Press Out Dispenser (POD) System

User Manual

VALE-TECH LIMITED
Unit 12, Depot Road, Newmarket, Suffolk CB8 0AL, UK
Tel: +44 (0) 1638 668583/668593
Fax: +44 (0) 1638 676720
E-mail: sales@vale-tech.co.uk

CD14/15
NOVEMBER 2007

Introduction

This User Manual provides the user with a comprehensive guide to the machine.

The machine is configured with the capacity for 16, 2.5litre plastic or steel ink containers which are located on a dual level carousel. Each ink station has a container shroud, pressout piston and gasket seal which locates within the ink container. When the dispense process is activated, the pneumatic master cylinder located on the top of the machine is enabled, and coupled with the pressout piston and the dispense valve, ink is transferred to a container on the scale unit, as part of a formulation. The scale range for this machine allows maximum gross weight on the scale unit of 11lb (5kg).

This User Manual identifies the requirements for the initial installation of the machine and provides information for the effective operation of the machine on a day-to-day basis, including maintenance, to ensure a high standard of ink dispensing can be consistently achieved.

The Service section of this manual enables the user to identify any spare parts that may need to be ordered for the machine. This product has been manufactured to the highest standards; however, should any difficulties arise, before requesting technical support, a speedier resolution can usually be reached by referring to the trouble-shooting guide. A full set of drawings is also provided to assist in fault finding in the unlikely event of the product developing a fault.

Full Ink Manager Software training is provided within the Training Manual to ensure that the user can feel confident with the machine operation.

The Service Log at the back of this manual serves to provide contact information. Should assistance be required please refer to the contact details supplied within this section. Forms available in this section allow the service history of the machine to be recorded for future reference.

Vale Tech Press Out Dispenser (POD)

Vale Tech Press Out Dispenser (POD)

Vale Tech Press Out Dispenser (POD)

Declaration of Conformity & Quality

Vale-Tech Limited Hereby Declares That

Machine:

Project:

Is in conformity with the provisions of the machinery directives as listed below: -

The Machinery Directive, 98/37/EC – "Machinery is described in the Directive as "an assembly of linked parts or components, at least one of which moves, with the appropriate actuators, control and power circuits, etc., joined together for a specific application, in particular for the processing, treatment, moving or packaging of a material". The manufacturer is responsible for verifying whether a particular product falls within the scope of the Machinery Directive."

The Pressure Equipment Directive, 97/23/EC – " The directive provides control over equipment subject to pressure" Pressure equipment being vessels, piping, safety accessories and pressure accessories. A pressure assembly being several pieces of pressure equipment assembled to form an integrated functional whole.

The EMC Directive, 89/336/EEC – "The Directive applies to most electrical and electronic apparatus, that is, finished products and systems that include electrical and electronic equipment."

The Low Voltage Directive, 73/23/EEC – "Broadly the Regulations apply to most consumer, commercial and industrial electrical equipment designed for use within the voltage ranges 50 V ac to 1,000 V ac and 75 V dc to 1,500 V dc."

Remarks & restrictions for this declaration

This declaration is no longer valid if any changes are made to the machine, which is not corresponding to the abovementioned standards.

Place and date:	Newmarket
G Adlem:	Mechanical Engineering
C Stapleton:	Electrical Engineering
M Hughes:	Director
N Scott:	Director

Representing:

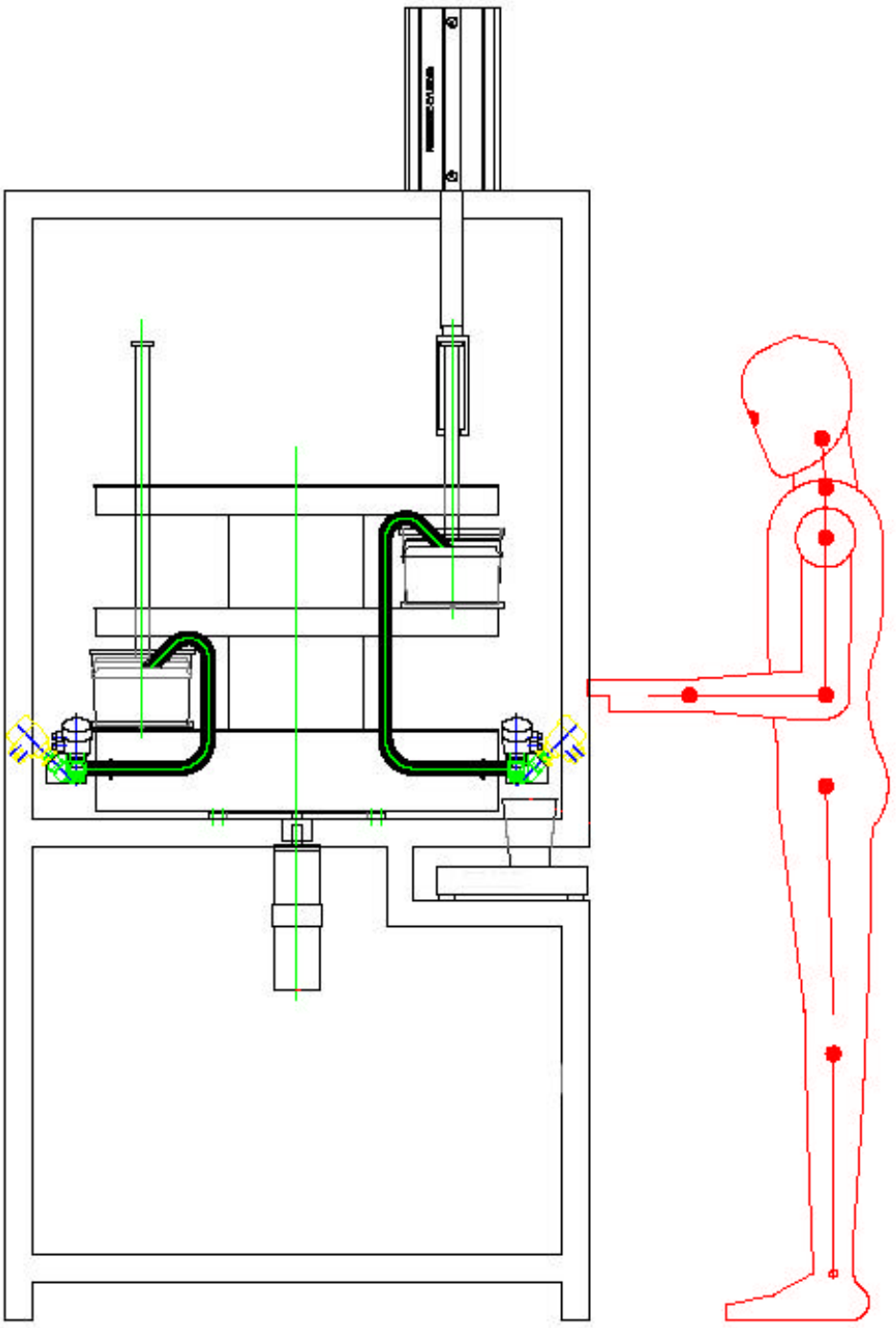
Vale-Tech Ltd
12 Depot Road
Newmarket
Suffolk CB8 0AL
United Kingdom

CE

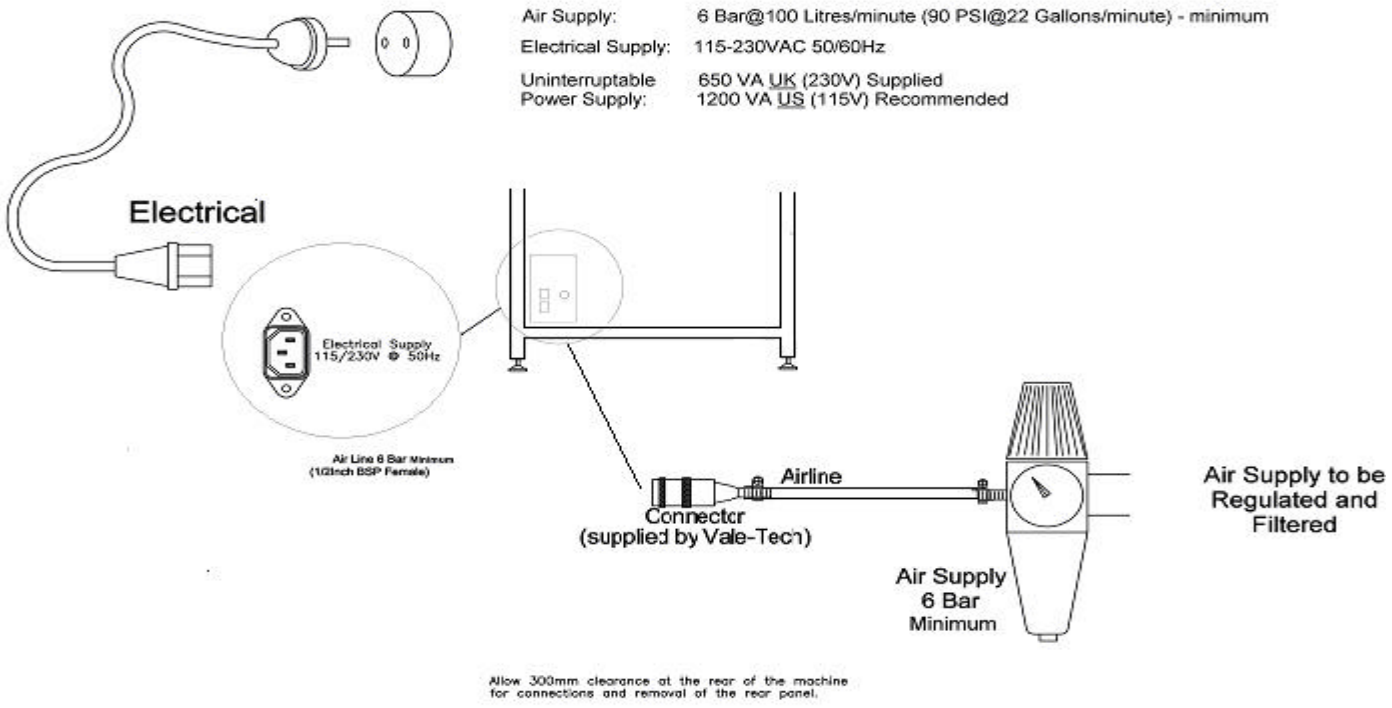
1 Installation

1.1 Machine overview

1.1.1 Services Connection Requirements (cont)



POD dimensions: 1085mm wide x 1070 mm deep x 2150mm high



1.2 Connection of Services

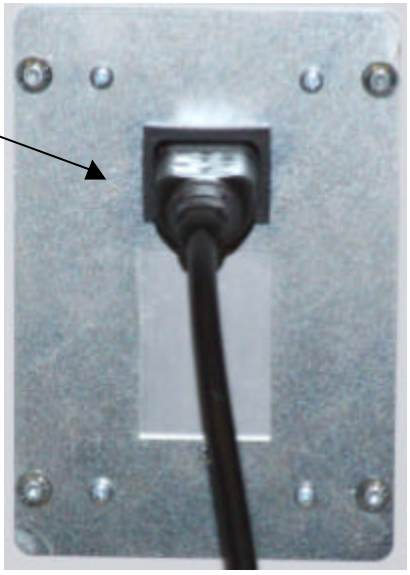
The POD comprises one primary module, measuring overall 1070mm(D) x 1085mm(W) x 2150mm(H). It should be sited in its desired location by moving with a forklift or pallet truck, remembering to ensure there is a requirement for a minimum of 300mm of clear space at the back of the machine for access to enable the connection of primary services, and clearance on the right side to gain access to the electrical and pneumatic supply cabinets.

After positioning the POD, ensure that all the feet are placed flat on the floor before leveling. Correct leveling is achieved by placing a spirit level on all four corners and also across the frame. Adjustment to the height of the machine is done by adjusting each of the corner feet up or down as necessary.

1.3 Connecting Electrical Supply

Connect mains electrical power rated at either 115V or 230V 50/60 Hz to the UPS, (Uninteruptable Power Supply). The UPS will be supplied by the user and sourced locally. If no UPS is fitted, connect the power supply cable directly to the inlet power socket. This is located inside the rear right side of the machine. Removal of the rear panel is required for access to these connections.

Main electrical power supply from UPS or direct from main power supply to machine

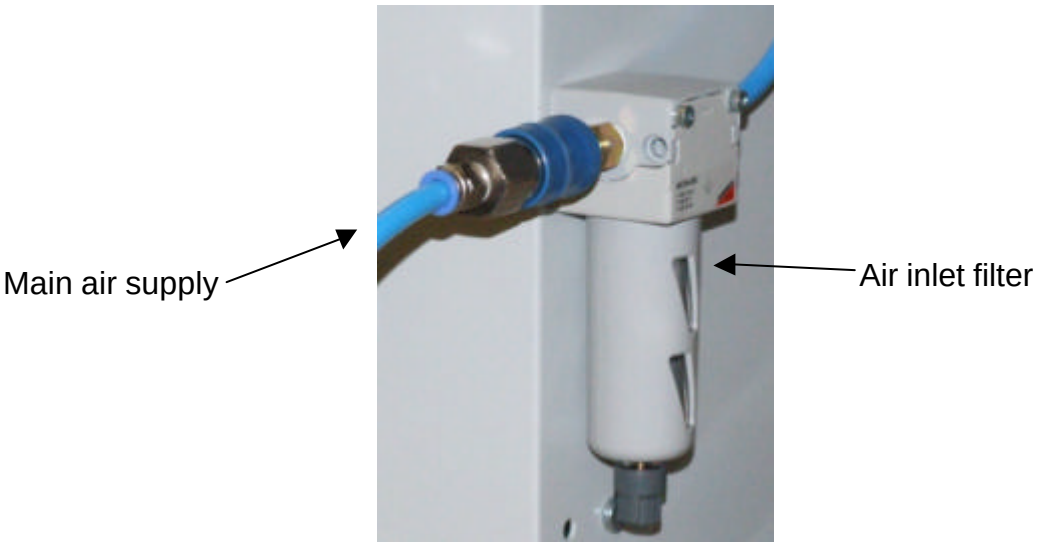


1.4 Connecting Air Supply

Connect an airline from an external filtered, clean, dry regulated air supply to the air input quick-fit air coupling connector supplied by Vale-Tech. This requires 8mm hard walled hose for the push fitting. Alternatively, the air supply can also be fitted using soft wall hose and a Jubilee Clip (Use Imp ½“ bore or Met 12.70mm, Imp ¾“ or Met 19/20mm o/d air hose).

1.4 Connecting Air Supply (cont)

The air input and air inlet filter to the machine are located beside the mains power input.



1.5 Connecting the PC

Connect the Keyboard and Monitor cables to the appropriate ports on the back of the PC (refer to the configuration data in the service section). Now connect network, printer, scanner and telephone modem connections to the PC, if additionally required.

Note: Before powering on the PC Please ensure that its Power Supply Unit is set to the correct mains power voltage either 115V or 230V. Full range PSU's are auto switching, 115/230V.

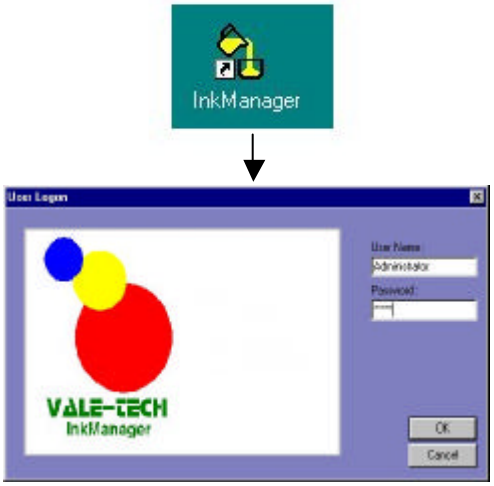
2 POD Start-Up Procedure

2.1 Switching On the POD

Switch on the POD by turning the mains ON/OFF isolator switch on the lower right side of the machine CLOCKWISE to the ON position.
Turn on the PC and the monitor. The PC is located behind the panel on the right side at the front of the machine.
At this point, the red light on the beacon will be illuminated and the alarm will be sounding.

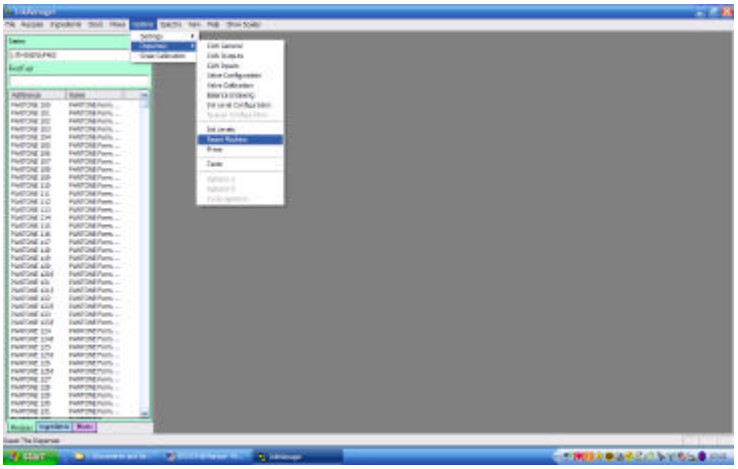
2.2 Log-on and Dispenser Initialisation

Once the power is on, start up the PC by pressing the ‘Power’ button on the front panel. Once this has powered up, launch the Ink Manager Software program and logon.
If there are no user accounts, create these by logging on as ‘administrator’ (password supplied separately).



2.2 Log-on and Dispenser Initialisation (cont)

When Ink Manager opens, a formulation list will appear on screen. The machine requires a reset to be carried out as follows. Highlight ‘Options’, ‘Dispenser’, ‘Reset’.



After completing the reset process the sounder should stop and the beacon will change from red to combined green and amber. The carousel will move to the ‘home’ position.

The ‘home’ location for the carousel is with container number 1 directly in line with the front door of the machine.

As the reset takes place, the secondary air supply regulator will become enabled and the air supply to the press cylinder and the valve actuators will switch on.

If the dispenser does not reset, check that the emergency stop button is released.

Note: If the emergency-stop button is depressed, release it by turning the button clockwise and allowing it to spring out. Ensure that the button is not depressed further whilst turning it or the button will not release.

2.3 Beacon Warning Indicator

RED: Indicates Emergency Stop Switch activated or machine in initial Power ON state.

AMBER: Indicates the balance dispenser is moving.

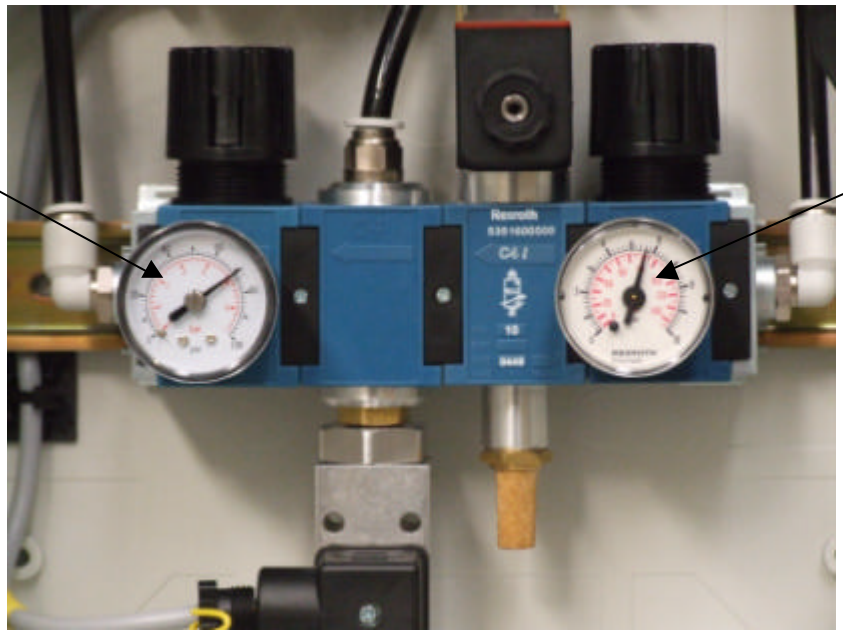
GREEN AND AMBER: Indicates machine in RESET condition or ready to dispense.

GREEN: Indicates machine is in the process of dispensing ink.

2.4 Compressed Air Supply

The incoming compressed air supply feeding the POD requires regulating to feed the ink dispense valve actuators and the pressout cylinder. This is done by setting the air flow regulators within the air box to the correct levels. The air box is located within the cabinet on the right side of the machine. The main air pressure should be set at 85psi, (5.5bar), and the secondary air pressure should be set to 45psi, (3bar).

Secondary air pressure 45– psi (3bar)



Main air pressure – 82psi (5.5bar)

3 POD Set-Up

3.1 Setting Ink Names

WARNING: DO NOT PLACE THE INK SUPPLY CONTAINERS IN THE MACHINE UNTIL THIS STAGE HAS BEEN COMPLETED!

The reference or description for each ink to be used must be allocated to each of the supply containers. The corresponding ink container will be put into its position later when loading commences. Complete the Ink Reference names in the space provided below.

Some machines may have a pre-determined list setting out which ink should be placed in which supply container. In this case, this information will be supplied in conjunction with this manual or obtained from the distribution agent.

Container	Series/Reference/ /Colour
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

3.2 Fitting ink containers

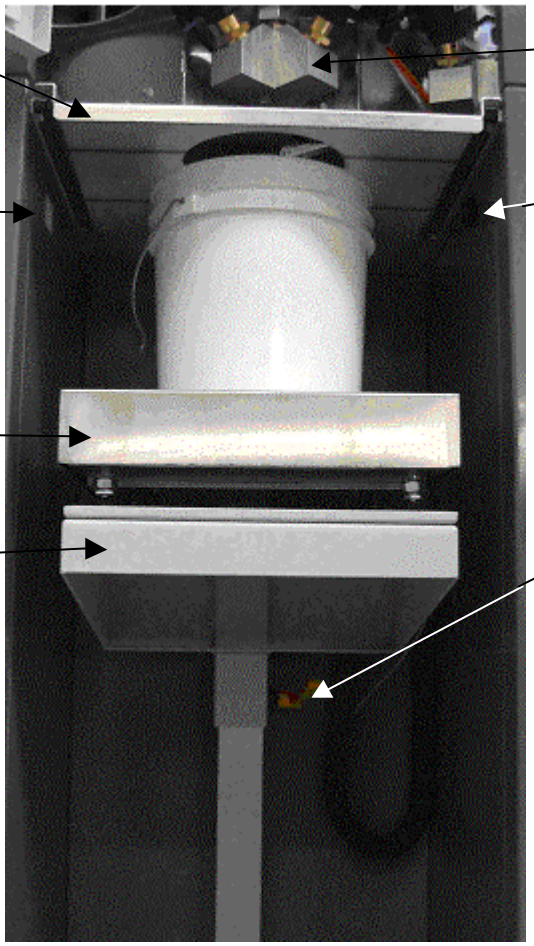
The ink containers are located within a support sleeve when in their positions in the machine. The ink container is placed into the sleeve before being loaded into the machine. It container should be positioned with its side tabs located into the slots in the top sides of the shroud.

The initial installation of the ink containers will be carried out by a Vale-Tech technician at the time of machine commissioning.
During operation of the machine the containers will require changing as their contents are dispensed. An alert indicating that a container is empty will appear on the monitor screen. When an ink container requires changing, the push rod and claw assembly attached to the cylinder piston raises slightly to allow the carousel to index to the change position.
The cylinder then retracts the push rod and claw assembly to allow access to remove the empty container and sleeve. At this point, the follower plate can then be manually removed from the ink container and the new container placed in position. The follower plate is then lowered into position, resting on the ink ready for the next dispense operation, or the continuation of a dispense operation which has been paused.

3.3 Setting Scale Unit Support

Adjust the height of the scale unit to suit the container. The gap between the underside of the drip wipe tray and the top of the container must be as small as is practical.

Adjusting the height of the scale unit:-



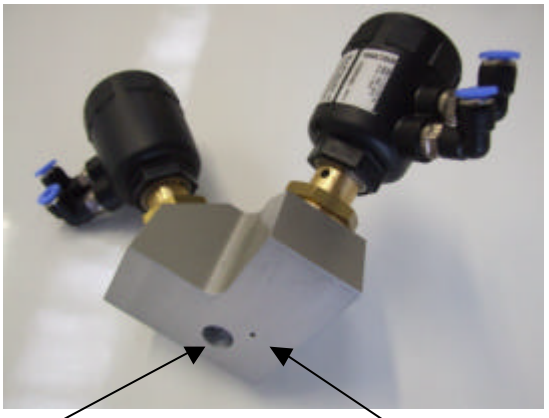
Rotate handle counter clock wise to release the support, be ready to take the weight of the assembly.
Position the assembly as required and tighten the clamp.

The clamp has a ratchet, by pulling the handle out axially it can be rotated in either direction, allowing a better position for either slackening or tightening the clamp.

3.4 Ink Valve

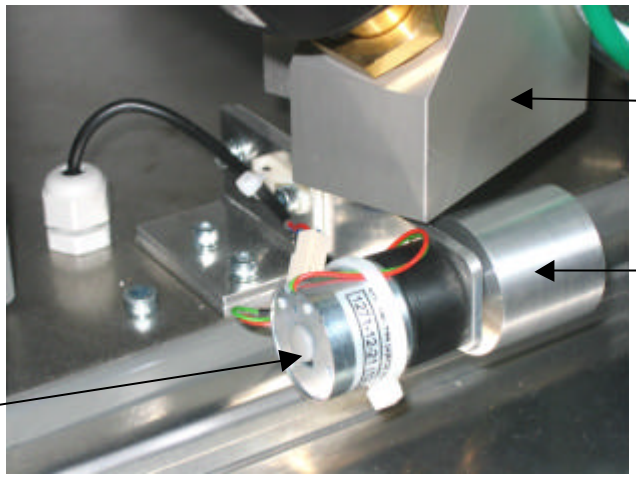
Ink is dispensed from each of the canisters within the ink containers be means of the dispense valve. The dispense valve comprises coarse and fine feed outlet ports to allow a controlled and precise flow of ink.

Ink dispense valve



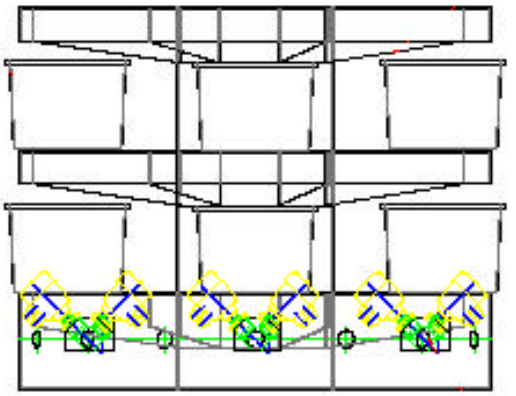
3.5 Drip Wipe Assembly

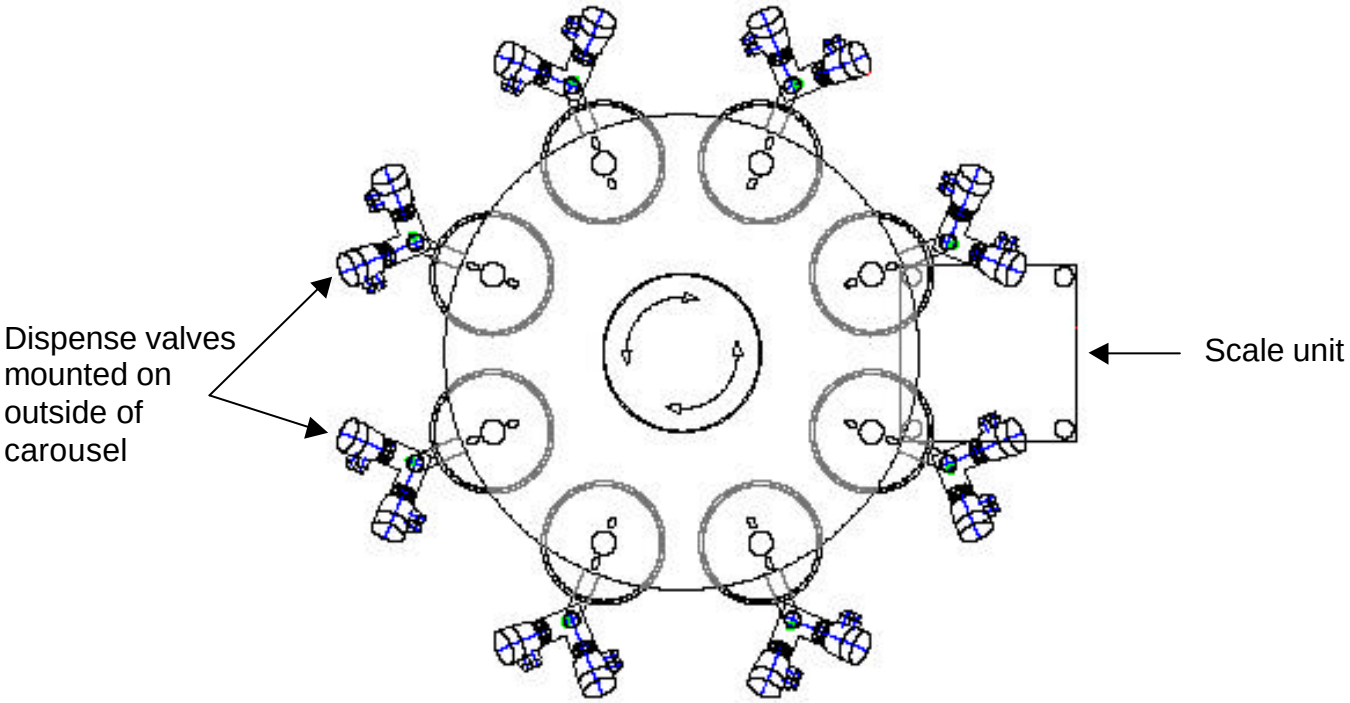
The drip wipe assembly is located on the base plate below the ink containers, to the left side inside the front door of the POD. It comprises an electric motor and metal roller. Its purpose is to remove any residual ink from the underside of the ink valve following a dispense operation. After ink is dispensed from the ink valve, the carousel moves the ink valve over the drip wipe roller which rotates close to the underside of the valve, removing the residual ink, and depositing it on the drip wipe tray, which can be removed for cleaning as necessary.



3.6 Carousel operation

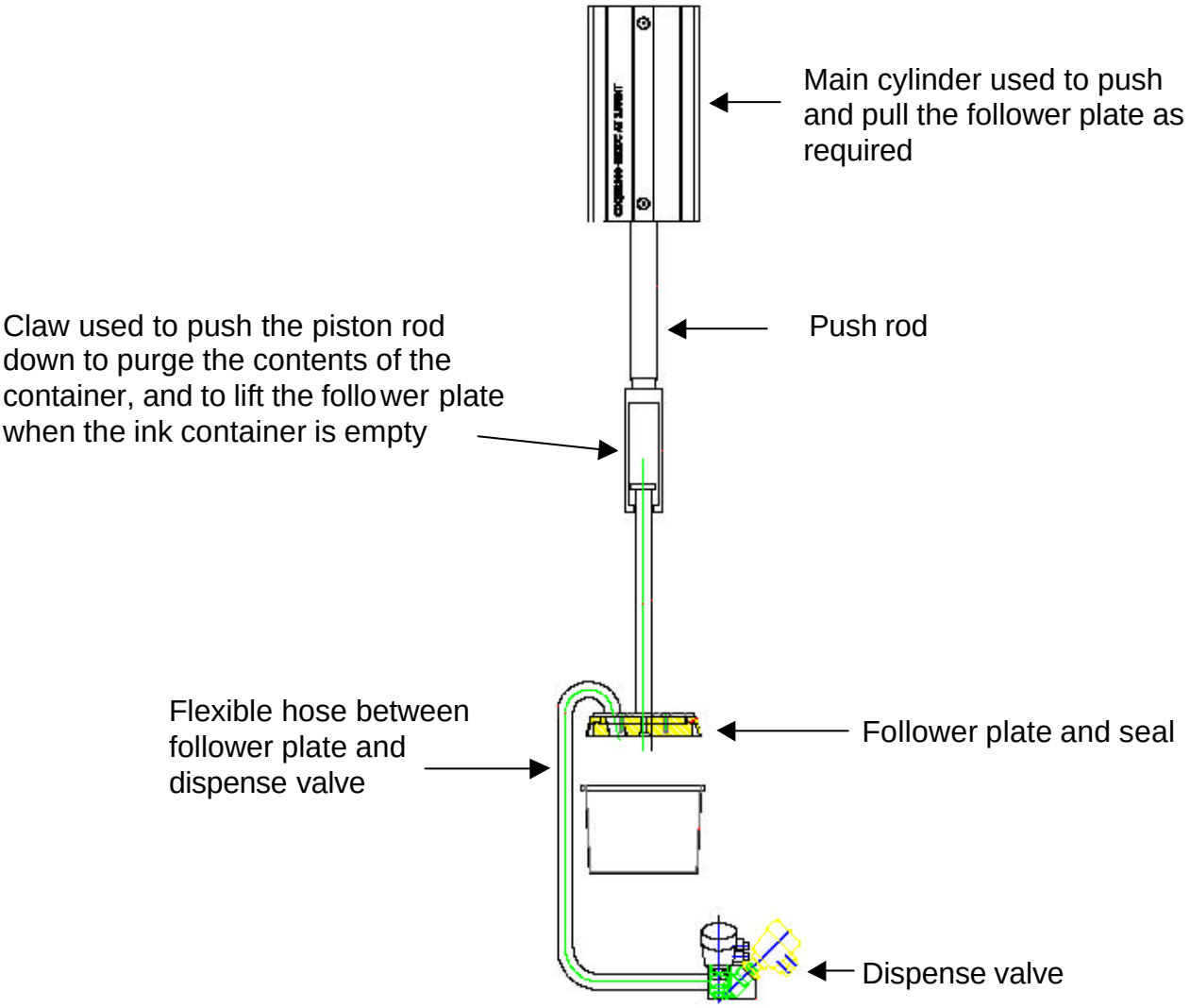
Materials to be dispensed are mounted in their respective containers, and within a support sleeve, on two levels on the main carousel unit. This is then rotated to the necessary dispense position relative to each ingredient in the formulation which is to be dispensed.





The scale unit is mounted below the press out piston position and follower plate. The cylinder is then used to push down the follower plate, forcing the ingredient up through the outlet port in the follower plate and through a flexible hose to the dispense valve, which is mounted on the outside face of the carousel unit, and into the container placed on the scale. The dispense valve is controlled through the Ink manager software in conjunction to weight change being registered by the scale, until the final weight of the component part of the formulation is reached. The cylinder then retracts to a point where it will not contact the rotating carousel as it indexes to its next position.

3.7 Press out piston, follower plate and valve assembly

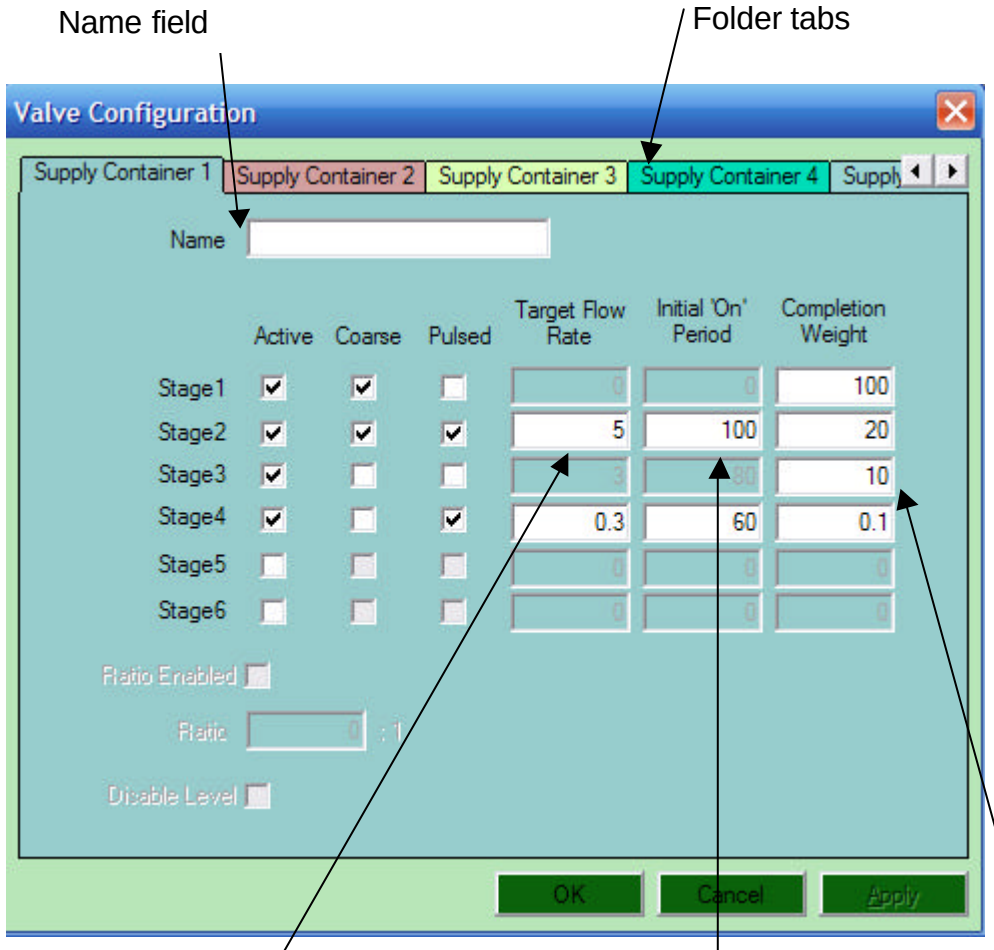


3.8 Ink Valve Configuration

To allocate settings to each ink container, open the Valve Configuration settings. Select ‘Options’ ‘Dispenser ‘Valve Configuration’ from the drop down menu in Ink Manager. Each container has its own ‘Folder tab’ and must be allocated the correct colour reference in the ‘Name’ field before the valves can be configured for their flow rates. For this information please refer to the list in Setting Ink Names, in 3.1.

Before starting to dispense ink, the flow rate for each ink valve needs to be set in order to provide swift but controlled dispensing. It is necessary to understand that the viscosity and flow attributes of the ink will affect its actual dispense rate. The ink container regulators have been set at 50psi, (3.5bar) and may require slight adjustment to provide the desired steady dispense rate.

There is a facility to split the dispense process into stages, for ease of control. These are ‘coarse’ feed for the bulk of the dispense down to approximately 100g before completion, ‘coarse pulsed’ feed giving coarse feed control down to approximately 20g before completion, ‘fine continuous’ feed down to approximately 10g before completion and finally, ‘fine pulsed’ feed down to completion of the dispense. There can be up to 6 separate stages of dispense, although they do not all have to be used. For the purpose of this example, 200g of ink is to be dispensed, utilising only 4 of the stages.



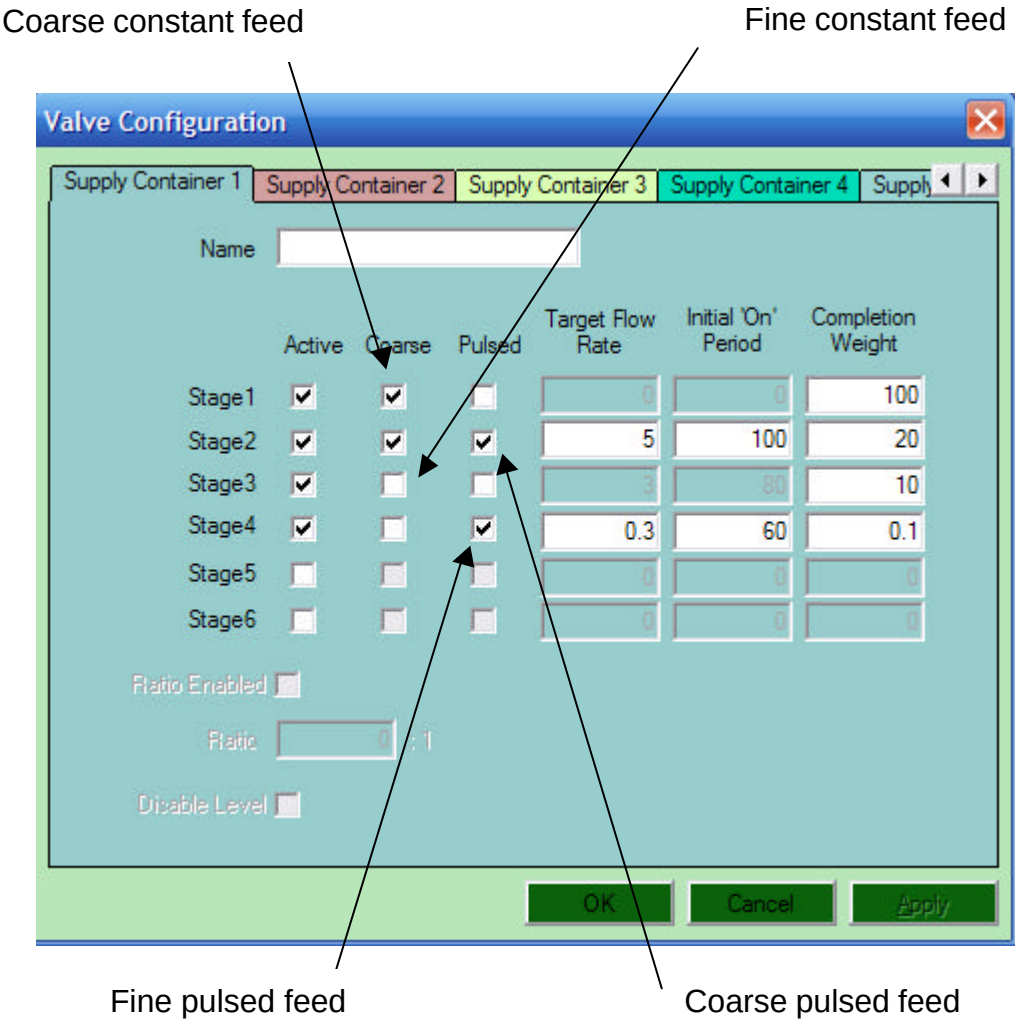
The required speed of dispense when the valve is pulsing, in gms/second.

The length of time (measured in milliseconds) that the valve is open when it begins to pulse.

The weight remaining to be dispensed at which this stage ends.

3.9 How does the Ink Valve function during a dispense?

The ink valve is controlled by the Ink Manager Software to open allowing the flow of ink through the large outlet (coarse feed) and small outlet (fine feed). Both coarse and fine feeds can be set to complete the end of their dispense operations by pulsing the flow to reach the desired quantity.
The feed profiles are activated by setting parameters in the Ink Manager software and the valve opens to achieve its pre-determined operation.



By ticking:

'Active' – this opens a dispense stage. If the 'Coarse' or 'Pulsed' options are not selected, the ink valve will only dispense from the fine feed outlet.
'Active' 'Coarse' – this opens the valve to dispense to the 'Completion' preset value of that stage from the coarse feed outlet.
'Active' 'Coarse' 'Pulsed' – this 'Pulses' the coarse feed to the 'Completion' preset value of that stage at the preset 'Target Flow' rate.
'Active' and 'Pulsed' – this 'Pulses' the fine feed to the 'Completion' preset value of that stage at the preset 'Target Flow' rate.

How does the Ink Valve function during a dispense? (cont)

The dispense example uses 4 stages to complete the process; the break down of each dispense stage is as follows and for the example, the dispense ink quantity is 200g:

Stage 1.

- Is Active (or enabled)
- Coarse feed valve continuous dispense
- From 200g down to the Completion Weight of 100g
  (Total of 100g of ink dispensed into the supply container)

Stage 2.

- Is Active (or enabled)
- Coarse feed valve will pulse (open for 100 milliseconds before closing) and dispense at a target flow rate of 5grams/second The target flow rate should be adjusted in increments of 10 if the target rate is difficult to achieve; if the dispense time is taking too long for example.
- Now down to the new Completion Weight of 20g
  (Total of 180g of Ink dispensed into the container)

Stage 3.

- Is Active (or enabled)
- Fine feed valve continuous dispense
- Now down to the new Completion Weight of 10g
  (Total of 190g of Ink dispensed into the container)

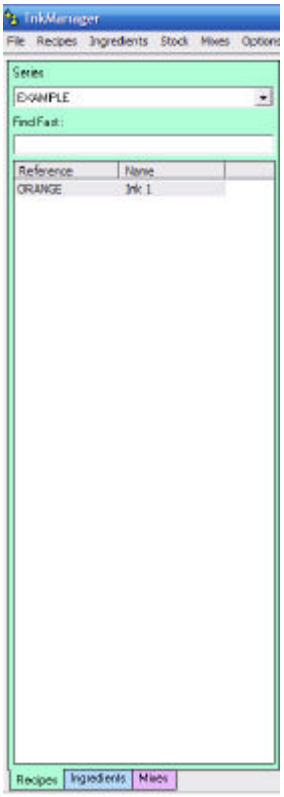
Stage 4.

- Is Active (or enabled)
- Fine feed valve will pulse (open for 60 milliseconds before closing) and dispense at a target flow rate of 0.3grams/second
- Now down to the new Completion Rate of 0.3g (This allows for the ink tail which may form at the outlet of the dispensing valve to be included. For thicker inks this can be increased and for thin inks this can be zero, 0g)
- (Total of 200g of Ink dispensed into the container)

WARNING: IF STAGE 1 IS DISABLED THEN THE POD WILL NOT DISPENSE ANY OTHER STAGES!

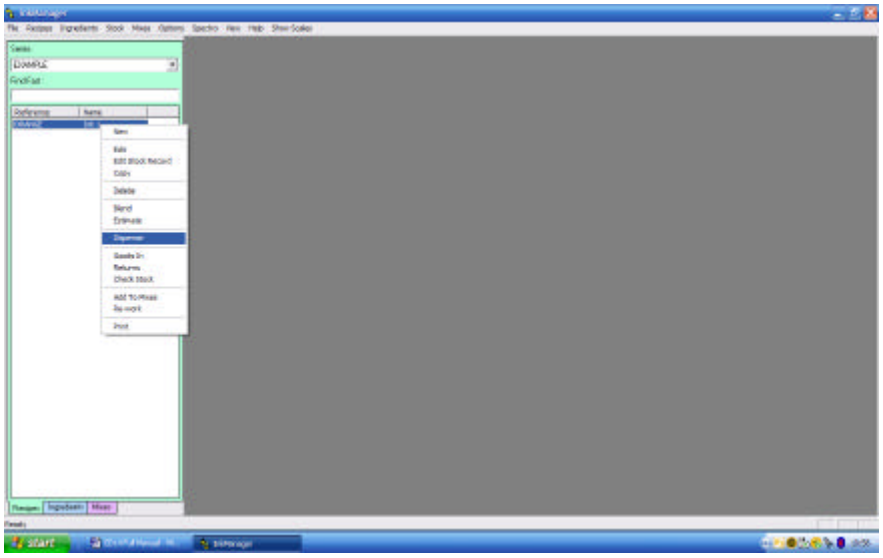
3.10 Dispensing ink

For instruction on entering recipes, see Ink Manager Training section.

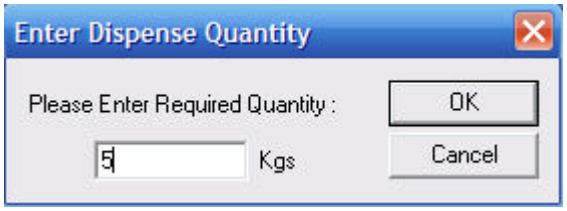


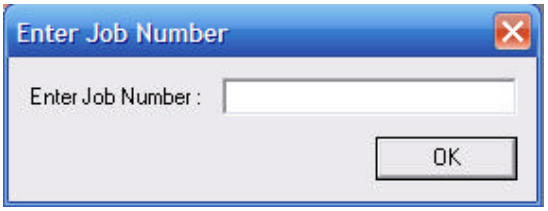
Select the Ink Series to be used from the drop down menu and select the recipes tab at the bottom left of the screen.

In the recipes window, locate and select the recipe to be dispensed, place the curser over, and highlight it using the right mouse button.



From the drop down list, highlight ‘dispense’ and select it using the left mouse button. Enter the dispense quantity and click ‘ok’.

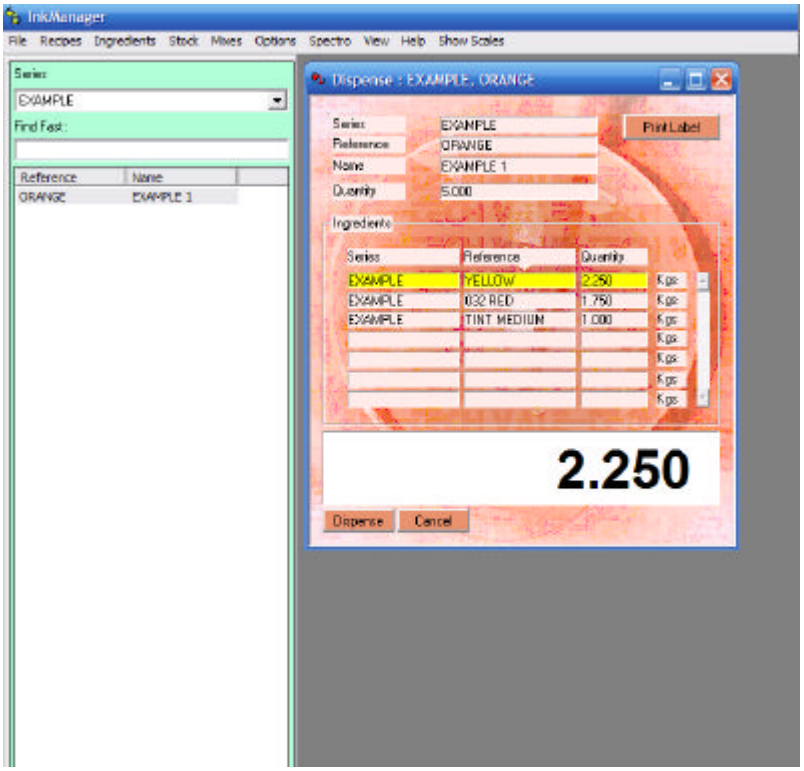




Enter the ‘job number’ if required and click ‘ok’. If the ink is not to be allocated to a job, click ‘ok’.

Dispensing ink (cont)

The dispense screen shows details of the ink formulation to be dispensed. Select ‘dispense’ and the machine operation will commence.



As each component part of the formulation is dispensed, the software will control the ink valve as described in section 3.6. When the dispense is complete, the dispense screen will clear* and the container of blended ink can be removed from the scale unit.

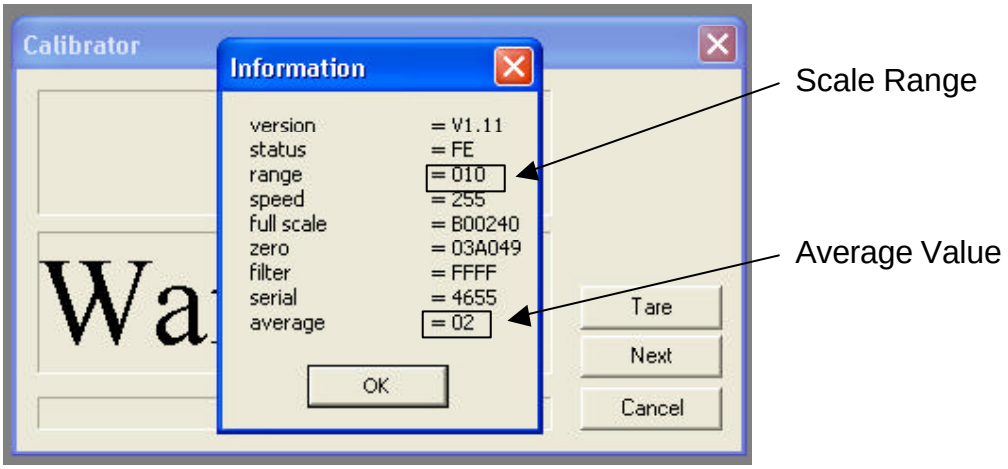
*If the software has been configured to allocate the ink to stock, a box will appear and the allocation can be confirmed.

4 Scale Calibration

For the purpose of this example of the procedure, the 10kg scale is to be calibrated using 9kg of test weights. All Vale-Tech scale systems calibrate at zero and then 90% of the full scale capacity.

Check the scale accuracy by selecting 'Show Scales' from the drop down menu in Ink Manager, and checking the accuracy with a known weight before running the 'Scale Calibration' option. Always allow the scale to stabilise for 30mins before checking the calibration.
Select 'Show Scales' and allow the scale to tare. If a small amount of fluctuation is seen, this can be reset by clicking on 'Tare Scales' If the scale value continues to climb or fall, check for anything which may be preventing the scales' free movement through its range, and start again. If there is no touch down and the scale will not stabilise, contact Vale Tech for further advice.
Place known weights on to the scale weigh pan, (conformance weights supplied with the machine), and verify the scale is within the allowed tolerance. If it is, calibration is not required. If it is not, follow the calibration procedure.

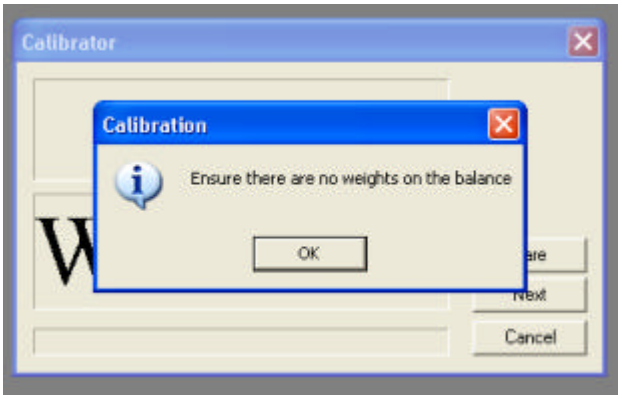
If it is determined that the scale requires re-calibration, log on to Ink Manger and ensure the scale calibration privileges are available by selecting 'Options' Scale Calibration from the drop down menu. If this option is not available, see your system manager log in details. The following screen will be displayed:



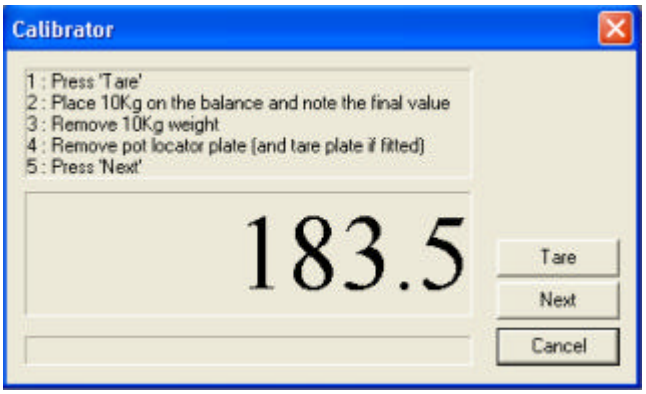
This is the basic scale programming information stored on the scale board that Vale-Tech Service may ask for if there are problems calibrating the scale. Check the scale 'range' is correct. The example above shows a 10Kg range Scale Board. The 'average' setting should be 02 on all scales.

Scale Calibration (cont)

Click OK and the following screen is displayed:



Click OK and the following screen is displayed:



Above is the ‘Calibrator’ screen showing current weight and instructions on creating pre-calibration figures which will be required for the purpose of completing a calibration certificate. If it has been established that the scale is not out of calibration, then recalibration is not required, and cancellation of the procedure can be achieved at this point. If calibration is required, clicking on ‘Next’ will start the calibration procedure which is irreversible.

Scale Calibration (cont)

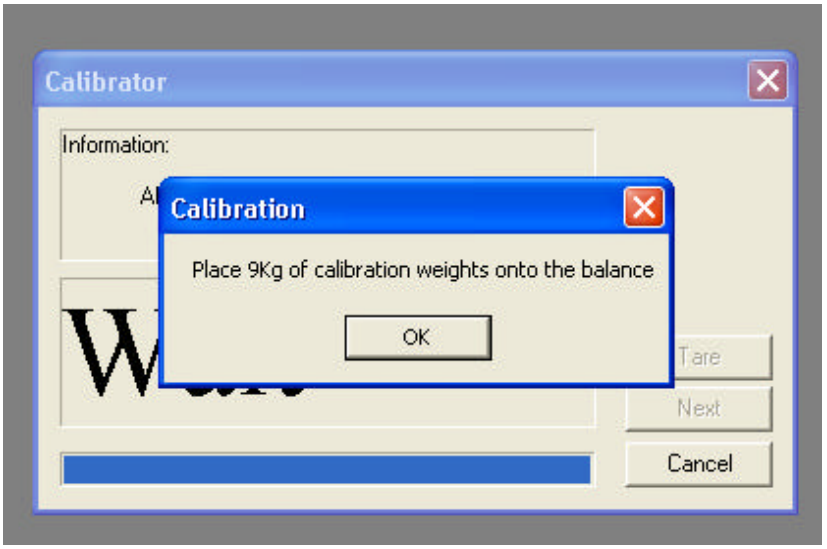
Ensure the required conformance or calibration weights are available, along with the ‘Light Weigh Pan’ as shown.

Place the light weigh pan squarely on the weigh pan with the balance locked position as shown.

Scale Calibration (cont)

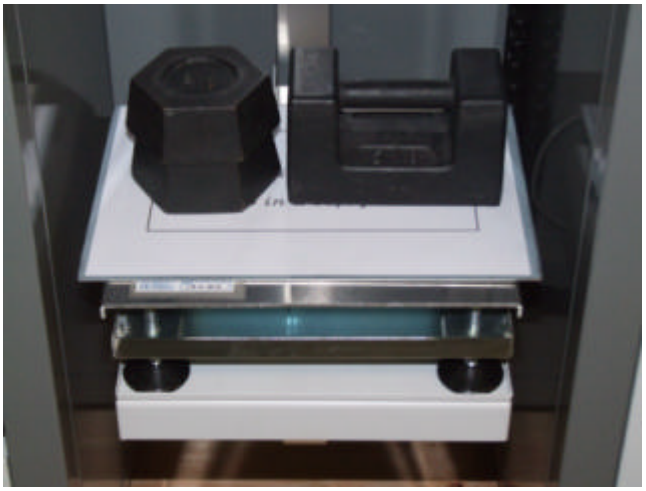
Click ‘Next’ and the calibration procedure begins. The procedure allows the scale to settle before the reading is taken. Avoid vibrations, draughts and touching the scale during this time. The blue progress bar indicates the stage of the procedure.

When the scale has finished recording the zero value, the following screen is displayed:

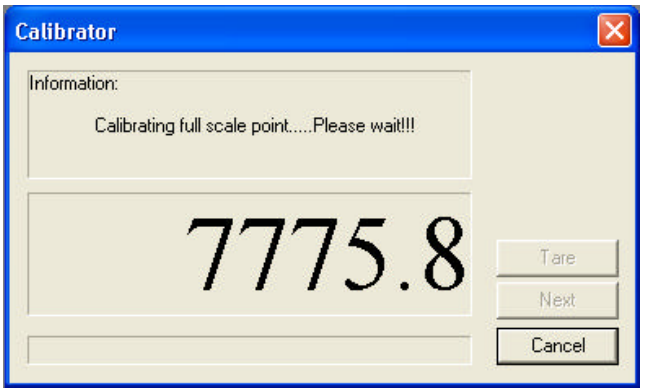


Scale Calibration (cont)

Place 9kg of conformance or calibration weights centrally on the scale with the balance locked in the home position as shown.

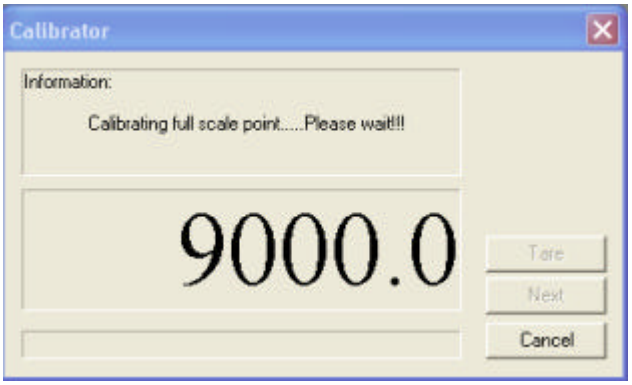


Click OK. The scale will then allow time for the readings to settle, before values are displayed, and counting up to the calibration weight value. This will overshoot up to three times reducing less each time as the calibration point is reached.

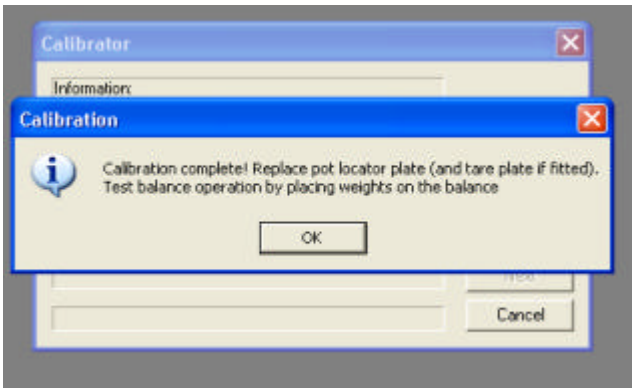


The final value, in this example 9kg, will be displayed as the value is stored. During this stage it is again important that the scale is not exposed to vibrations, draughts, or being touched.

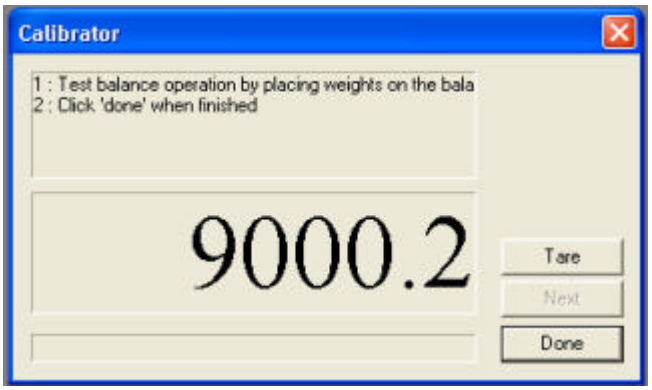
Scale Calibration (cont)



After the full scale point is stored, the following message will be displayed.



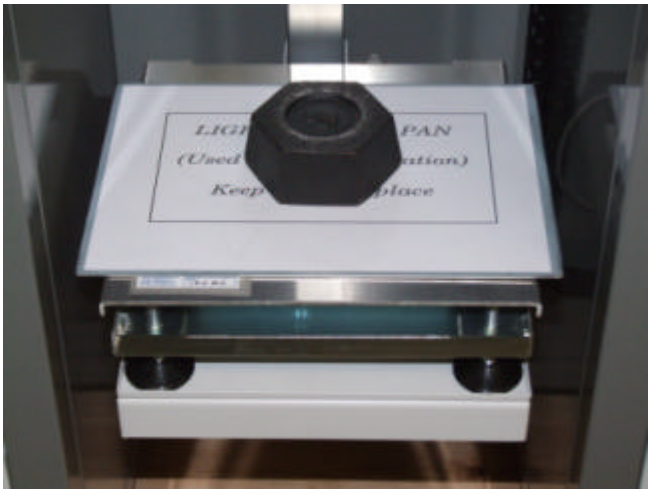
Click OK to return to the calibration window. The final weight will be displayed.



The scale calibration can be tested using this window. To do this remove all the weights from the scale, replace the weigh pan and 5kg Container Locator then click on Tare.

Scale Calibration (cont)

Place the calibration weights on the scale in 1kg increments and record the value displayed at each point, again with the balance locked in position as shown:

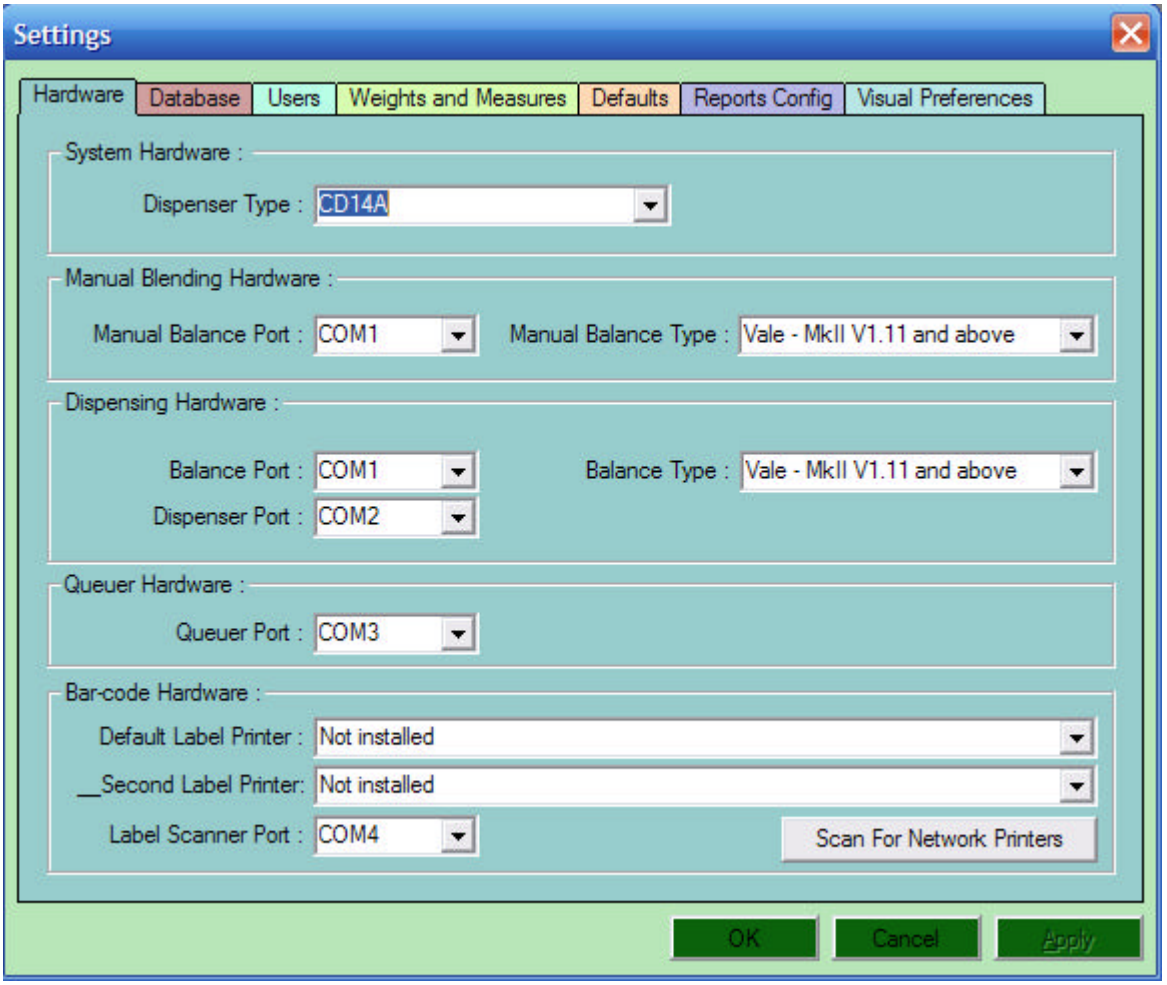


If the scale is within specification at each of the calibration points, click ‘Done’. Calibration is complete.
If calibrator screen indicates the weight incorrectly, click ‘Done’ to close the current window and repeat the calibration procedure.
If repeating the procedure does not achieve the desired results, please contact Vale-Tech Technical Support.

5 Hardware Settings

Ink Manager requires setting up to work with a particular machine and its requirements. From the drop down menu select ‘Options’, ‘Settings’, General and the following screen will appear. To configure the various fields, refer to the Hardware Set Up in the Ink Manager Training Section.

.



To configure the ports which the various items of hardware are connected into and which type of balance is being used, please refer to the Hardware Configuration information in the Service section of this manual for settings.

Note: Hardware settings should only be changed by authorised personnel/ engineers.

6 Machine Safety

The POD dispensing machine incorporates safety features which work to prevent any potential injury or harm to the user or to the machine. The safety features must not be tampered with.

When handling ink and lacquer products for use in conjunction with the CD14, suitable protective equipment must be used. Use latex (or similar) gloves, eye protection, suitable safety shoes and overalls to protect from splashes and spills.

6.1 Safety Features of the POD

6.1.1 Isolator Switch

The main power isolator switch is located on the right side of the machine. When maintenance is being carried out, the power must be isolated and the switch locked with a padlock.

6.1.2 Door Switch

The front door of the machine has a safety system which requires the door to be closed before a dispense operation can be started. If the door is opened as a dispense is about to start or while the machine is in operation, it will stop. The operation will resume once the door is closed.

Magnetic interlock to disable machine if front door opened

Warning notice

Safety Features of the POD (cont)

6.1.3 Emergency Stop Switch

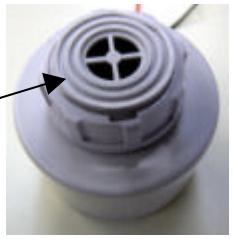
Pressing the red button labeled ‘Emergency Stop’ at the front of the machine will activate the emergency stop circuit within the electronics of the machine. The machine will require resetting as detailed in Section 2.2 before any operations can be carried out, and to stop the alarm sounding.

If the Emergency Stop button is depressed during a dispense operation, this will be aborted.
To release the Emergency Stop, the button must be turned anti-clockwise ensuring that it is not depressed further, preventing the button from releasing.

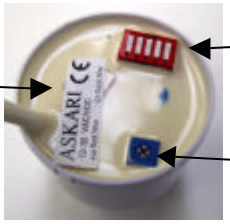
6.1.4 Alarm Sounder

The sounder is an alarm which alerts the user to any problems that occur with the machine. (It is located to the left of the Airbox assembly). The alarm volume and tone can be adjusted via settings within the sounder.
For volume adjustment, a screw can be found on the underside, and by turning this either way the volume can be decreased or increased accordingly. For tone adjustment, a series of switches which can be placed in various position combinations alter the tone.
Note: It is important that before any adjustment is made, the user is reminded that the sounder is a safety feature that must be audible above the ambient noise of the workplace.

Sounder top



Sounder underside



Tone adjustment

Volume adjustment

7 Preventative Maintenance Programme

??	Scale unit	Check: Balance calibration **MONTHLY** Excessive ink on scale and scale support Container sensor and reflector are clean and functioning **AS NECESSARY**
??	Dispense valves	Check: Coarse feed nozzle for excessive dripping Ink leakage from valve seals Flow rate configuration **WEEKLY**
??	Main drive	Check carousel drive belt and alignment for wear and tear **MONTHLY**
??	Primary air regulator	Clean filter and check air pressure is set to minimum 82psi (5.5 bar) **WEEKLY**
??	Dispense valve air	Clean filter, ensure air pressure regulator is set at 16psi (1bar) **WEEKLY**
??	General	Check: Air settings to pressout cylinder, and adjust as required Container seal gaskets, and clean/replace as required **WEEKLY**
??	General	Check machine for cleanliness and for mechanical integrity **WEEKLY**
??	General	Check and report any mechanical damage or signs of misuse **AS NECESSARY**
??	General	Check main air pipes and fittings, and electrical cables and fittings for signs of wear **WEEKLY**
??	General	Check safety switch on door and emergency stop button are functioning correctly **DAILY**

IF IN ANY DOUBT, DO NOT USE THE MACHINE UNTIL A VALE-TECH OR AN AUTHORISED SERVICE AGENT HAS CLEARED THE MACHINE FOR USE.

8 Troubleshooting Guide

8.1 PC and monitor

- **Machine power is on but no LED on front of PC is not lit**

  Press power on button at front of PC

  If no LED, check power supply switch at rear of PC is on, then press power button at front of PC

  Check power cable is secure and press power button at front of PC

- **PC LED is on but there is no display**

  If no display LED is showing, switch on monitor

  If display LED is on, check monitor cable at rear of PC is securely plugged in, turn off monitor and then turn on again.

  If display LED amber or red, display is stuck in power save mode. Turn off monitor and then turn on again.

- **PC not getting into Windows**

  Invalid system disk warning on older PC's indicates there is a disk in the floppy drive.

  If keyboard error is showing, ensure keyboard is connected securely to the PC.

  Error message Hard Disk or Boot Device; there is a hard disk fault. Call Support

  Registry device/files error message. Call Support

  PC jams as Windows loads. Re-boot using Ctrl+Alt+Del keys or switch PC off then on again.

  Problem continues. Call Support.

- **Monitor screen dark but Windows is on**

  Check that the monitor is switched on and press any key or move the mouse roller to bring out of power save mode.

- **Machine will not power up at all**

  If this occurs, check the mains power to the machine, check the isolator switch is turned to the on position and check that the PC is turned on.

8.2 Dispense Problems

?? **Slow dispense**

Check the ink container is not empty. If it empties during a dispense, the flow will slow down, and commence when a new container is installed, and the flow rate error message has been cleared.

If the problem persists after changing the ink container, check the following:

Low or no air pressure. Check air pressure regulators.
This should be: ink valve – 5bar, pressout cylinder - 3 bar*. Check main air supply is ok, and then adjust gauges to specified pressures.
(*2-4 Bar subject to ink type)

If ink container pressure remains low after air is switched on, check for air leaks in the system.

If ink leaks from the ink container, check and clean the piston gasket.

If there are no apparent air leaks, check that the ink flow rates in the Valve Configurations section of Ink Manager are set correctly.

8.3 Reset problems

?? **Machine will not reset**

Check that the door is not open.

Check the emergency stop has not been activated. If it has, turn it clockwise to release and go through reset procedure.

If door is closed and emergency stop button is not activated, call Vale Tech Technical Support.

8.4 Balance errors

?? **No weight output**

Check the calibration of the scale, and if necessary, re-calibrate.

Check that the settings in Inkmanager are the same as those in the Hardware Configuration settings.

?? **Balance display locks**

Check the balance cable is securely connected. The machine may need a re-start if it has become unplugged during operation.

8.5 Carousel

?? **Does not move after machine reset**

Check door is securely closed and door switch is active.

Check for obstructions.

Check 20mm fuses on stepper motor driver board.

Check stepper motor drive belt for wear or breakage.

8.6 Warning lamps

- **Mains indicator**

  Not lit. Check bulb and replace if necessary

- **Beacon indicator**

  One or more of the beacon lamps is not lit. Check bulb and replace if necessary.

  If beacon appears not to be functioning at all, call Support.

  If problems persist, or are not listed, contact local Authorised Service Agent, or

  Vale-Tech

  Tel: +44 (0) 1638 668593

  Fax: +44 (0) 1638 676720

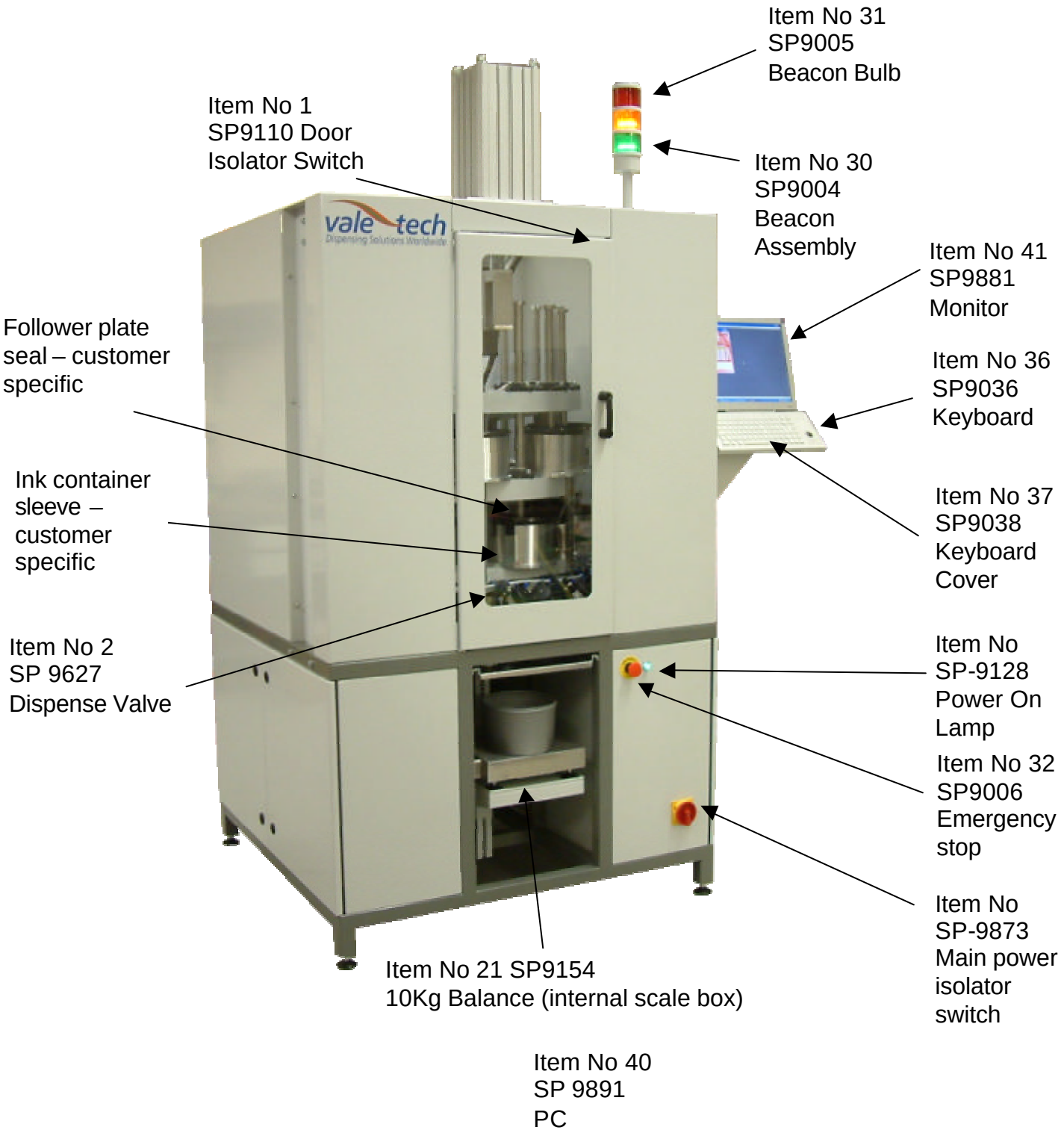
  E.Mail: technical.support@vale-tech.co.uk

9 Spare Parts

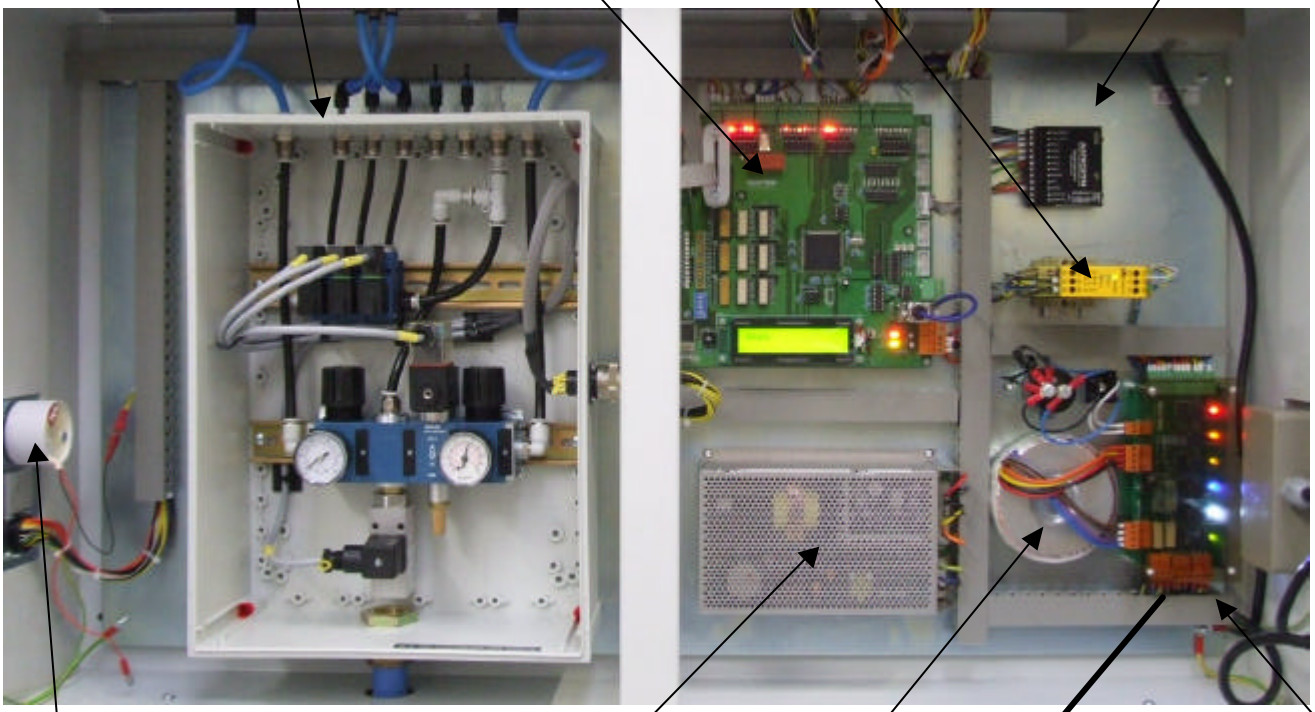
9.1 Parts List

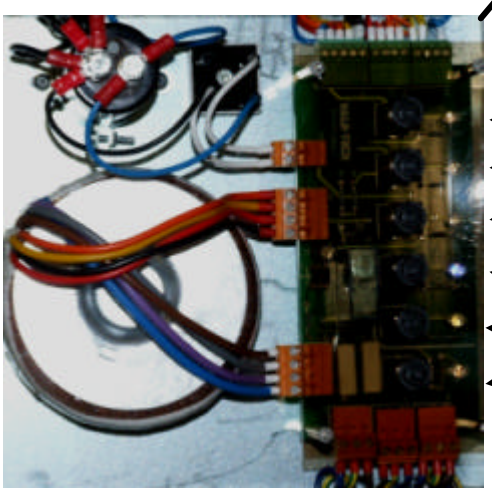
Item	Part No.	Description
1	SP-9110	Door Isolator switch
2	SP-9627	DA L body Dispense valve
3	SP-9640	Drip wipe assembly
4	SP-9641	Drip wipe doctor blade
5	SP-9615	Drip wipe motor
6	SP-9645	Carousel Drive Motor
7	SP-9646	Gear box 10:1 Mk 1.
8	SP-9647	Gear box 40:1 Mk 2.
9	SP-9648	Motor Drive Coupling
10	SP-9069	Carousel position sensor
11	SP-9636	Valve roller switch
12	SP-9637	Roller switch actuator
15	SP-9407	Pot Sensor
16	SP-9408	Pot Sensor reflector (tape)
21	SP-9154	10kg balance (internal box)
22	SP-9638	Ink Container 4 bar air regulator
23	SP-9639	Ink Container air regulator 4 bar gauge
27	SP-9643	Balance power connector 3 way XLR socket
28	SP-9644	Balance comms connector 9 way ‘D’ socket
29	SP-9618	Air Cabinet - complete
30	SP-9004	Beacon 3 colour lamp assembly
31	SP-9005	Beacon bulb (24v bayonet)
32	SP-9006	Emergency stop switch
33	SP-9008	Emergency stop safety relay (Piltz)
34	SP-9011	Controller Board
35	SP-9023	Fuse board (6 way)
36	SP-9036	Cherry Trackerball keyboard
37	SP-9038	Cherry Trackerball keyboard cover
38	SP-9125	8 amp 20mm fuse (pack 10)
39	SP-9022	Stepper Motor Controller (Async)
40	SP-9891	PC
41	SP-9881	15” TFT Monitor
42	SP-9129	Switch Mode Power Supply
43	SP-9120	Linear power supply
44	SP-9226	Pilot Solenoid Valve (18mm)
45	SP-9654	Main supply air regulator with 6 bar gauge
46	SP-9653	Ink container/canister, air regulator with 4 bar gauge
47	SP-9655	Air pressure switch (1/8”)
48	SP-9656	Air in isolator switch
49	SP-9003	Sounder
50	SP-9652	Stepper Motor/Gearbox assembly (10:1)
51	SP-9124	5 amp 20mm fuse (pack 10)

9.2 Parts Diagram 1

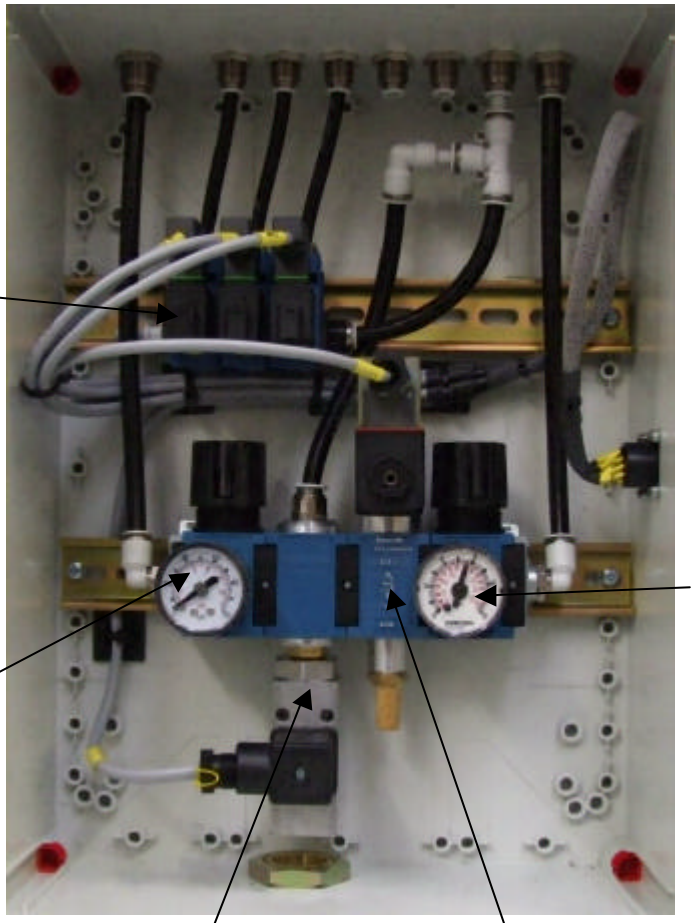


9.3 Parts Diagram 2





9.4 Parts Diagrams 3



Item No. 44 – SP9226 –
24v Pilot valve manifold (x3)

Item No. 45 – SP9654 - 6 Bar
Main Air supply regulator
(+gauge)

Item No. 46 – SP9654 - 4 Bar
Pot Supply regulator (+ gauge)

Item No. 47 – SP9655 -Input pressure
Switch

Item No. 48 – SP9656
Air input isolator switch & dump valve

10 PC Hardware Configuration

The following information is recorded during the final quality control checks and reflects the PC configuration prior to shipping. Any changes made to the configuration after this may not be recorded. This record may provide essential information in restoring system operation in the event of system failure. Please do not remove it from this folder.

11 Ink Manager Hardware Configuration

12 Drawings

Main Circuit Diagram

Lead 1

Lead 2

Chassis Circuit

Electrical Chassis Layout

TRAINING MANUAL

13 Ink Manager Software

The Ink Manager Software Training Manual that follows will provide you with the information you need to use all the advanced functions and features, along with basic instructions necessary for simple operation of the software. It can also act as a complete package for structured on-site training.

SERVICE LOG

14 Service Log

14.1 Introduction

This Service Log serves to provide contact information; should additional assistance be required please refer to the contact details supplied below. Forms available at the end of this section allow space for the service history of the machine to be recorded for future reference.

15 Contact Information

If you require any additional assistance or have any queries, please contact

Vale-Tech

Direct on:

Office: +44 (0) 1638 668593

Fax: +44 (0) 1638 676720

Email: technical.support@vale-tech.co.uk

Website: www.vale-tech.co.uk

Address:

VALE-TECH LIMITED
Unit 12
Depot Road
Newmarket
Suffolk
CB7 OAL
UK

16 Service History

16.1 Machine Fault/Maintenance Log

Date	Action Taken	Signed

Machine Fault/Maintenance Log (cont)

Date	Action Taken	Signed