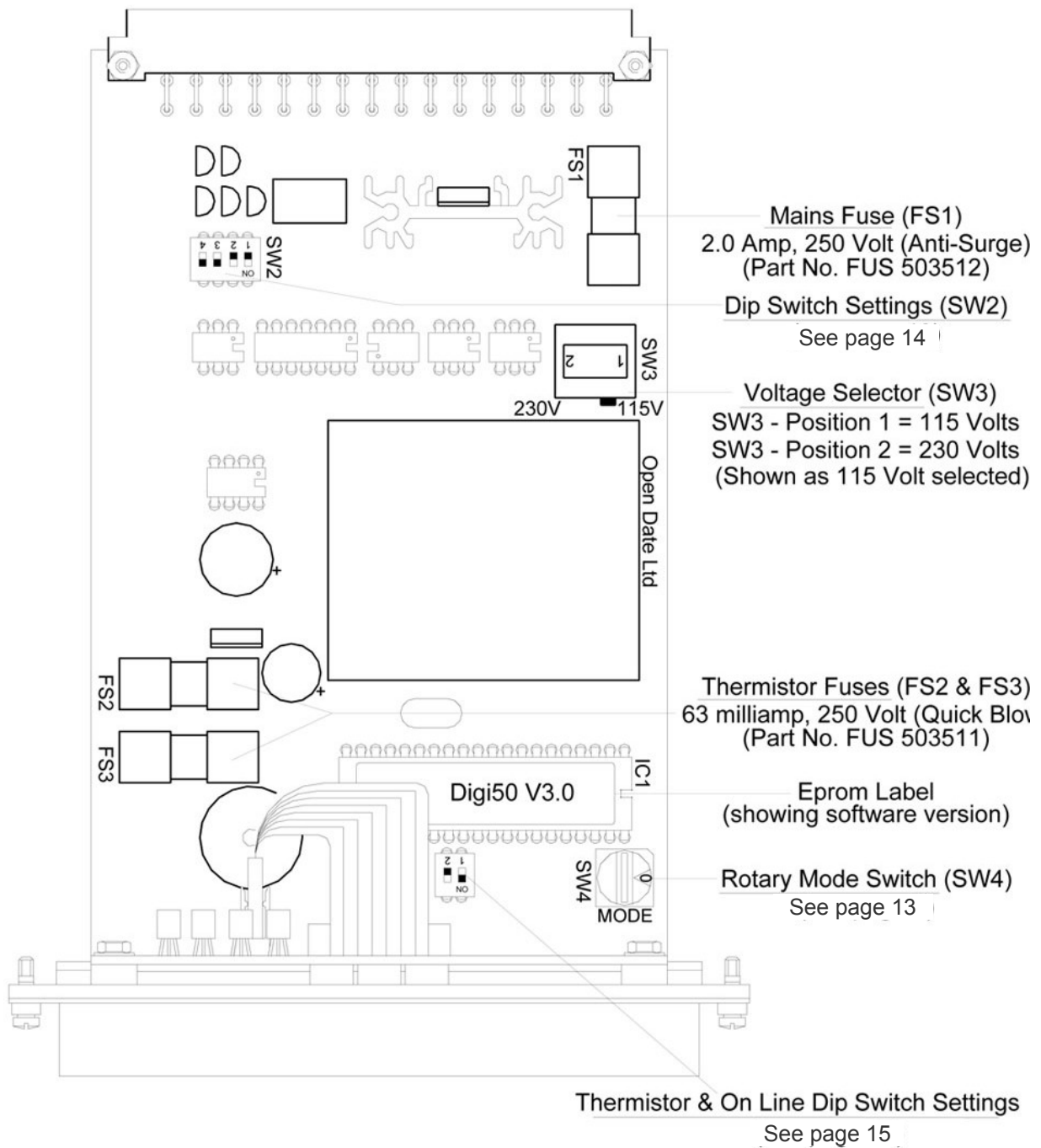
SOLENOID VALVE DETAILS



PRINTMASTER CONNECTION DETAILS **(R/H VERSION SHOWN)**



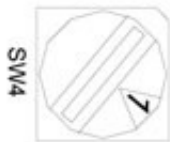
SETTING UP DIGI-50 CONTROLLER



DIGI-50 MODE SETTINGS FOR TEMPERATURE TOLERANCE RANGES

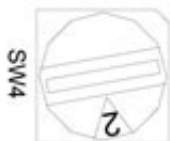
The Mode selector is a Rotary Switch located between the Front Panel and the Transformer.

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



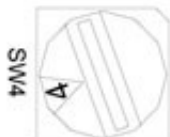
Temperature Range. -5% to +10% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 3



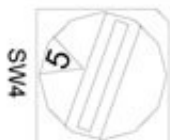
Temperature Range. -5% to +5% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

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

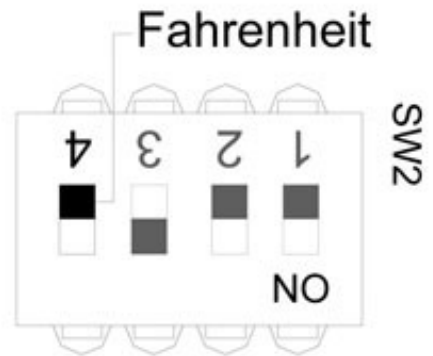
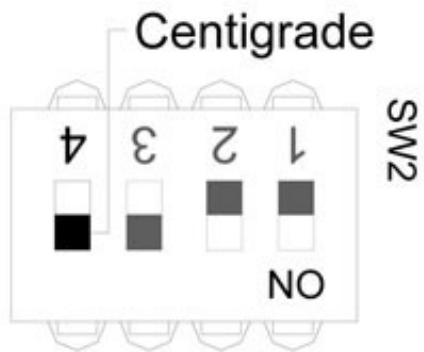


Temperature Range. -10% to +10% of the set point.
Printer operates with in the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

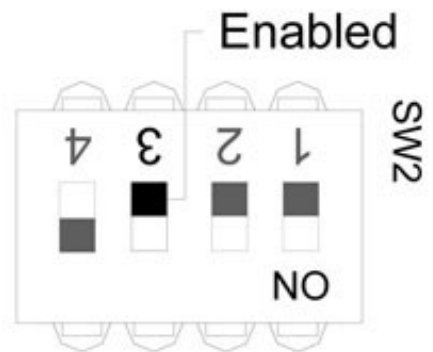
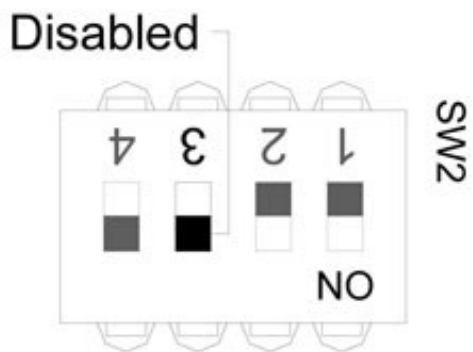
Modes 7, 8, 9 and 0 are the same as the default value. (Mode 1)

DIGI-50 DIP SWITCH SETTINGS

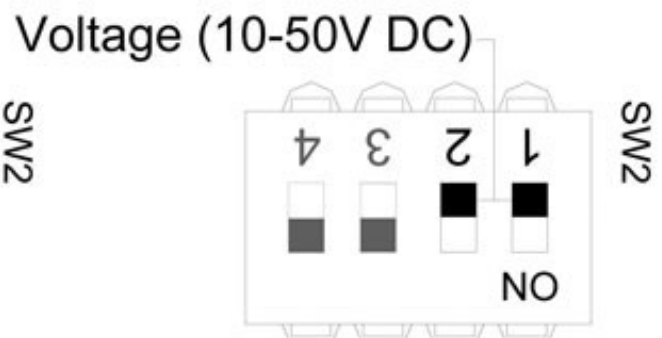
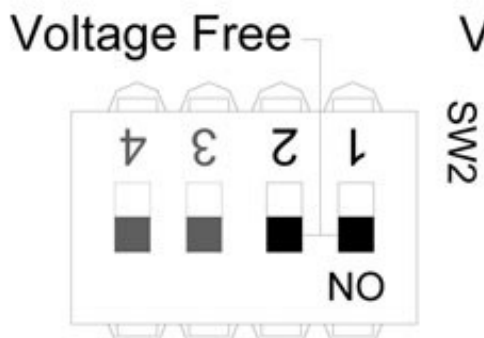
Temperature Range SW2 (No 4)



Low Air Configuration SW2 (No 3)

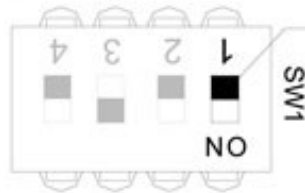


Print Trigger Selection SW2 (No 1 & 2)



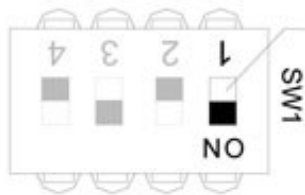
THERMISTOR & ON-LINE DIP SWITCH SETTINGS (SW1)

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.

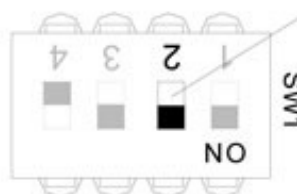


Set switch No. 1 to "ON"
Part No. THE 500502 (Optional)
Thermistor Type G55-Bead
White Connection wires.

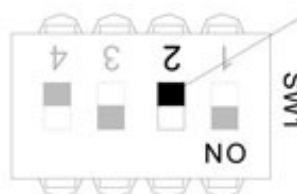
NOTE!

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)

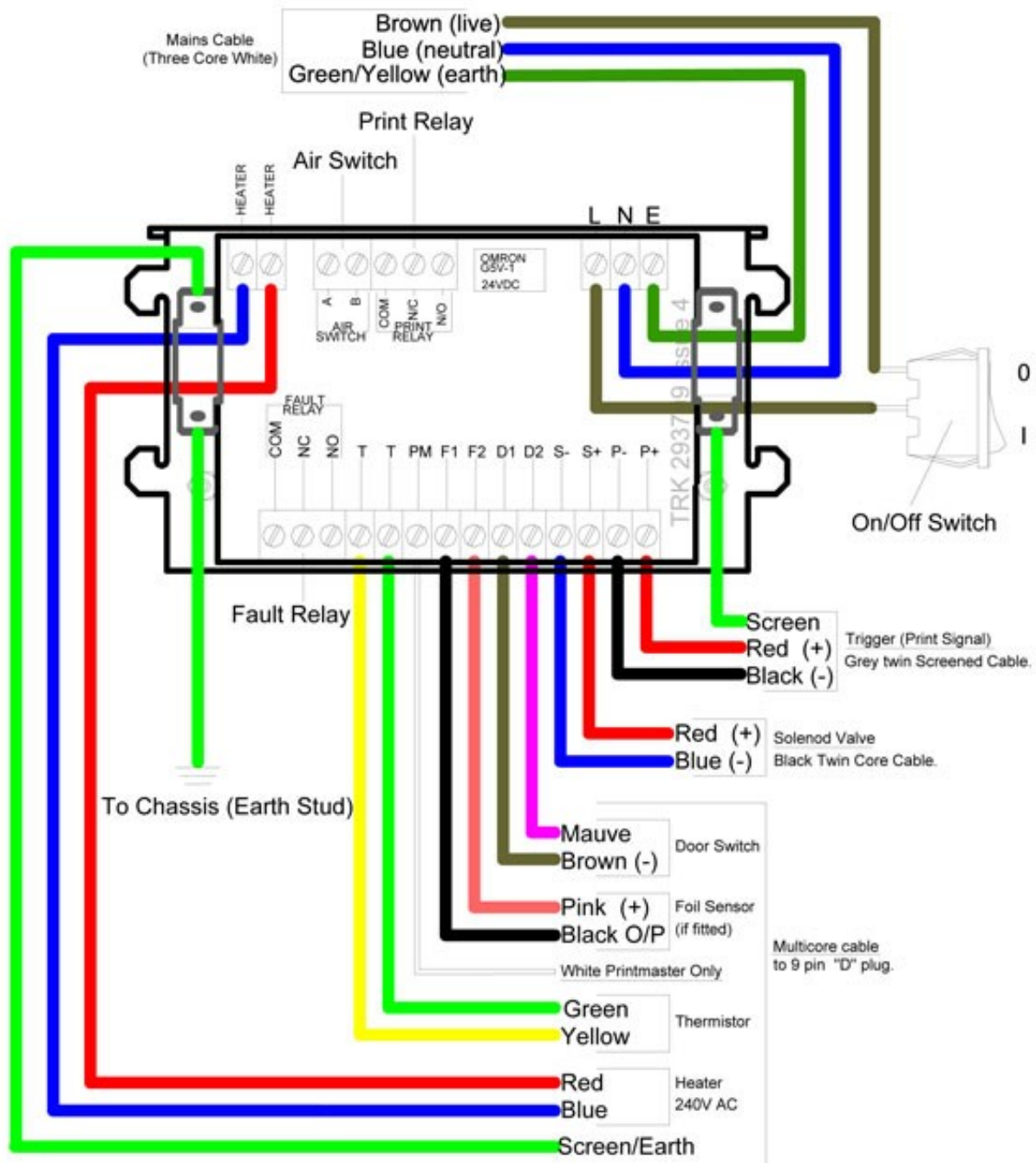


Set switch No. 2 to "OFF"
The printer automatically, puts the printer "OFF LINE" .
Correct the fault, and press the "PRINT" Switch.

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 20 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, +27v DC. (see note below)	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

NOTE! Units supplied before October 2005 had only 14V DC supply for the foil sensor, if in doubt contact your supplier.

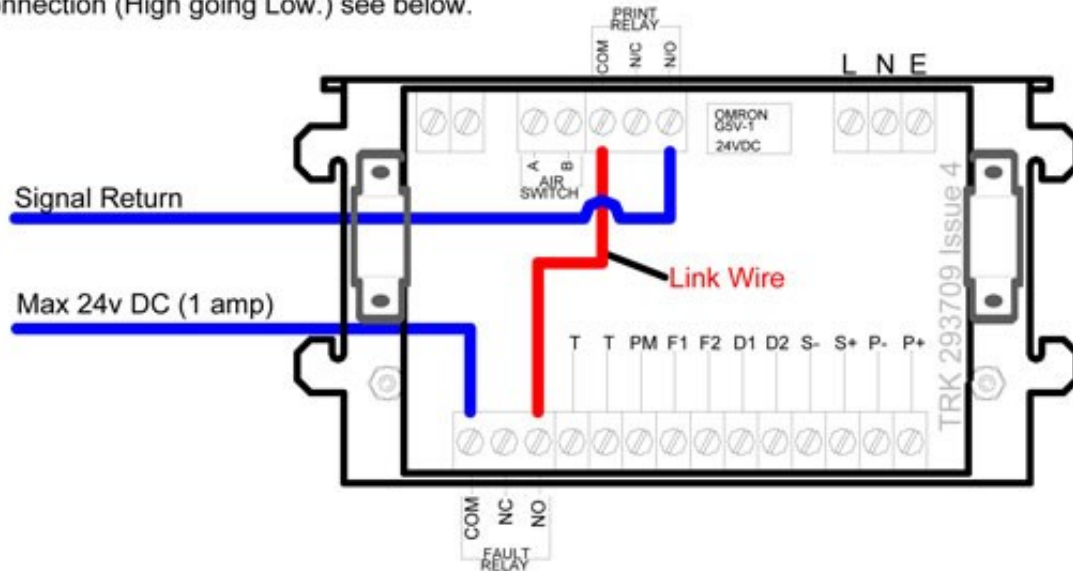
Mains Cable - Three core white.

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

DIGI-50 FAULT & PRINT RELAY CONNECTIONS

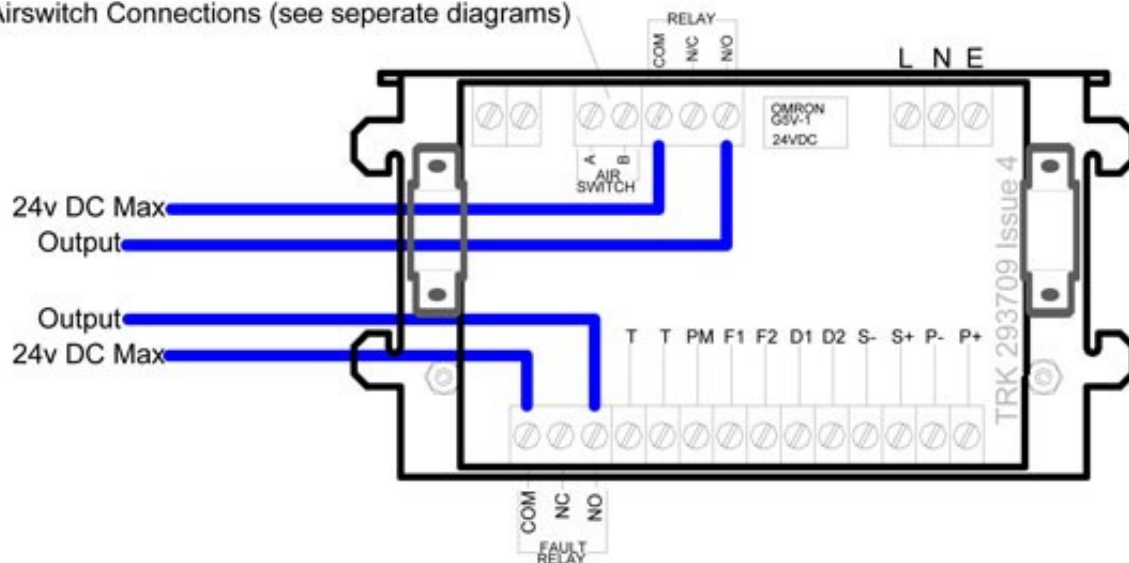
Note

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.



Digi50 Individual Relays & Connections

Airswitch Connections (see separate diagrams)



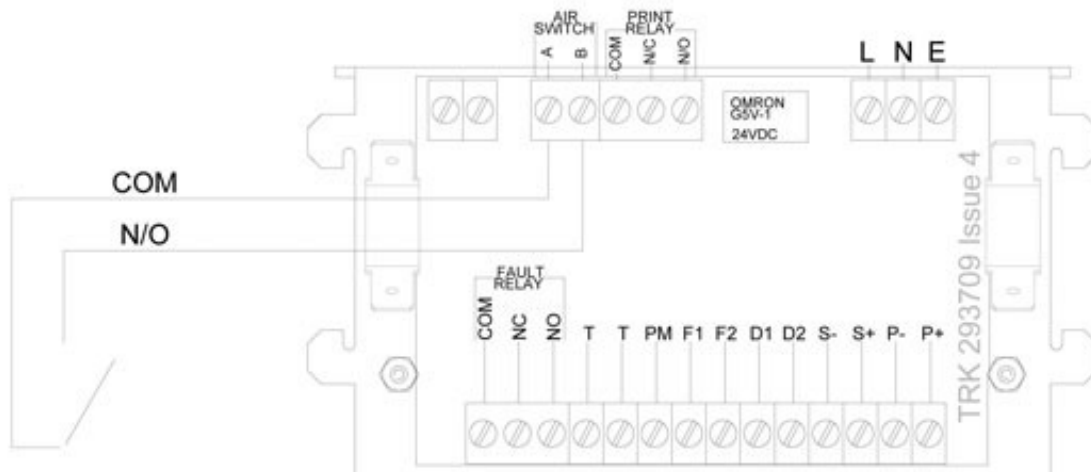
Print Relay:- Rated 24v DC, 1 amp max current

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)



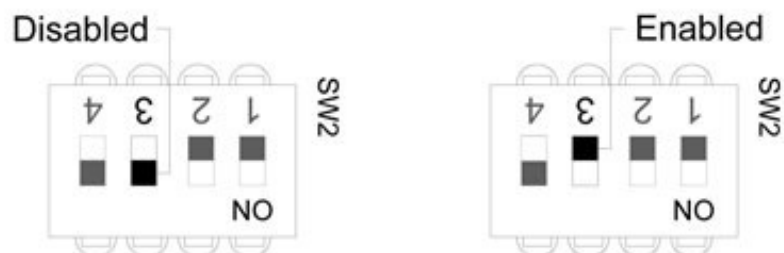
Air Switch Not Supplied

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)



DIGI-50 CALIBRATION METHOD

Note: Calibration Temperature Range = 70°C to 220°C (158°F to 428°F)

The control unit is factory calibrated at 130°C, 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 70°C to 180°C (158°F to 356°F), 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 130°C or 266°F.

Leave on for 10 to 15 minutes, allowing the temperature to stabilise.

Measure the temperature at the type face using a temperature probe.

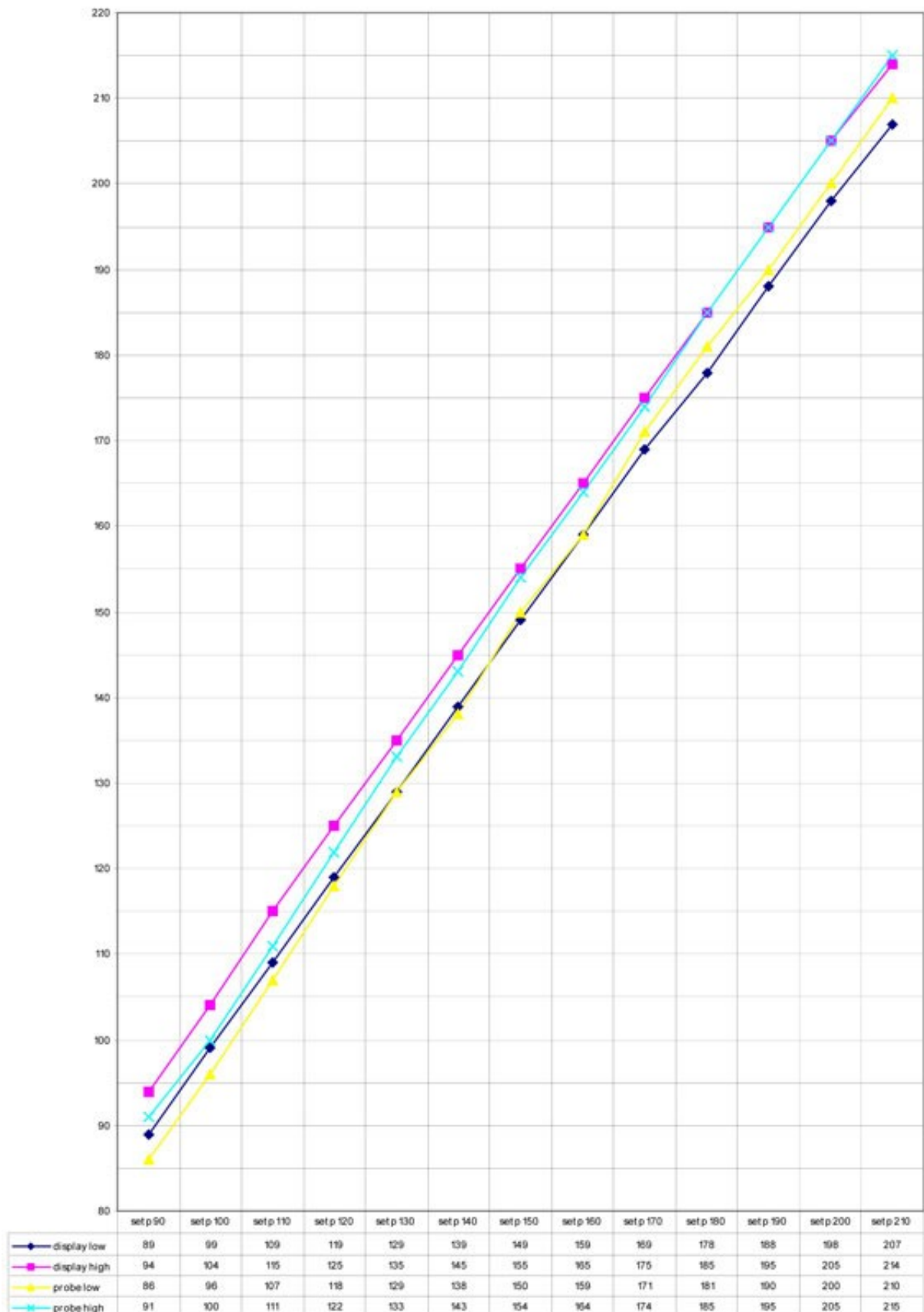
Allow the temperature probe to stabilise before noting the reading.

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.

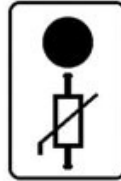
STATIC TEMPERATURE RESULTS CALIBRATED AT 130°C



DIGI-50 SYSTEM FAULTS

Thermistor

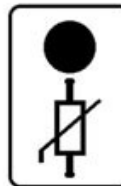
Thermistor short circuit; the LED is on and digital display reads similar to, or the same as that shown (the figures may be different depend upon calibration values). The heater is switched off. Internal bleeper is sounding.



2.7.1

Thermistor

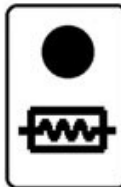
Thermistor open circuit, the LED is on and the display reads similar to or the same as that shown (the figures may change). The heater is switched off. Internal bleeper is sounding.



.. 5

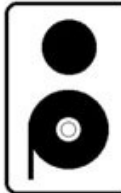
Heater

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)

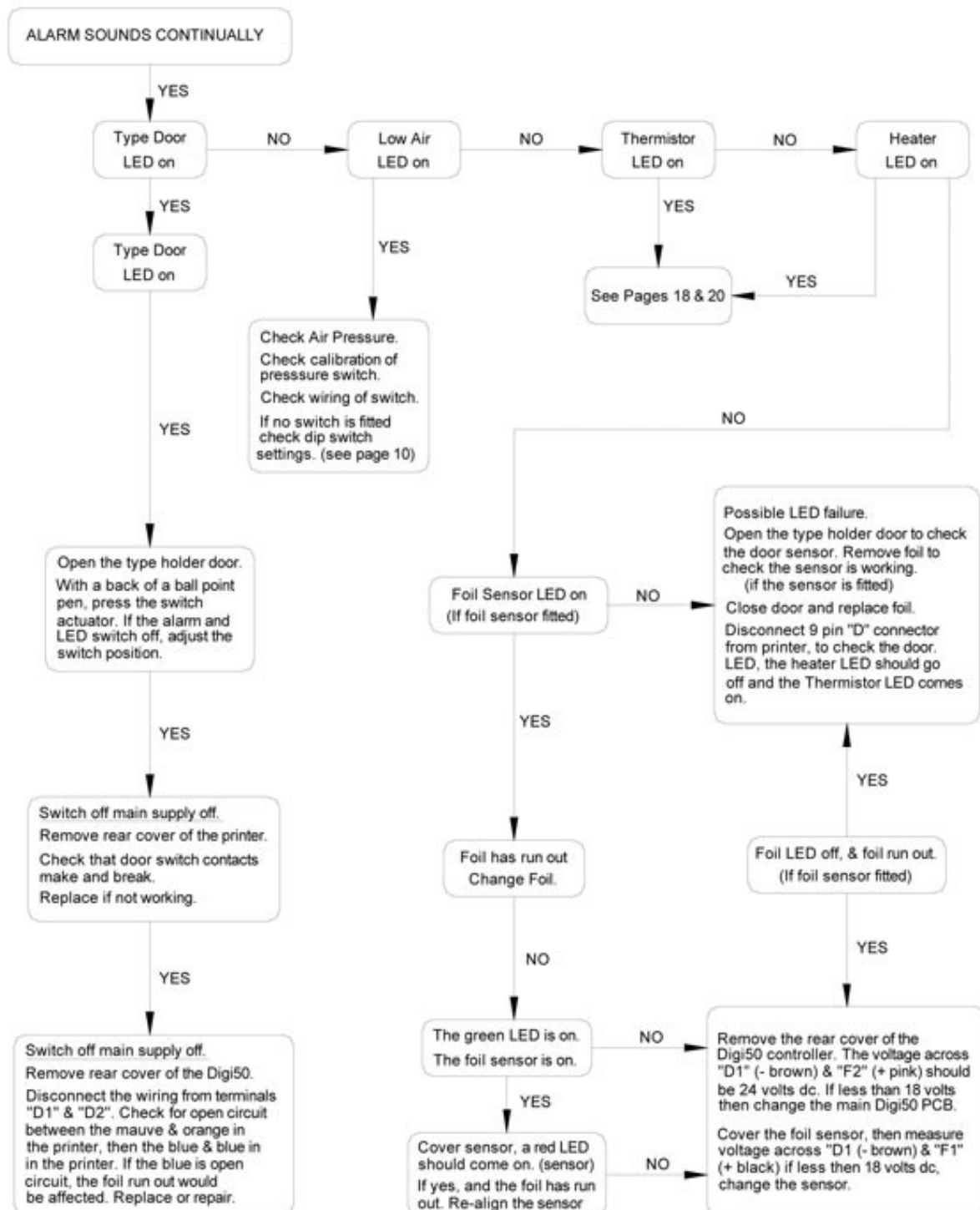
When air pressure is low, the LED is on. External Pressure switch required. See separate wiring detail. (see page 19) Internal Bleeper is sounding. Set Dip Switch to enable this function (see page 14).



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

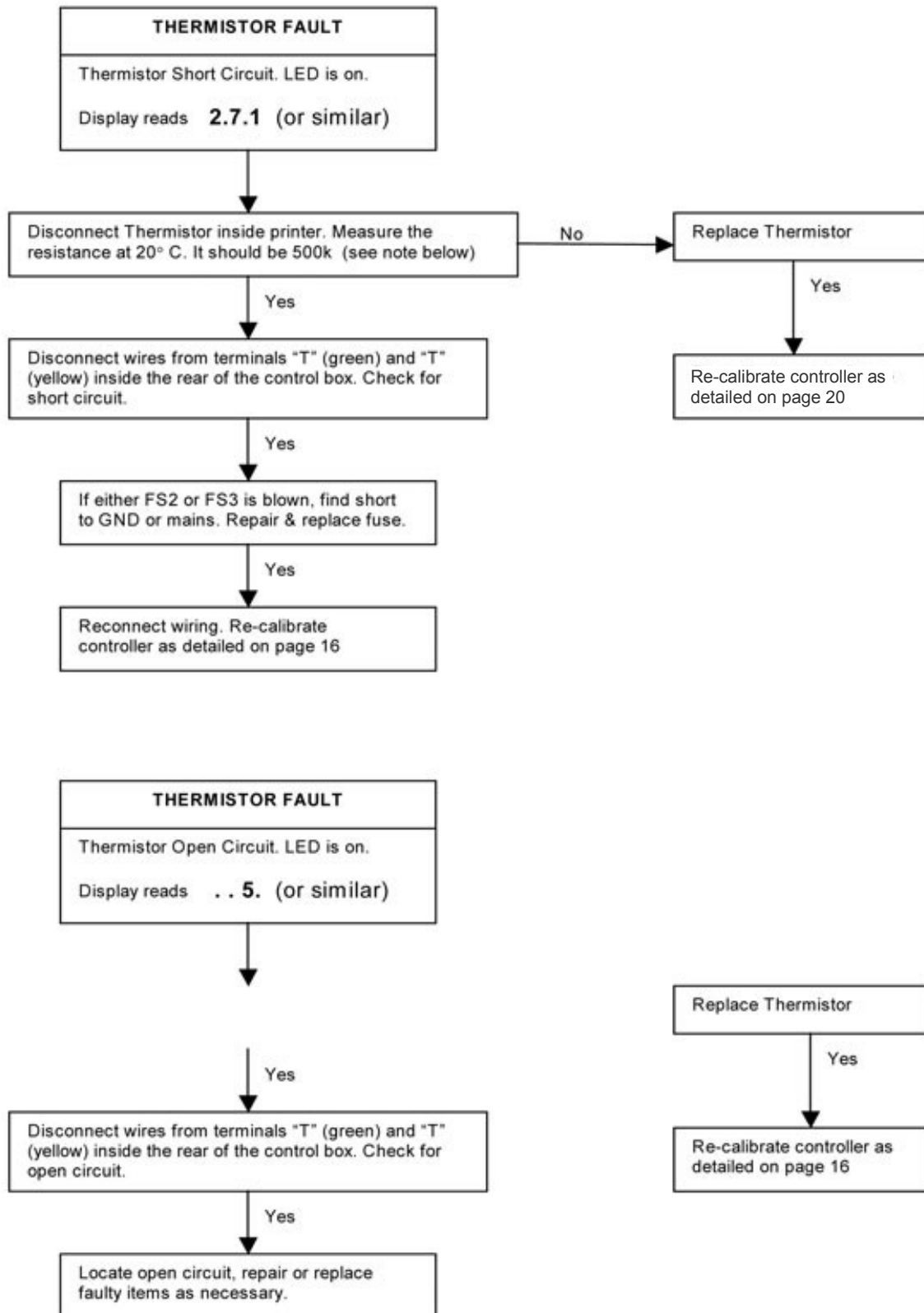
DIGI-50 ALARM SYSTEM FAULTS

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



THERMISTOR FAULTS

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



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

MECHANICAL FAULTS

FAULT	POSSIBLE CAUSE
Insufficient foil pull.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • No air. • Air pipe damaged.
Printer operates but does not print, i.e. impression but no print.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Bent spindle on foil magazine. • Brake arm loose. • Pinch roller misaligned with drive roller.
Foil rewind is loose.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Insufficient air pressure. • Faulty valve. • Incorrect flow restrictor settings.

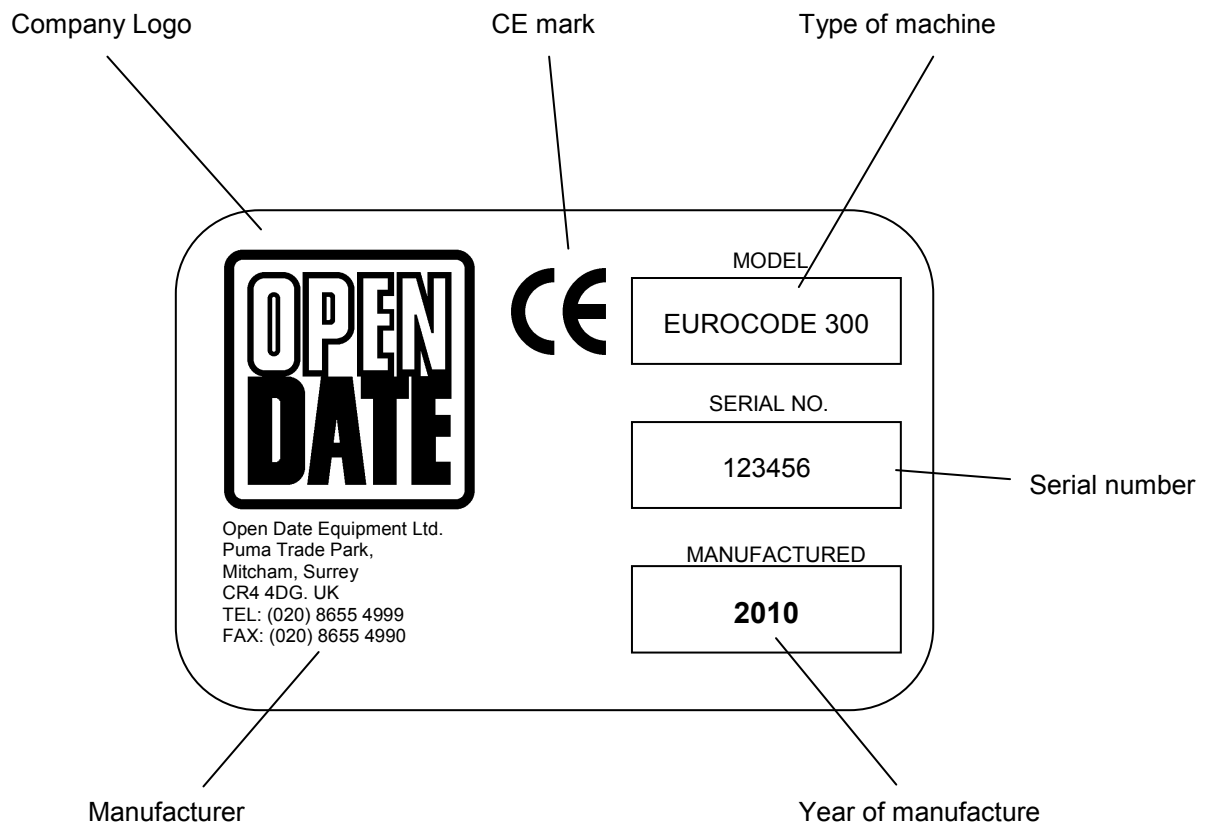
PRINT QUALITY DETERIORATION

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.



RECOMMENDED SPARES LIST

Covering R/H & L/H Versions of:

PRINTMASTER 400
PRINTMASTER 1000
PRINTMASTER PLUS

MECHANICAL

STOCK REF

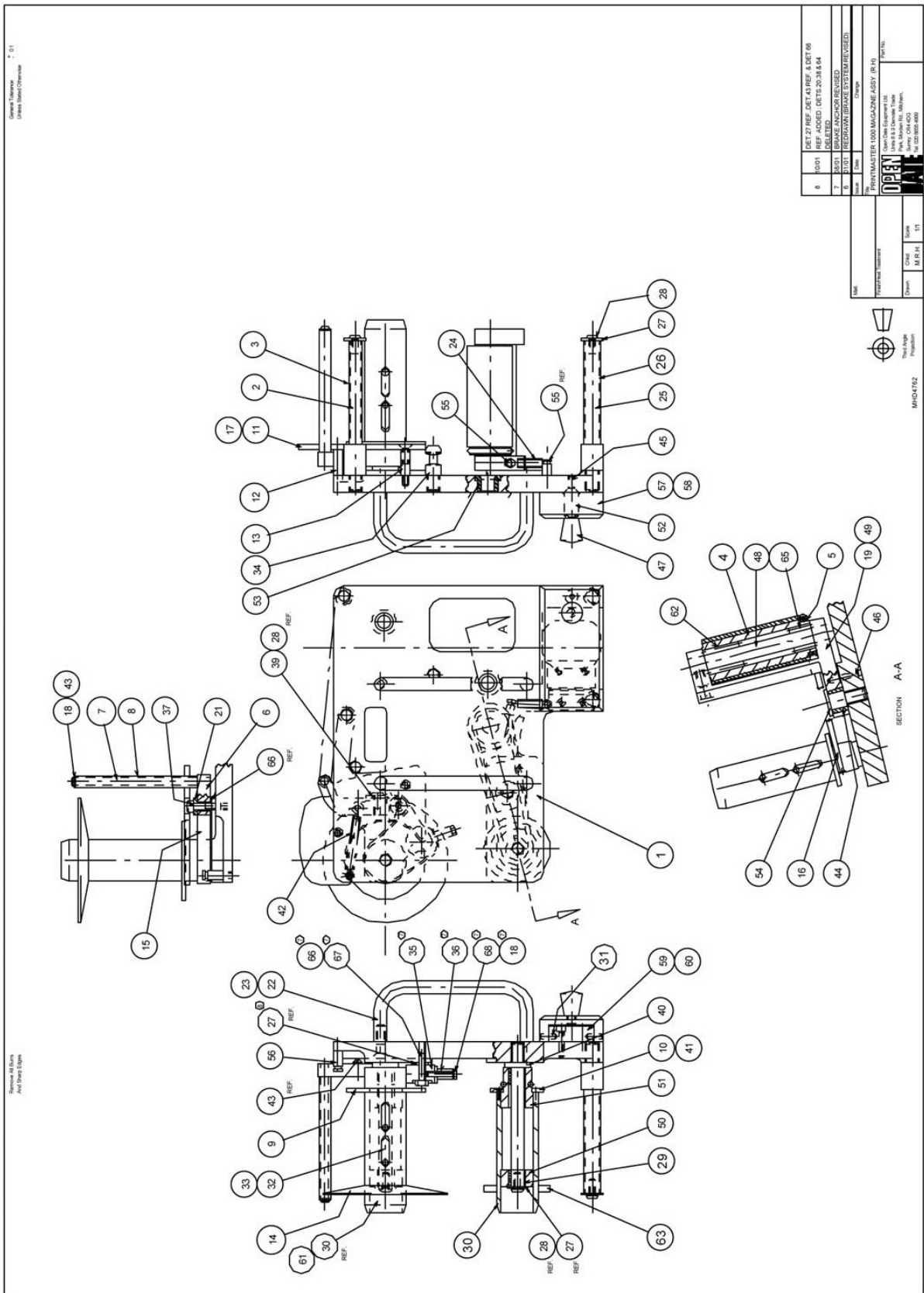
1.	Spring Set (PM1000 & Plus)	SPR129505
	Spring Set (PM400)	SPR129502
2.	Drive Belt (PM1000 & Plus & "S")	DRI121014
	Drive Belt (PM400)	DRI120047
3.	Grey Self Adhesive Print Base 300 x 450mm sheet	SABASE
or 4.	White Silicone Rubber Print Base 300 x 300 x 3mm thick sheet	SRBASE
5.	Rubber Drive Roller (Body)	DRI120019
6.	Rubber Pinch Roller (R/H printer)	ROL129210
	Rubber Pinch Roller (L/H printer)	ROL129211
7.	Brake Strap	BRA120088
8.	Fork End Roller Assembly	FOR129506

ELECTRICAL

1.	Cartridge Heater 240v	HEA501506
2.	Thermistor Probe	THE500522
3.	End of Foil Detector Card	ALA129510
4.	Proximity Switch for Door	SWI395003
5.	Plug-In Control Card (240v)	CPC293504
6.	Solenoid Valve Assembly	VAL400021
7.	Pack of Fuses (5)	FUS393504

Note. The stock reference for the plug-in 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.

PRINTMASTER 1000 MAGAZINE ASSEMBLY



PRINTMASTER 1000 FOIL MAGAZINE PARTS LIST (1 of 2)

When ordering spare parts please use the Stock Reference.

Item numbers refer to those on assembly drawing MHD4762 issue 8 (see page 28).

List refers to machines from serial number 249101 onwards.

	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>STOCK REF.</u>	<u>QTY</u>	<u>NOTES</u>
	1	Magazine Plate	N/A	1	
	2	Foil Spindle	SPI121002	1	
	3	Foil Roller	ROL121003	1	
	4/5	Pinch Roller Assembly	ROL129210	1	For R/H printer only.
or		Pinch Roller Assembly	ROL129211	1	For L/H printer only.
or		Pinch Roller Assembly	ROL129222	1	Part assembled. Suitable for either hand.
	6	Dancing Arm	ARM120086	1	
	7	Dancing Bar	DAN120037	1	
	8	Dance Arm Roller	ROL121007	1	
	9	Brake Hub Back Disc	N/A	1	Part of item 30.
	10	Rewind Hub Back Disc	DIS121009	1	Part of item 30.
	11	Foil Guide	GUI121010	1	For R/H printer only.
or		Foil Guide	GUI121503	1	For L/H printer only.
	12	Foil Guide Support	SUP121011	1	
	13	Foil Guide Support	SUP121012	1	
	14	Reel Clamp	CLA121013	1	
	15	Brake Strap	BRA120088	1	
	16	Drive Belt	DRI121014	1	
	17	Countersunk Screw	SCRM4CSS12	2	M4 x 12.
	18	Plain Washer	WASM3F	3	M3.
	19	Pinch Roller Bracket Assy	BRA129208	1	For R/H printer only. Includes items 44 & 56.
or		Pinch Roller Bracket Assy	BRA129209	1	For L/H printer only. Includes items 44 & 56.
	20				
	21	Pivot Bush	BUS120032	1	
	22	Magazine Handle	HAN120079	2	
	23	Countersunk Screw	SCRM5CSS20	4	M5 x 20.
	24	Spring	SPR530008	1	
	25	Foil Spindle	SPI120033	4	
	26	Foil Roller	ROL120034	4	
	27	Washer	WAS120035	8	
	28	Button Head Screw	SCRM4BH508	8	M4 x 8.
	29	Bearing	BEA520003	4	Part of item 30.
	30	Take-Off Hub Assy	HUB125114	1	Includes items 9, 29, 32, 33, 50 & 61.
or		Rewind Hub Assy	HUB125118	1	Includes items 10, 29, 32, 33, 41, 50 & 51.
	31	Dowel		2	3 dia x 10.
	32	Spring Clip	SPR530001	8	Part of Sprint Set. Part of item 30.
	33	Pan Head Screw	SCR2-56PHS1/8	8	No. 2-56 UNC x 1/8".
	34	Pull Stud	PUL120040	1	
	35	Anchor	ANC120087	1	
	36	Brake Tension Sleeve	SLE751036	1	
	37	Cap Head Screw	SCRM4SCS20	1	M4 x 20.
	38				
	39	Brake Strap Clamp	CLA620041	1	
	40	Hub Spindle	SPI120044	2	
	41	Pan Head Screw	SCRM2PHS06	2	M2 x 6.
	42	Brake Spring	SPR530018	1	
	43	Button Head Screw	SCRM3BHS06	2	M3 x 6.
	44	Bush	BEA520004	1	Part of item 19.
	45	Countersunk Screw	SCRM4CSS08	1	M4 x 8.
	46	Roll Pin		1	1/8" dia x 3/4"
	47	Door Handle	HAN530502	1	Part of item 57.
	48	Pinch Roller Shaft	SHA120050	1	
	49	Grub Screw	SCRM5SSS10	1	M5 x 10.
	50	Hub Boss	N/A	2	Part of item 30.
	51	Drive Boss	N/A	1	Part of item 30.
	52	Door Magnet	MAG531001	1	Part of item 57.

PRINTMASTER 1000 FOIL MAGAZINE PARTS LIST (2 of 2)

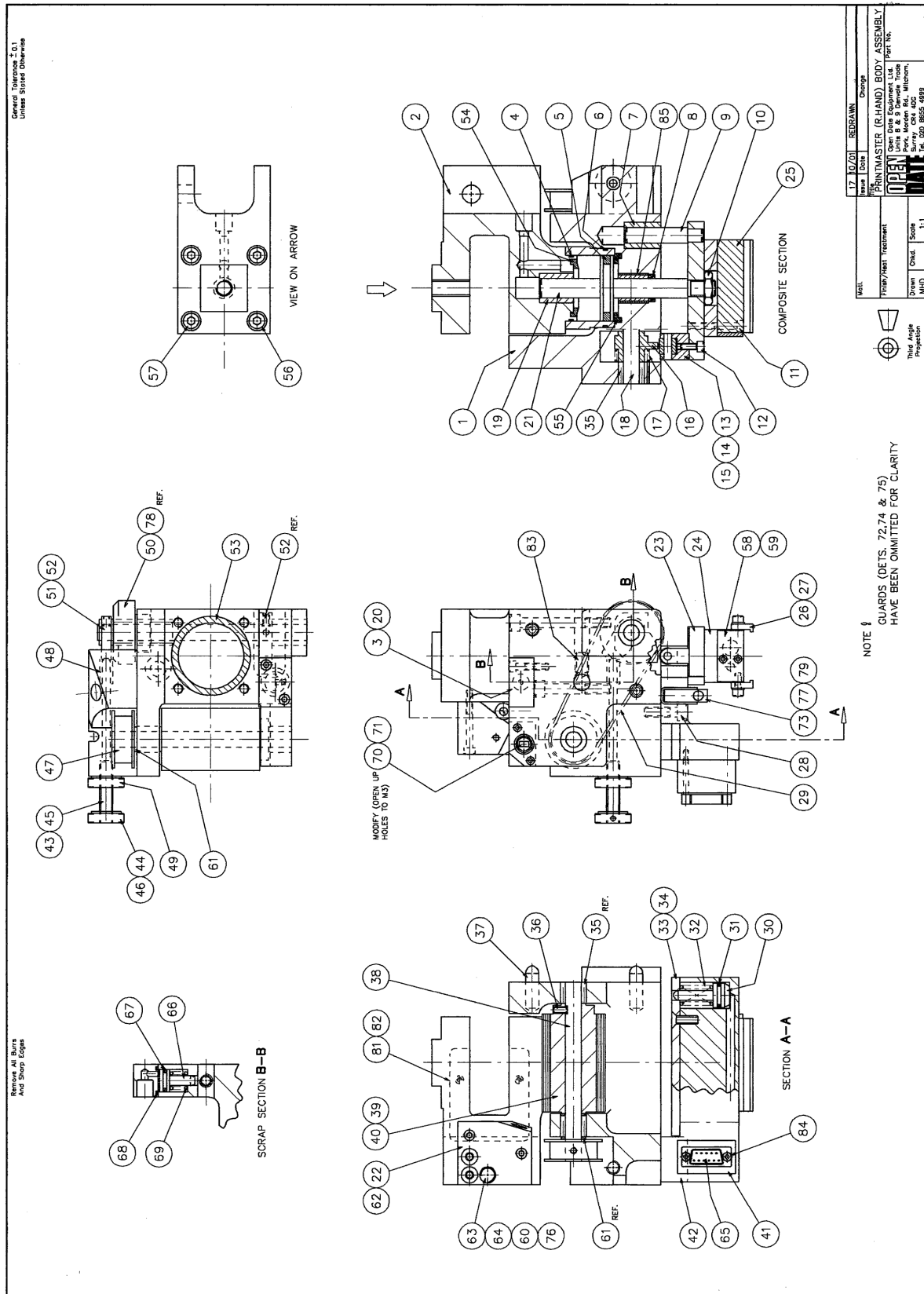
When ordering spare parts please use the Stock Reference.

Item numbers refer to those on assembly drawing MHD4762 issue 8 (see page 31).

List refers to machines from serial number 249101 onwards.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>STOCK REF.</u>	<u>QTY</u>	<u>NOTES</u>
53	Location Bush	BUS120053	2	
54	Shoulder Screw	SHO120056	1	
55	Spring Post	SPR120058	2	Part of item 19.
56	Spring Post	SPR120059	1	
57	Door Assembly	DOO125152	1	For standard Magazine.
or	Door Assembly	DOO125154	1	For Databox Magazine.
58	Sensor Magnet	MAG120078	1	Part of item 57.
59	Hinge Block	HIN120062	1	Part of item 57 for standard Magazine.
or	Hinge Block	HIN122006	1	Part of item 57 for Databox Magazine.
60	Cap Head Screw	SCRM3SCS16	2	M3 x 16.
61	Brake Hub	N/A	1	Part of item 30.
62	Clutch Bearing	BEA521501	1	Part of item 4/5.
63	Foil Retainer	RET129501	1	
64				
65	Needle Bearing	BEA521001	1	Part of item 4/5.
66	Washer	WASM4F	2	M4.
67	Hexagon Screw	SCRM4HSS16	1	M4 x 16.
68	Hexagon Screw	SCRM3HSS16	1	M3 x 16.

PRINTMASTER BODY ASSEMBLY



PRINTMASTER BODY PARTS LIST (1 of 2)

When ordering spare parts please use the Stock Reference.

Item numbers refer to those on assembly drawing on page 31.

List refers to machines from serial number 249101 onwards.

	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>STOCK REF.</u>	<u>QTY</u>	<u>NOTES</u>
	1	Body	N/A	1	
or	2	Top Bracket Assy	BRA125158	1	For R/H printer only.
		Top Bracket Assy	BRA125162	1	For L/H printer only.
	3	Port Block	POR129221	1	
	4	O-Ring	O-R512005	1	Part of Seal Kit.
	5	Main Piston Seal	SEA512006	1	Part of Seal Kit.
	6	O-Ring	O-R512016	1	Part of Seal Kit.
	7	Oilite Bearing	BEA520009	1	
	8	Nose Seal	SEA512007	1	Part of Seal Kit.
	9	Guide Pin	GUL120004	1	
	10	Nut	NUTM10H	1	M10
	11	Cap Head Screw	SCRM4SCS30	4	M4 x 30
	12	Cap Head Screw	SCRM4SCS10	1	M4 x 10
	13	Fork End Assembly	FOR129506	1	
	14	Fork End Roller	N/A	1	Part of Fork End Assembly.
	15	Dowel Pin	N/A	1	Part of Fork End Assembly.
	16	Cam	CAM120007	1	
	17	Torsion Spring	SPR530006	1	Part of Spring Set.
	18	Cam Shaft	SHA120008	1	
	19	Oilite Bearing	BEA520002	1	
	20	Cap Head Screw	SCRM4SCS16	2	M4 x 16
	21	Main Piston	PIS120009	1	or Piston/Seal Ass'y – PIS125050
or	22	Manifold Assembly	MAN129215	1	For R/H printer only.
		Manifold Assembly	MAN129216	1	For L/H printer only.
	23	Mounting Plate	N/A	1	
	24	Insulator Plate	INS120012	1	
	25	Heater Block	HEA120013	1	
or	26	Side Locator	SID120014	2	
		Side Locator	SID122503	2	For Printmaster Plus only.
	27	Button Head Screw	SCRM4SSS08	6	
	28	Cap Head Screw	SCRM6SCS20	2	M6 x 20
or	29	Timing Belt	BEL522501	1	
		Timing Belt	BEL522508	1	For Printmaster Plus only.
	30	Piston	PIS120015	2	or Piston/Seal Ass'y – PIS125076
	31	Seal	SEA512008	2	Part of Seal Kit.
	32	Compression Spring	SPR530007	2	Part of Spring Set.
	33	Keep Plate	KEE120016	1	
	34	CSK Screw	SCRM5CSS16	2	M5 x 16
	35	Needle Bearing	BEA521001	4	
	36	Grub Screw	SCRM4SSS08	2	M4 x 8
	37	Location Pin	LOC120017	2	
	38	Drive Roller Shaft	SHA120018	1	
	39/40	Drive Roller	DRI120019	1	
	41	Plug Housing	PLU120020	1	
or	42	Piston Bracket Assy	BRA129217	1	For R/H printer only.
		Piston Bracket Assy	BRA129218	1	For L/H printer only.
	43 - 46	Foil Adjusting Screw	ADJ120057	1	
or	47	Timing Pulley	PUL120025	1	
		Timing Pulley	PUL122501	1	For Printmaster Plus only.
	48	Lever Stop	N/A		
	49	Thumb Nut	THU120023	1	
or	50	Timing Pulley Assy	PUL129212	1	For R/H Printmaster 1000 & S only.
or		Timing Pulley Assy	PUL129213	1	For L/H Printmaster 1000 & S only.
or		Timing Pulley Assy	PUL125092	1	For R/H Printmaster Plus only.
or		Timing Pulley Assy	PUL125093	1	For L/H Printmaster Plus only.
	51	Lever	LEV120028	1	
	52	Grub Screw	SCRM5SSS06	2	M5 x 6
	53	Main Cylinder Barrel	BAR120029	1	
	54	Top Damper	DAM120075	1	
	55	Bottom Damper	DAM120074	1	
	56	Cap Head Screw	SCRM6SCS40	2	M6 x 40
	57	Cap Head Screw	SCRM6SCS55	2	M6 x 55

PRINTMASTER BODY PARTS LIST (2 of 2)

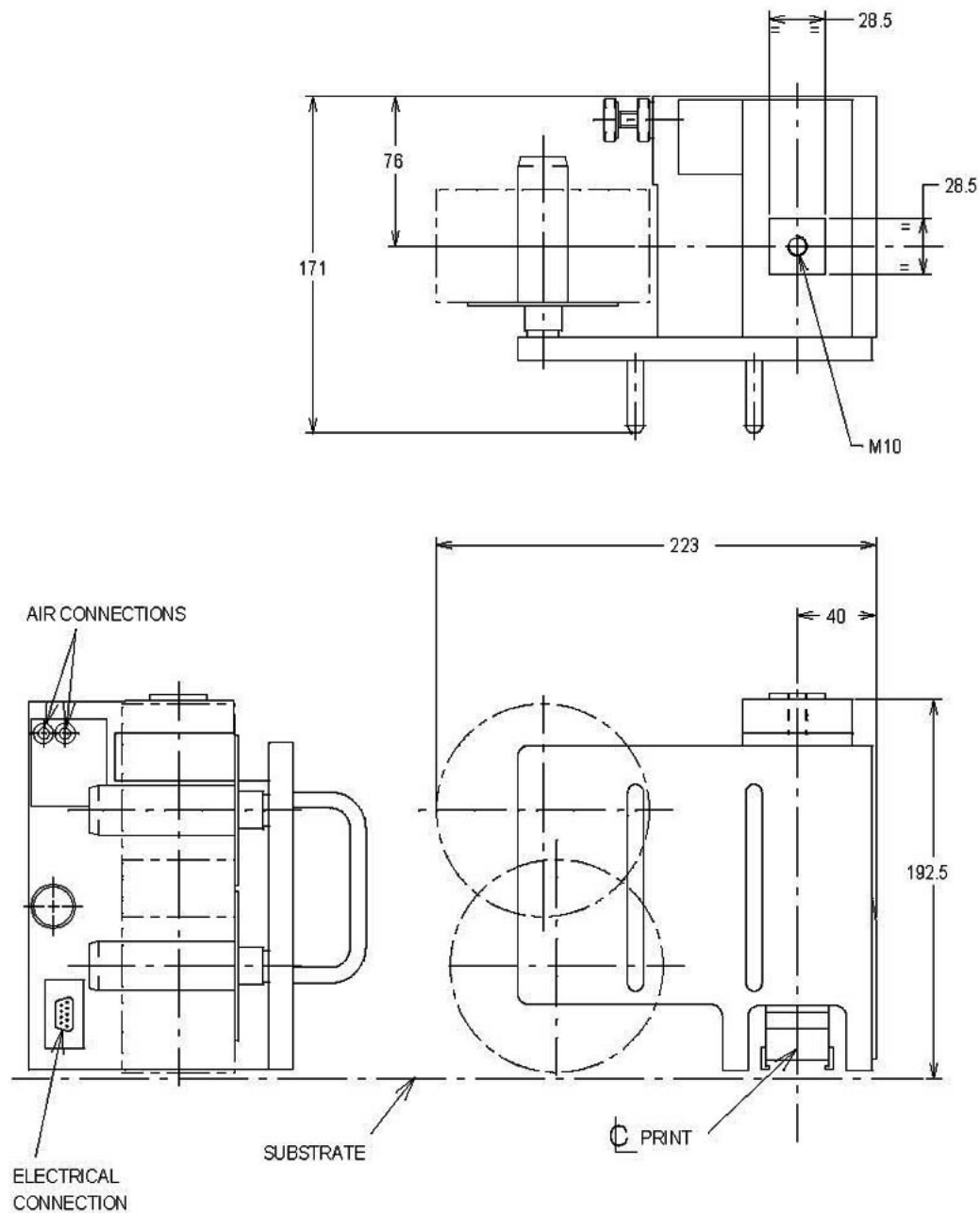
When ordering spare parts please use the Stock Reference.
 Item numbers refer to those on assembly drawing on page 31.
 List refers to machines from serial number 249101 onwards.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>STOCK REF.</u>	<u>QTY</u>	<u>NOTES</u>
58	Keep Plate	KEE120030	1	
59	CSK Screw	SCRM3CSS06	2	M3 x 6
60	Poppet	POP120054	1	Part of item 22.
61	Spacer	SPA120055	2	
62	Cap Head Screw	SCRM4SCS35	2	M4 x 35
63	Plug		1	1/8" BSP. Part of item 22.
64	Compression Spring	SPR530011	1	Part of Spring Set. Part of item 22.
65	Plug/Wiring Assy	PLU399400	1	For R/H printer only.
or	Plug/Wiring Assy	PLU399401	1	For L/H printer only.
66	Lock Piston	PIS120064	1	or Piston/Seal Assy – PIS125166
67	Seal	SEA512009	1	Part of Seal Kit.
68	O-Ring	O-R512010	1	Part of Seal Kit.
69	Spring	SPR530027	1	Part of Spring Set.
70	Air Switch	AIR120065	1	
71	Cap Head Screw	SCRM3SCS25	2	M3 x 25
72	Air Switch Guard	GUA120066	1	For R/H printer only.
or	Air Switch Guard	GUA120512	1	For L/H printer only.
73	Door Switch Guard	GUA120067	1	
74	Back Guard	GUA120068	1	For R/H printer only.
or	Back Guard	GUA120513	1	For L/H printer only.
75	Side Guard	GUA120069	1	For Standard R/H printer only.
or	Side Guard	GUA120514	1	For Standard L/H printer only.
or	Side Guard	GUA122008	1	For Databox R/H printer only.
or	Side Guard	GUA122009	1	For Databox L/H printer only.
76	O-Ring	O-R512011	1	Part of Seal Kit.
77	Door Switch Holder	HOL120080	1	
78	Clutch Bearing	BEA521501	2	One used in item 50.
79	Door Switch	SWI395003	1	Part of item 65.
80				
81	Foil Run-Out Card	ALA129510	1	
82	Cap Head Screw	SCRM3SCS06	2	M3 x 6
83	Ball Catch	SPR531005	1	
84	Mounting Screw	SCR120070	2	
85	Nose Bearing Assy	BEA120071	1	Part of Seal Kit.

ADDITIONAL SPARE PARTS AND REPAIR KITS

<u>PNEUMATIC</u>	
Solenoid valve without fittings.	VAL400021
<u>ELECTRONIC</u>	
Cartridge Heater, 240V, 250w.	HEA501506
Thermistor probe.	THE500522
Plug-in Digi-50 printer control card, 240V.	CPC293503
<u>REPAIR KITS</u>	
Spring set containing all springs plus drive belt.	SPR129505
Full Seal Kit including all seals, o-rings & nose bearing.	SEA129528
Main Cylinder only Seal Kit including seals, o-rings & nose bearing.	SEA131011

PRINTMASTER SERIES DIMENSIONAL DRAWING



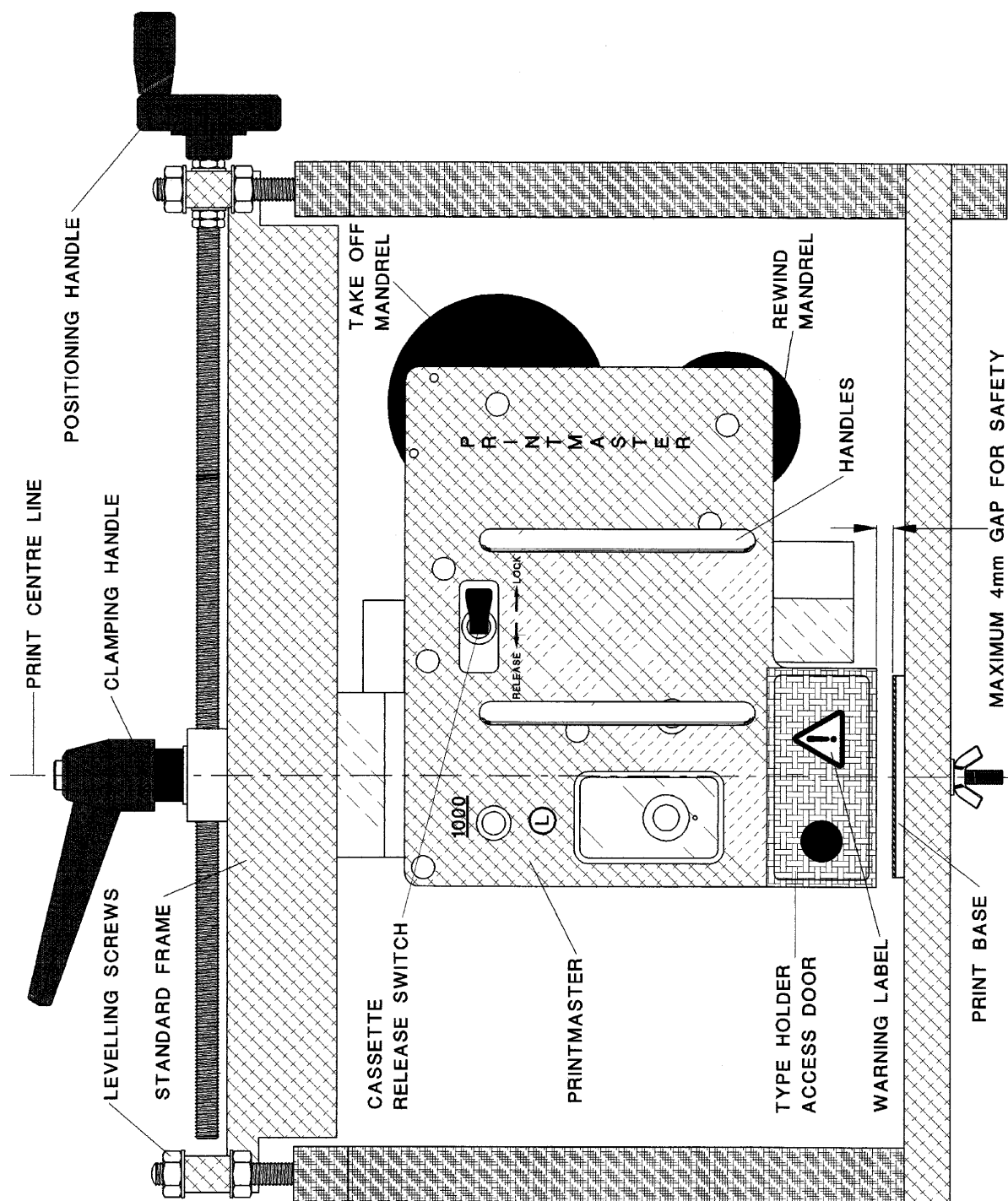
PRINTMASTER 1000 PRINTER

05/02

**OPEN
DATE**

MHD4787

PRINTMASTER - STANDARD FRAME INSTALLATION



PRINTMASTER AIRBOURNE NOISE EMISSIONS

Comprehensive tests have been carried out with the Printmaster 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.

OPEN DATE GROUPS COMPANIES AND DISTRIBUTORS

FRANCE

OPEN DATE FRANCE

Z.I. D'Attichy

No.8, voie Industrielle

60350 Attichy.

Tel:- +33 (0)3 44 42 94 43

Fax:- +33 (0)3 44 42 17 17

Email:- info@opendatefrance.com

GERMANY

OPEN DATE GmbH

Mittler Stämmig 4

D - 97292 Üttingen

Tel:- +49 (0)9369 9824 0

Fax:- +49 (0)9369 9824 24

Email:- info@opendate.de

USA

OPEN DATE SYSTEMS, INC.

Springfield Road

PO Box 538

Georges Mills

NH 03751-0538.

Tel:- +1 603 763 3444

Fax:- +1 603 763 4222

Email:- info@opendate.com

INTERNATIONAL AGENTS & DISTRIBUTORS

For a list of international agents & distributors visit www.opendate.co.uk