

AUTO CENTRING PUNCH
Omicrøn



Operating Manual

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2 Owner Registration

TO ENSURE SIBERT INSTRUMENTS SUPPLIES YOU WITH ANY NECESSARY HARDWARE, SOFTWARE OR DOCUMENTATION UPDATES, PLEASE ENTER YOUR COMPANY DETAILS, DETACH THIS PAGE AND FAX OR POST TO:-

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THE PINES	FAX:	+44 (0) 1483 302699
BROAD STREET		
GUILDFORD	EMAIL:	Sales@Sibert.co.uk
SURREY		
GU3 3BH		
ENGLAND		

COMPANY NAME: ADDRESS: CONTACT:	
FAX: PHONE: EMAIL:	

I would like to register for a username and password for the Sibert Customer web site (please specify email address above)

DO NOT WRITE BELOW THIS LINE

Omicrøn SERIAL NUMBER	
DATE OF MANUFACTURE	
QA ENGINEER SIGNATURE and STAMP	

3 Important Notices

3.1 Safety Notices



Please do not switch on this equipment unless the operating manual has been fully read and understood. If there is any difficulty in understanding, or a translation is required, please contact the address below:



Ne mettez pas cet équipement sous tension avant d'avoir entièrement lu et compris le manuel d'utilisation. Si vous rencontrez des difficultés de compréhension ou avez besoin d'une traduction, contactez l'adresse suivante:



Bitte schalten Sie die Geräte nicht ein, bevor Sie das Bedienungshandbuch vollständig gelesen und verstanden haben. Wenn dabei Verständnisschwierigkeiten auftreten oder Sie eine Übersetzung benötigen sollten, wenden Sie sich bitte an die nachfolgende Adresse:



Non accendere questa apparecchiatura senza prima avere attentamente letto e compreso il Manuale delle istruzioni. In caso di difficoltà di comprensione, o se si richiede una traduzione, si prega di contattare il seguente indirizzo:



Deze apparatuur pas inschakelen als u de handleiding helemaal hebt gelezen en begrepen. Mocht er iets zijn dat u niet begrijpt, of mocht u een vertaling nodig hebben, neem dan contact op met het onderstaande adres:



No encienda este equipo antes de haber leído y comprendido El Manual de Funcionamiento correspondiente. Si tuviera alguna dificultad en comprenderlo o necesita una traducción, sírvase contactar con la dirección siguiente:

3.2 Information Content

All rights reserved. Reproduction of any part of this manual or Omicrøn program or Omicrøn software in any form whatsoever without the express written permission of Sibert Instruments is strictly forbidden.

All efforts have been made to ensure the accuracy of the information in this manual, however the contents of this manual are subject to change without notice.

Sibert Instruments shall not be liable against any damages or problems arising from the use of options, consumables or spares, other than those supplied or designated by Sibert Instruments.

The above notwithstanding, Sibert Instruments can assume no responsibility for any errors in this manual or their consequences.

3.3 Sales and Service Address

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3.4 Safety Instructions

3.4.1 Site Selection

When selecting the installation site for the equipment and the pertaining components, relevant health and safety procedures should be followed.

Applicable technical and building regulations must also be observed.



The Omicrøn has been tested under “A” weighted continuous sound and does not exceed 70 decibel noise levels.



The Omicrøn has been tested under “C” weighted instantaneous sound and does not exceed 130 decibel noise levels.

The unit must be placed on a suitable level surface offering the system firm support.

Ensure there is sufficient surrounding clearance for maintenance and cleaning operations.

Sibert Instruments recognises the need for and produces a purpose made bench for the Omicrøn accommodating the wand holder together with the filter and regulation unit.



Do not deposit any objects in front or on top of the unit.



Hoses and electrical cables must be laid in a manner to prevent tripping and damage.

3.4.2 General Notes on Safety

All persons concerned with the installation, commissioning, operation, maintenance and repair of the system and its components must have read the operating instructions, particularly those on Safety. If necessary, in-house instruction should be provided, specifically taking into account the qualifications of the individual persons.

Prior to commissioning the system, the user must ensure that all safety conditions are met.



Both this Service Manual and the Operating Manual should be read before attempting to operate the Omicrøn.



Only authorised personnel to carry out maintenance or adjustments to this Omicrøn.

The system must be maintained and repaired only by persons who are familiar with the system and have been informed about the potential hazards and possess the necessary qualifications.

The pertinent regulations for prevention of accidents and other generally recognised safety and industrial medical requirements must be observed.

3.4.3 Notes on Safety for Operating Personnel

All working methods are forbidden, which:

- constitute a danger to the life and limb of the user or third parties,
- are detrimental to the system or others,
- are detrimental to the safety and proper function of the system,
- are not in compliance with the specified notes on safety.



No safety devices may be removed or rendered inoperative.

If it should become necessary to remove safety devices for setting, repair and maintenance purposes, the safety devices must be replaced immediately on completion of maintenance or repair works, prior to switching the Omicrøn on.



Safety devices must be replaced prior to re-connecting Electrical or Pneumatic supplies.

The generally applicable safety rules and regulations for the prevention of accidents must be observed.



Only those items that can be adjusted or maintained by non Sibert personnel are to be accessed or adjusted.

Use for any other than the intended purpose is considered improper. The manufacturer disclaims all liability for any damage resulting from such use; the user/operator is solely liable.



Maintenance and repair may only be undertaken when the unit is switched off and disconnected from the Electrical input supply.

3.4.5 Spare Parts



Hazardous voltages are present in this Omicrøn



Use recommended spare parts only. For a list of authorised spare parts please contact Sibert Instruments.



This Omicrøn must be earthed



Repair work on hydraulic and pneumatic system, may only be carried out when relevant pressures are zero or disconnected from all mains supplies.

3.4.6 Terms of Guarantee



The front guard must be closed and all covers present during normal punching operation.

Use, other than for intended purpose and unauthorised changes or modifications to the unit and/or its components or software or programs which are part of the scope of supply of Sibert Instruments, exclude any liability of the Manufacturer for damage caused as a result of such changes or modifications. The warranty/guarantee of the manufacturer is invalidated.



When handling nickel Stampers, protective gloves should be worn.

The removal of side access panels by any person other than Sibert employees and the attachment of associated components i.e. keyboard etc. constitutes use, other than for intended purpose as above and will also invalidate the warranty/guarantee.



Care should always be taken when handling Punch and Die sets.



Do not use sharp objects on the LCD screen.
Do not spill any liquid onto the screen.

3.4.4 Use for the Intended Purpose



This Omicrøn is intended solely to punch the inner and outer diameter of CD/DVD Matrix Stampers up to a maximum of 0.35mm thickness. For optimum results, a hardness of 200 +/- 10% HV 0.5 is recommended. This machine is to be used only with the components supplied and approved by Sibert Instruments.

4 Warning Labels



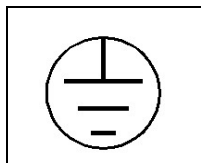
WARNING
DANGER OF INJURY FROM
EDGE OF STAMPER

FOUND ON BASE
PLATE ABOVE
FRONT PANEL



**EMERGENCY
STOP**

FOUND ON FRONT PANEL




FOUND ON REAR CASTING
ADJACENT TO
PRIMARY EARTH POINT



WARNING
THIS EQUIPMENT
MUST BE EARTHED

FOUND ON REAR CASTING
ADJACENT TO
ELECTRICAL POWER INLET



DANGER
 DO NOT REMOVE COVER UNLESS
DISCONNECTED FROM MAINS
SUPPLY

FOUND ON ALL REMOVABLE
COVERS PROTECTING
ELECTRICAL SYSTEMS

5 Equipment Diagram

5.1 Front and Right Hand Side



- | | | | |
|-----------|---|-----------|---------------------------------|
| 1 | Top Cap | 15 | Left Hand Cover Plate |
| 2 | Top Cover | 16 | Anti-Vibration Feet |
| 3 | Back Cover | 17 | Centre Hole Waste Outlet |
| 4 | Right Hand Cover Plate (CD ROM and PC extension sockets) | 18 | LCD Touch Screen |
| 5 | Rear Cover Plate (Hydraulic Booster) | 19 | Lower Ejection Ring |
| 6 | Pneumatic Input | 20 | Pre-Centring Cylinder |
| 7 | Electrical Input, Switch and Fuse | 21 | Nudge Cylinder |
| 8 | Oil Level Max. And Min. Indicator | 22 | Vacuum Turntable |
| 9 | Oil Level Sight Glass | 23 | Objective Lens |
| 10 | Optics Adjustment Lever | 24 | Upper Punch And Die Set |
| 11 | Optical Head | 25 | Lower OD Punch |
| 12 | Fibre Optic | 26 | Front Guard |
| 13 | Lower Punch and Die Assembly | 27 | Optics Locking Screw |
| 14 | Optics Adjustment Finger Rests | 33 | Lower ID Die |

5.2 Rear and Left hand Side



7

6

3

5

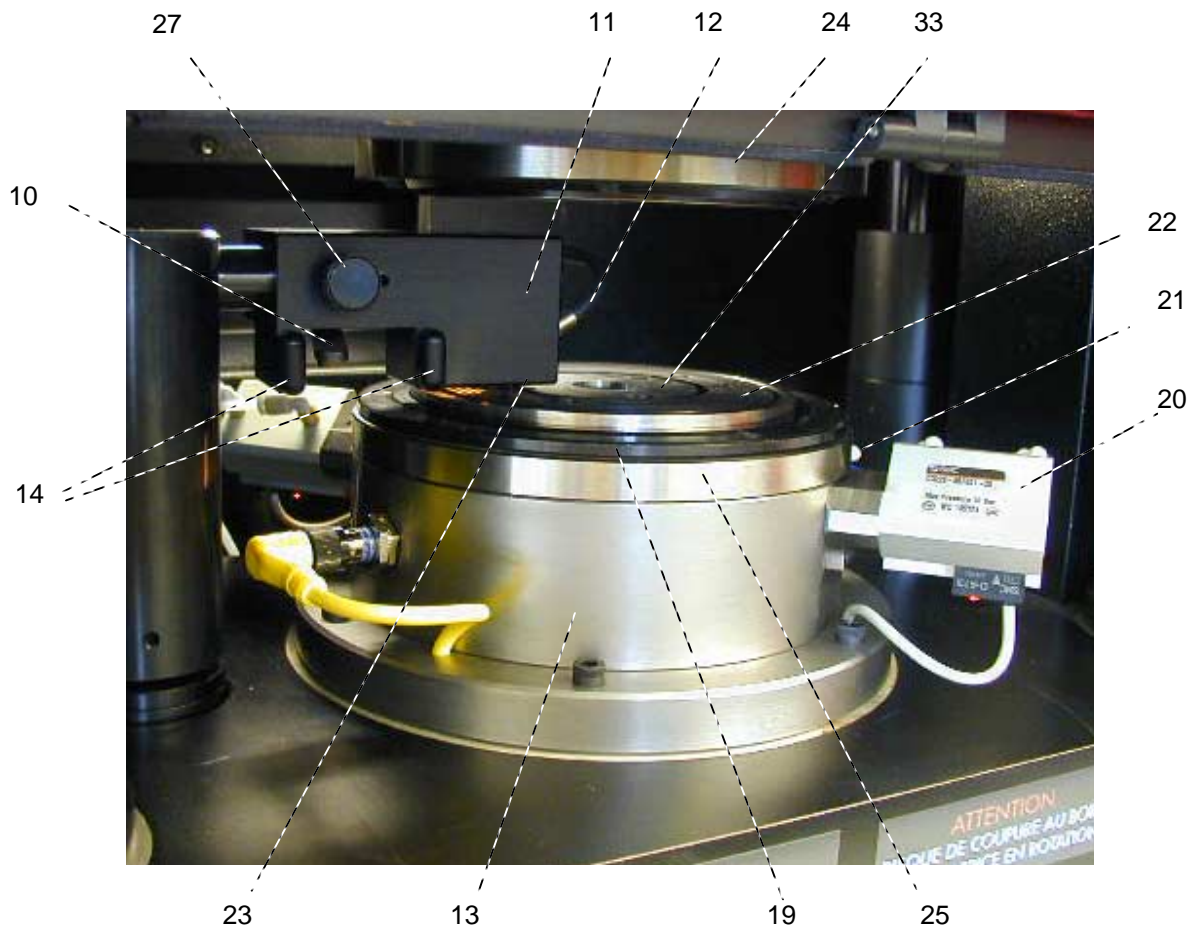
15

16

- 1 Top Cap
- 2 Top Cover
- 3 **Back Cover**
- 4 Right Hand Cover Plate (CD ROM and PC extension sockets)
- 5 **Rear Cover Plate (Hydraulic Booster)**
- 6 **Pneumatic Input**
- 7 **Electrical Input, Switch and Fuse**
- 8 Oil Level Max. And Min. Indicator
- 9 Oil Level Sight Glass
- 10 Optics Adjustment Lever
- 11 Optical Head
- 12 Fibre Optic
- 13 Lower Punch and Die Assembly
- 14 Optics Adjustment Finger Rests

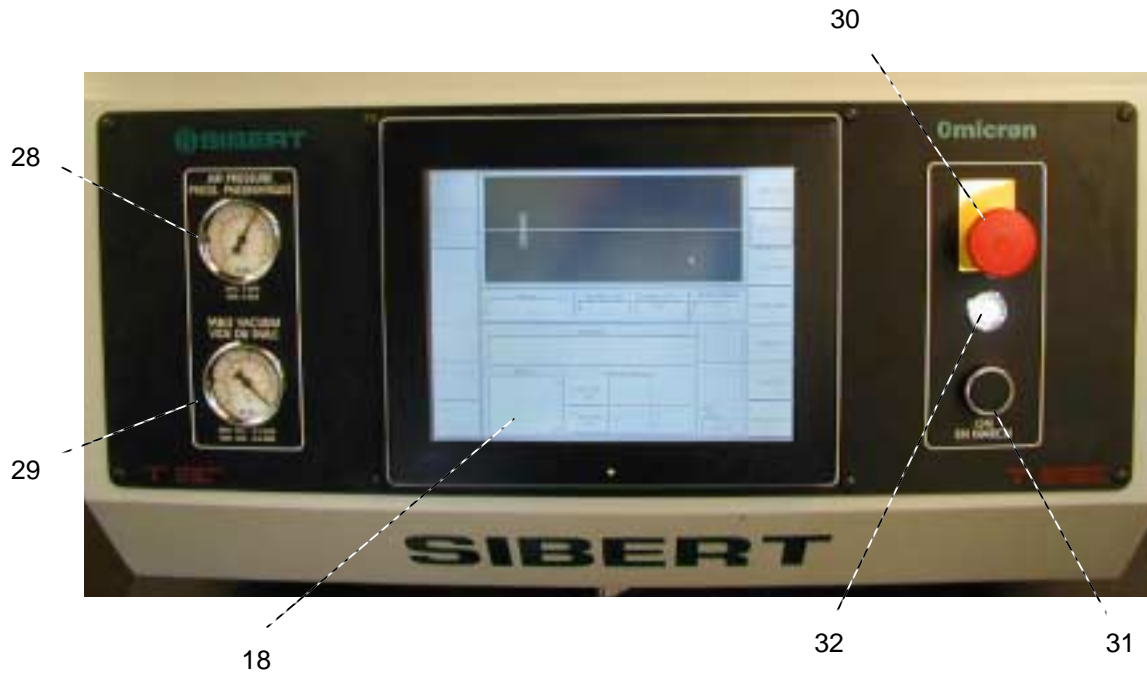
- 15 **Left Hand Cover Plate**
- 16 **Anti-Vibration Feet**
- 17 Centre Hole Waste Outlet
- 18 LCD Touch Screen
- 19 Lower Ejection Ring
- 20 Pre-Centring Cylinder
- 21 Nudge Cylinder
- 22 Vacuum Turntable
- 23 Objective Lens
- 24 Upper Punch And Die Set
- 25 Lower OD Punch
- 26 Front Guard
- 27 Optics Locking Screw
- 33 Lower ID Die

5.3 Punch and Die Area



- | | | | |
|----|--|----|--------------------------------|
| 1 | Top Cap | 15 | Left Hand Cover Plate |
| 2 | Top Cover | 16 | Anti-Vibration Feet |
| 3 | Back Cover | 17 | Centre Hole Waste Outlet |
| 4 | Right Hand Cover Plate (CD ROM and PC extension sockets) | 18 | LCD Touch Screen |
| 5 | Rear Cover Plate (Hydraulic Booster) | 19 | Lower Ejection Ring |
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| 13 | Lower Punch and Die Assembly | 27 | Optics Locking Screw |
| 14 | Optics Adjustment Finger Rests | 33 | Lower ID Die |

6 Control Panel



- | | | |
|----|-----------------------|--|
| 28 | Air Pressure Gauge | Indicates Pneumatic Pressure (bar and psi).
If supply is less than 6 bar, the 'Process' field displays 'Low air pressure'.
If supply is less than 4.5 bar, the 'Process' field displays 'No air pressure'. |
| 29 | Table Vacuum Gauge | Indicates vacuum (bar and Hg) clamping the Stamper to the Turntable. If vacuum is less than -0.4 bar, an error message is displayed in 'Process' field |
| 18 | LCD Screen | A fully functional Process Control 'Touch' screen with a magnified image of the Stamper embedded within it. |
| 30 | Emergency Stop Button | The Omicrøn can be stopped at any time by PUSHING the EMERGENCY STOP BUTTON. This will remove both electrical and pneumatic power from the Omicrøn. |
| 31 | Power Switch | Push Button that switches on the Omicrøn provided Emergency Stop button is pulled out. |
| 32 | Power Indicator | Indicates that the Omicrøn is switched on and Emergency Stop button is pulled out |

7 Power Failure Reset Procedure

If any of the following conditions occur:-

Electrical supply Loss

Omicrøn **switched off in error**

then the following procedure must be undertaken

- 1 Switch OFF the Omicrøn using Electrical Inlet Power switch (7)
- 2 Restore Electrical supply to the Omicrøn (if removed)
- 3 Switch ON the Omicrøn using Electrical Inlet Power switch (7)



7

The Omicrøn is now ready for normal use.

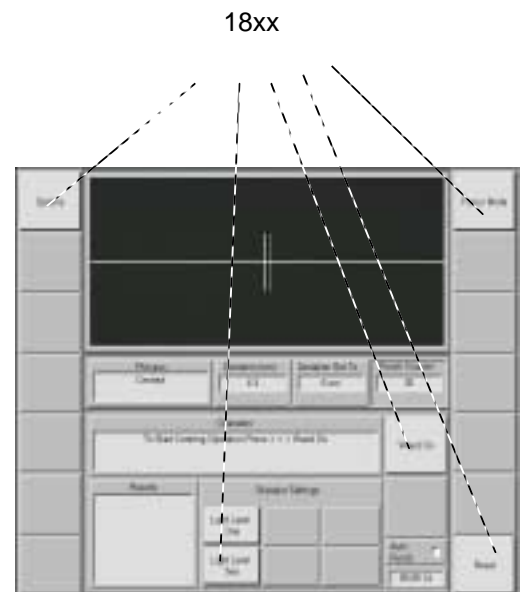
Refer to Section 9.1 for normal power on procedure.

Note: Dependant upon the state of the Omicrøn when power was removed, Microsoft Scandisk may execute during power up.

8 The LCD Screen

The LCD screen is a colour 'touch' type screen and it replaces the familiar switch and push button controls used in previous generations of Sibert punching equipment.

The 'touch areas' (18xx) can be 'touched' either with the tip of the finger or with the stylus provided in the Tool Kit, this will 'operate' the function relating to the area 'touched'.



For cleaning see section 10.



Do not use sharp objects on the LCD screen.

Do not spill any liquid onto the screen.

9 Operation

9.1 Switching Power On

The Omicrøn has one Electrical Inlet switch (7) on the rear of the lower casting. This controls electrical power to all parts of the Omicrøn. Under normal circumstances, this is left in the ON position.

Before operating the Power On button (31) ensure that the Emergency Stop Push Button (30) is pulled out.

Press Power On button (31)
The Power On Indicator Light (32) will illuminate and the Touch LCD Screen (18) will indicate the power on process of the in-built computer system.

When the Omicrøn has fully completed the power on cycle, the initial default screen is visible.



7

9.2 Initial Screen Defaults

The following are the screen default field settings:-

Process (18a) is blank

Light Level (18b) is set to last used level

Auto Punch (18c) is set to 'NO' (no tick)

Deviation (18d) displays 10 micron (Factory setting for Customer)

Wand On (18e) is available

Options (18f) is available

Focus Mode (18g) is available

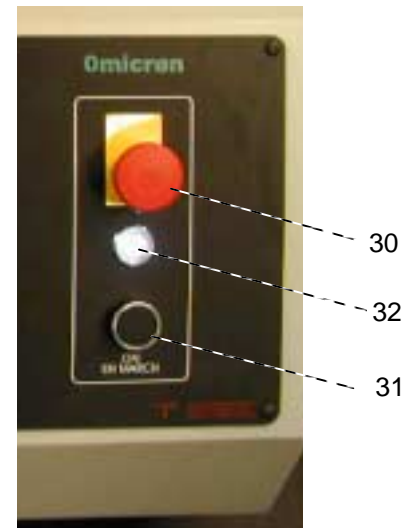
Results field (18h) will display previous Stamper results providing the Omicrøn has not been powered off.

Language Mode (18j) is available

Reset is available (18k)

Punch Counter (18m) displays the number of punching operations completed for the current Punch and Die set.

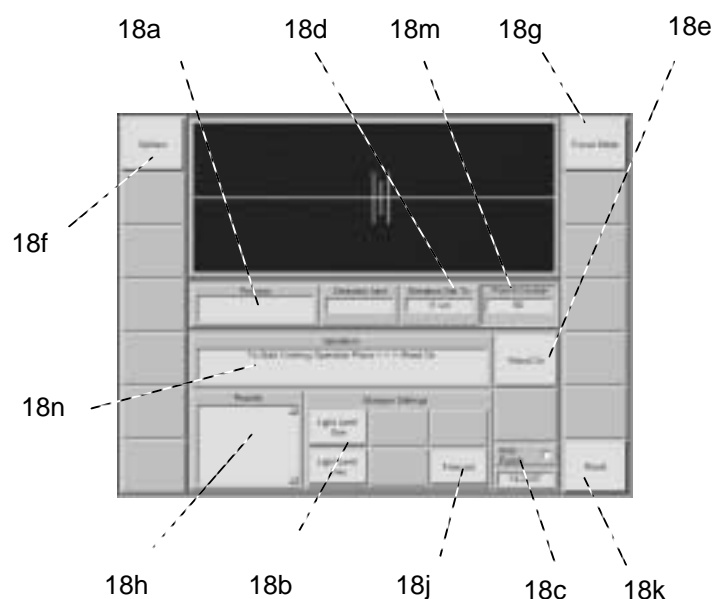
Operation (18n) displays 'To start Centring Operation Press>>>> Wand On'



30

32

31



If the Air Pressure Gauge (28) is not indicating between the specified limits (6 - 8 bar) 'Operation' field (18n) will display 'Air pressure low' or 'No air pressure'. Correct the problem before proceeding.

9.2.1 Resetting the Screen or Operation

At any time prior to starting the punching cycle, touching Reset (18k) will reset the current operation and return the screen to the initial defaults screen.

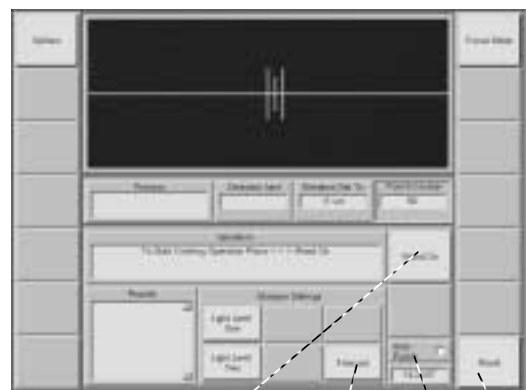
9.2.2 Setting Auto Punching

Touching Auto Punch (18c) will alternately set or unset the Auto Punching mode.

9.2.3 Changing Language

Touch Language (18j) to cycle through languages until screen is displaying correct language. Note: This also resets the current operation – See section 9.2.1

Further details on changing the initial and other settings can be found in the Service Manual.



18e

18j

18c

18k

9.3 Stamper Pre-Alignment



Ensure the Wand and Stamper are clean and free of dust and nickel particles. See Section 10 - Cleaning



When handling nickel Stampers, protective gloves should be worn.

Important: Careful pre-alignment and placement of the Stamper using the Wand in these sections will achieve consistent results.

The Front Guard should now be fully opened and secured in the upright position by means of the magnetic catch.

9.3.1 The Pre-Centring Wand

The Pre-Centring Wand is attached to the Omicrøn by a flexible pneumatic pipe.

When not in use, the wand should be located in the wand holder to prevent damage to the locating pins and alignment aperture. Stamper alignment can be affected by wand damage.



The Wand handle incorporates a vacuum-regulating aperture. With the aperture 'open' the vacuum available at the Stamper surface is approximately 50% of the normal operating vacuum, allowing the position of the Stamper to be adjusted on the wand.

9.4 Pre-Centring the Stamper

Touch Wand On (18e) on the LCD (xx)

Operation field (18n) displays 'Pre-centre Stamper on Wand and Load Machine'

Vacuum is applied to the Wand ready for positioning the Stamper.

Initial Stamper alignment is achieved by visually aligning the centre of information diameter on Stamper within the aperture on the Wand. The diameter of the wand aperture has been designed to show approximately 1mm of information around the inside diameter. When the Stamper is pre-aligned, close the vacuum regulation aperture (located on the Wand handle) by finger or thumb as shown

Note: Sibert produce a range of Wands with varying Stamper view aperture sizes according to Customer requirements.

9.5 Stamper Placement



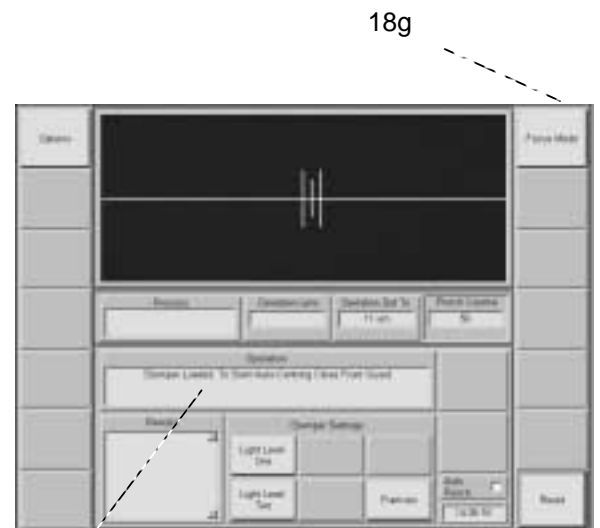
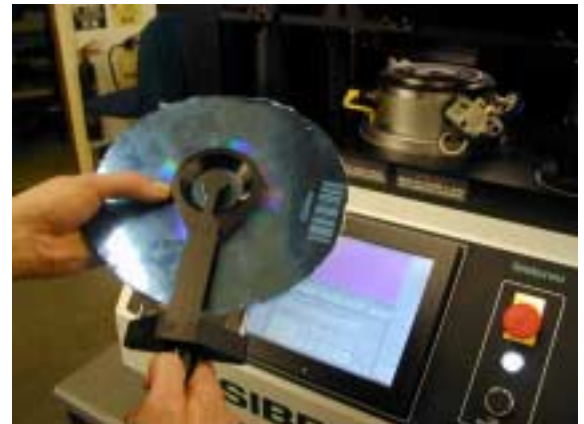
Ensure the Vacuum Table is clean and dry. See Section 10 - Cleaning

Once pre-aligned on the Wand, the Stamper can be placed on the Vacuum Table of the Omicrøn.

Carefully locate **both** Wand alignment pins against the outer casing of the Lower OD Punch (25) with the Wand at a slight upward angle and gently lower the Stamper onto the Turntable.

Note: If the approach angle is too severe, the back of the Stamper may suffer slight scratching from the cutting edge of Punch and Die.

The Vacuum Table will sense the presence of a Stamper and automatically apply the correct vacuum and at the same time the Wand vacuum will automatically switch off, thus allowing the Wand to be withdrawn.



18n



25

The Stamper will now be pre-aligned and well within the range of the Auto Centring table of the Omicrøn Punch and Die Set.

The Operation field (18n) now displays 'Stamper Loaded. To Start Auto-Centring Close Front Guard'.

See Section 9.7 to continue Automatic Centring

9.6 Aligning the Optics

The Omicrøn Optics are factory set to view the edge of Stamper information either on the 'Right' or on the 'Left'.

Variations in Stamper dimensions may require that minor adjustment to focus and Optics position be carried out. i.e. for the first Stamper of a batch or similar.

Following Stamper placement, the Centring process can be paused at any time by using Focus Mode (18g), table vacuum will remain constant during this process.

Sections 9.6.1 to 9.6.6 describe the scenarios that are applicable to Optics position setting.

Note: See section 10.1 for further explanation of deviation markers

Open the Front Guard.

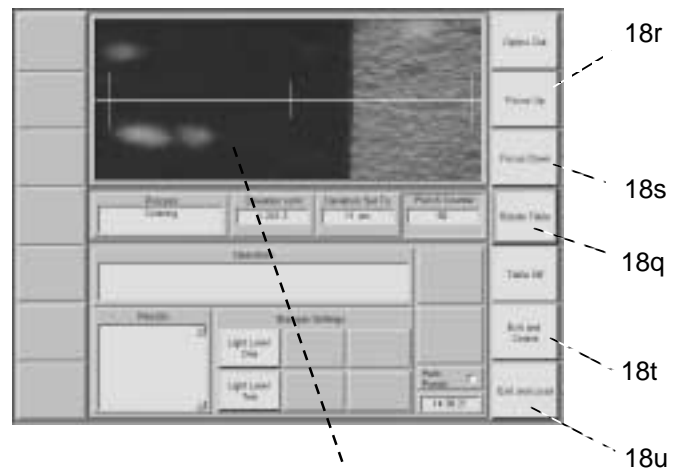
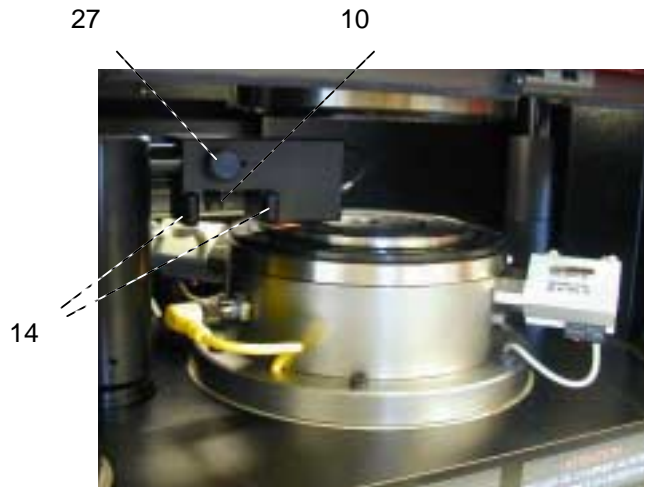
With the Stamper information visible, use Turntable Rotate (18q) and Focus up/down (18r / 18s) whilst viewing the information on the screen. The information edge may appear to move from side to side across the screen showing the extent of deviation dependant upon original Stamper Placement (see section 9.5).

Unlock the Optics Lock Screw (27) and carefully move the Optics Adjustment lever (10) left or right with the aid of the Finger Rests (14) according to one of the following (Sections 9.6.1 to 9.6.6)

Notes:-

It may be necessary to use one or more of the procedures.

If the information edge travels across the screen extremely fast or the Optics position is difficult to set, then the Stamper Placement sections 9.4 and 9.5 may need to be repeated.



A simplified view of the screen area is shown in the following sections (9.6.1 to 9.6.6)

9.6.1 Edge Visible (information on the Right)

When turntable is rotated, the information appears on screen from the Right and moves as shown in the diagram. Stop turntable rotate when the information edge is estimated to be at the furthestmost point on screen to the left. Slowly move optics lever Left, until the edge of the information is just off the screen to the left. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

Repeat this procedure a few times until the edge appears to be equally off screen both right and left for approximately the same time period.

When the above is true, carefully lock the Optics Lock Screw (27).

Close the Front Guard and touch Exit and Centre (18t) to continue or touch Exit and Load (18u) to reposition the Stamper.

See Section 9.7 to continue Automatic Centring

9.6.2 All Information (information on the Right)

When turntable is rotated, only information appears i.e. no edge is visible.

Stop turntable rotate and slowly move optics lever Right, until the edge of the information is approximately in the middle of the screen. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

Final Optics alignment will now be achieved by using the normal 'Edge Visible' Section 9.6.1.

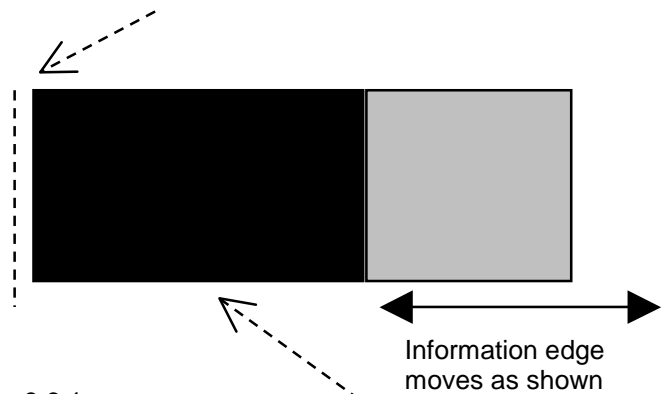
9.6.3 Non Information (information on the Right)

When turntable is rotated, only non-information appears i.e. no edge is visible.

Stop turntable rotate and slowly move optics lever Left, until the edge of the information approximately in the middle of the screen. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

Final Optics alignment will now be achieved by using the normal 'Edge Visible' Section 9.6.1.

Move Information edge to this position

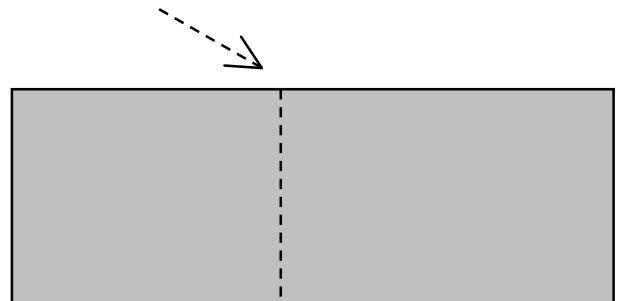


9.6.1
Edge Visible

Stop Turntable rotate when Information edge is estimated to be here on screen

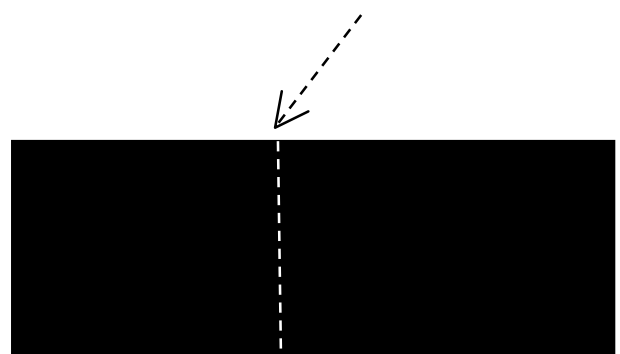
Move Information edge to this position

9.6.2
All Information



9.6.3
Non-Information

Move Information edge to this position



9.6.4 Edge Visible (Information on the Left)

When turntable is rotated, the information appears on screen from the Left and moves as shown in the diagram. Stop turntable rotate when the information edge is estimated to beat the furthestmost point on screen to the Right. Slowly move optics lever Right, until the edge of the information is just off the screen to the right. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

When the above is true, carefully lock the Optics Lock Screw (27).

Press Exit and Centre (18t) to continue or Exit and Load (18u) to reposition the Stamper.

See Section 9.7 to continue Automatic Centring

9.6.5 Non Information (Information on the Left)

When turntable is rotated, only non-information appears i.e. no edge is visible.

Stop turntable rotate and slowly move optics lever Right, until the edge of the information is approximately in the middle of the screen. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

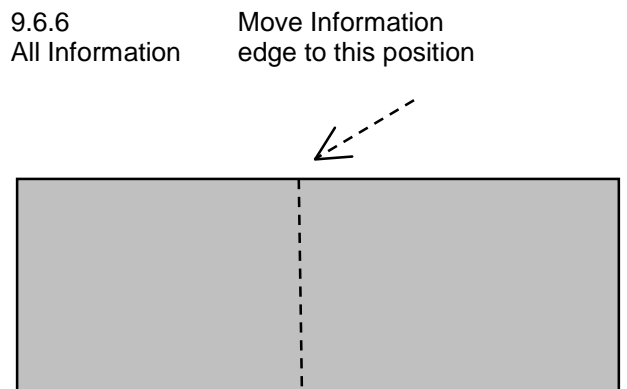
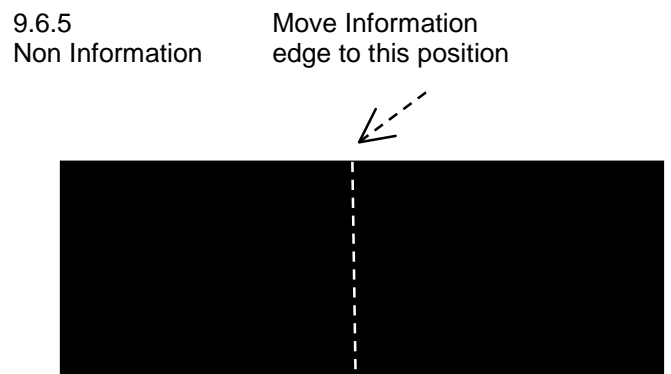
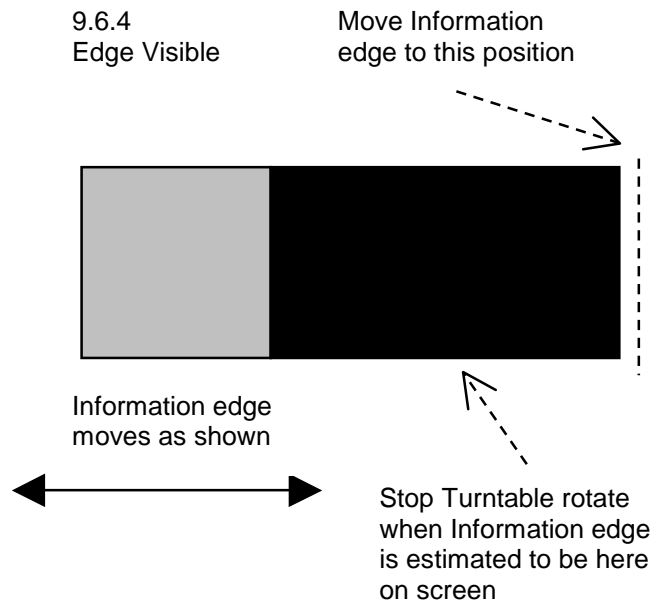
Final Optics alignment will now be achieved by using the normal 'Edge Visible' Section 9.6.4.

9.6.6 All Information (Information on the Left)

When turntable is rotated, only information appears i.e. no edge is visible.

Stop turntable rotate and slowly move optics lever Left, until the edge of the information is approximately in the middle of the screen. The amount of movement required by the Optics lever will vary dependant upon the original position of information edge.

Final Optics alignment will now be achieved by using the normal 'Edge Visible' Section 9.6.4.



9.7 Automatic Stamper Centring

Close the front guard.

Process field (18n) displays 'Optics In' followed by 'Centring' as the auto centring process starts.

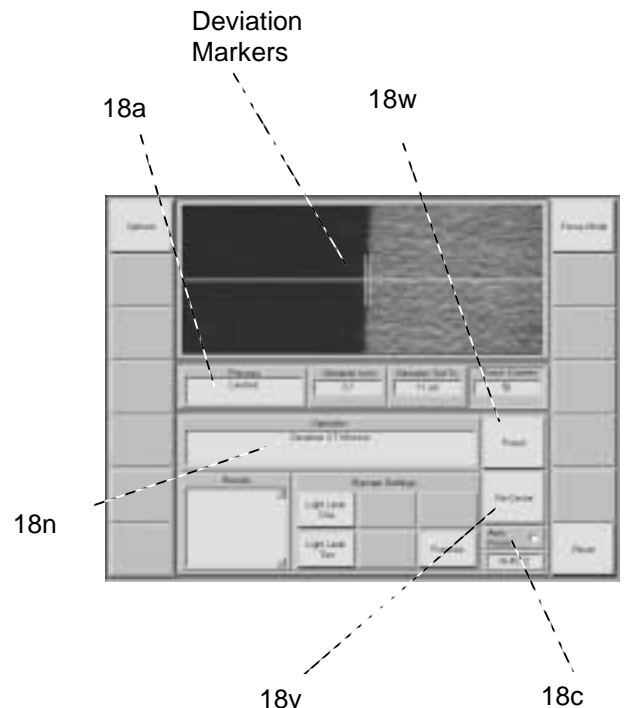
Note: See section 10.1 for further explanation of deviation markers



If the Vacuum Turntable detects a vacuum loss for any reason, Stamper Centring operation will not start. In this case carefully remove the Stamper and touch Reset (18k) to repeat the Stamper placement procedure again.



Note: Focus variations noticed during Turntable revolution will only be due to inconsistent Stamper thickness



Centring will normally continue until the deviation is below the pre-set parameter or within the Secondary Threshold).

Should the automatic Centring operation fail to complete, an error message will be displayed in Operation field (18n), indicating a possible solution as follows:-

Problem	Message
The use of Optics Mode for minor adjustment - see section 9.6	'Focus or Optics Setting Required > > > Focus Mode'
Stamper re-position is required - see sections 9.4 and 9.5	'Inspect Stamper, Check Optics Focus and Turntable Travel'
Optics re-position is required section - see section 9.6	'Optics Setting Required. Use > > > Focus Mode and Move Optics Lever Left'
The deviation is within the secondary Threshold	'Deviation Within (xx) Microns of Target. Punch, Re-Centre or Reset?' (Where xx is a value within the Secondary Threshold) Note: Acceptance of the 'Punch' option by touching Punch (18w) requires a Supervisor Login

When the Stamper is centred, the process field (18a) will display Centred and the final deviation is indicated in the Operation field (18n).

Note: Options of Re-Centring (18v) or Punching (18w) are available dependant upon the final deviation with respect to target deviation and Secondary Threshold.


9.7.1 Re-centring a Stamper

Once the Stamper has been centred, touching Re-centre (18v) will repeat the entire operation should further re-centring be required.

Note: This option is not available if Auto Punch is selected.

9.8 Punching

The following conditions must exist to allow Punching:-

	<p>The Front Guard is closed. The Air Pressure Gauge (28) is indicating between 6 - 8 bar. The Table Vacuum Gauge is above -0.4 bar. All covers are present.</p>
---	--

9.8.1 Automatic Stamper Punching

If Auto Punch (18c) was set to 'ON', the Optical Head will now move to the rest position. The Punch plate will then lower and the centre hole and outside diameter will now be punched. During this operation the Process field (18a) displays Punching.

The punch plate will return to the upper position when punching cycle is complete and Process (18a) displays Punched.

On completion of a successful Punching Operation, the Results field (18h) is updated with Stamper deviation and time of operation. Operation (18n) displays 'To continue open Front Guard'

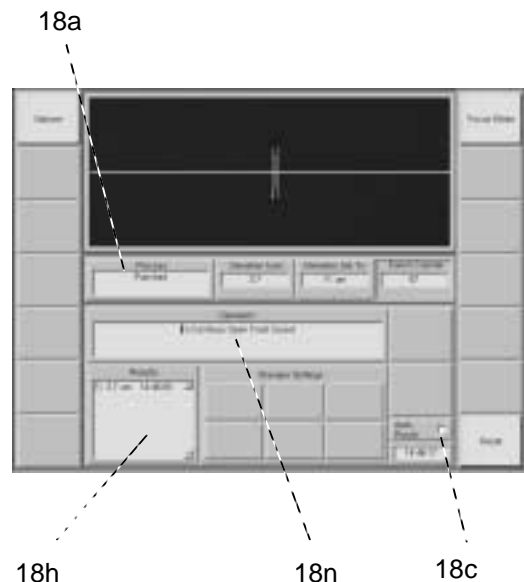
9.8.2 Operator Controlled Punching

If Auto Punch was not selected then touching Punch (18w) will start the Punching process.

The Optical Head will now move to the rest position. The Punch plate will then lower and the centre hole and outside diameter will now be punched. During this operation the Process field (18a) displays Punching.

The punch plate will return to the upper position when punching cycle is complete and Process (18n) displays Punched.

On completion of a successful Punching Operation, the Results field (18h) is updated with Stamper deviation and time of operation. Operation (18n) displays 'To continue open Front Guard'





When the Stamper has been punched the centre hole waste will fall through the Waste Outlet (17) at the front of the Omicrøn. This waste may be retained for thickness measurement and verification.

9.8.4 Removal of Stamper

Open Front Guard

Carefully remove Stamper.

Touch Stripper (18aa) to remove the outside diameter waste. This operation may be repeated if the outer scrap is not easily removable over the punch.

Note: Ensure the outside diameter waste does not bounce around the turntable area during this operation.

The Turntable will automatically re-centre ready for another Stamper to be placed on the Omicrøn.

9.9 Switching Power Off

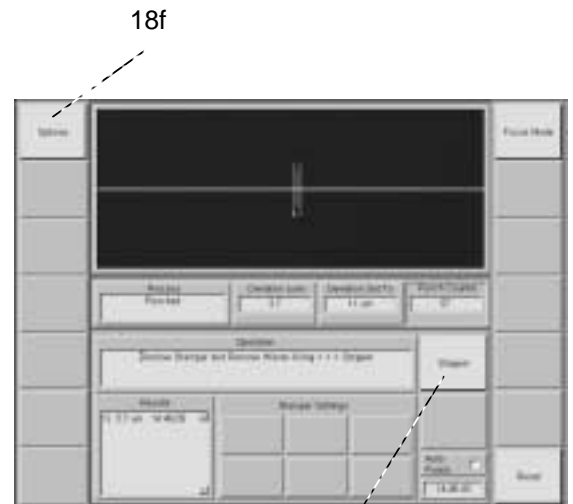
Ensure that Stamper has been removed and close the Front Guard.

Touch Options (18f) then Power Off (18y)

The Omicrøn will then power down.



17



18f

18aa



18y

10 Manual Mode

This mode is used if Automatic Centring is not required for operational reasons.

Touch Options (18f)

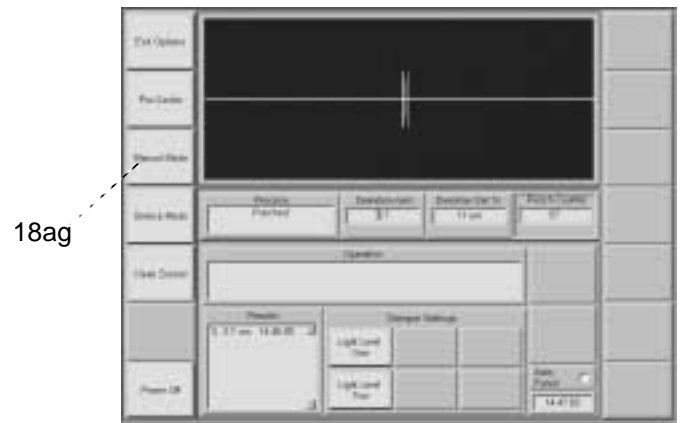
Touch Manual Mode (18ag)

Touch Wand On (18af) followed by Table On (18ae)

Pre-Centre the Stamper on the Wand and place onto the Turntable – see sections 9.4 and 9.5

Align Optics if required – see section 9.6

Touch Optics In (18ah) if not already In.



This indicates the mid point between maximum deviation markers

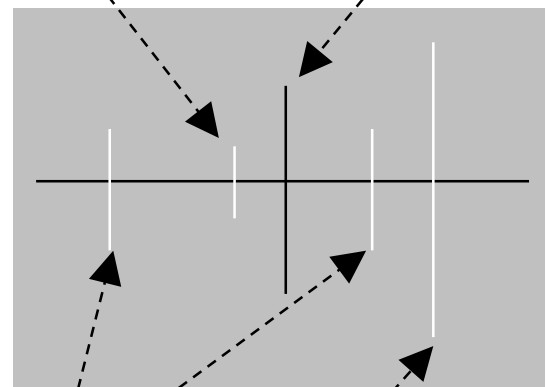
This follows the information edge

10.1 Deviation Markers

The Centring process utilises 'markers' as shown in the diagram opposite.

The black marker follows the information edge; the white markers indicate the extent of deviation and the small white marker indicates the mid point between maximum deviation points.

The large white marker only appears if the centring operation has momentarily lost the information edge during a tracking process.



These indicate the extent of deviation in either direction

This marker only appears if the centring operation has momentarily lost the information edge during a tracking process

10.2 Manual Centring

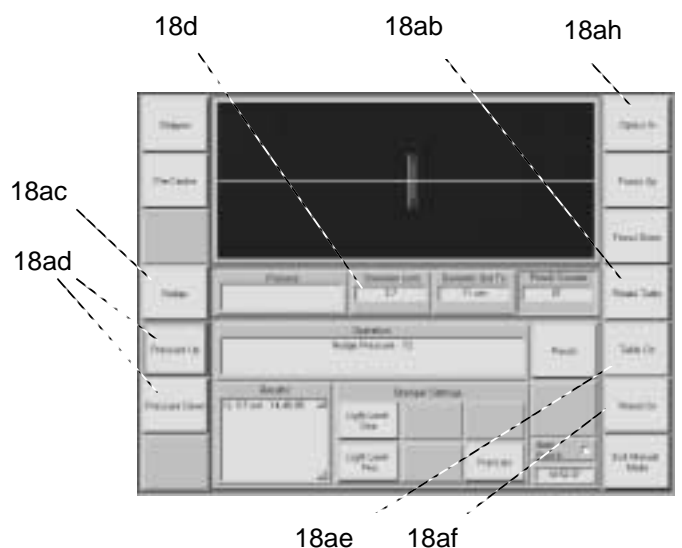
Touch and hold Rotate Table (18ab), whilst viewing the edge of the 'information'. This edge will appear to move from side to side across the screen showing the extent of eccentricity of the Stamper.

Estimate the position when the 'information' image has moved to the maximum extent to the right and stop the table rotation at this point.

This point may be off the edge of the screen dependant upon the original positioning of Stamper. In this case it may be necessary to re-align the Optics – see section 9.6 to ensure the information edge is displayed within the limit of the screen.

Touch Nudge (18ac) to nudge the table to the left, bringing the edge of the information to the centre marker, making sure that the deviation field (18d) is reset as the edge reaches it, ready for the next deviation calculation.

Initially, if large amounts of movement are required, the Nudge Pressure can be increased by using the Pressure Controls (18ad).

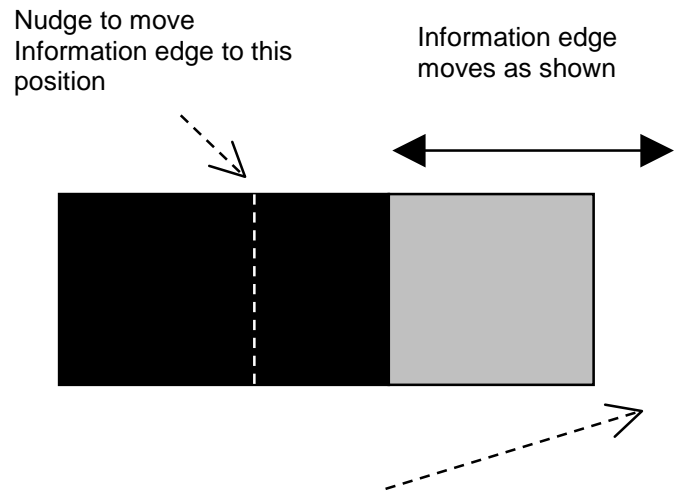


Repeat the above procedure, reducing the Nudge Pressure, as the Stamper eccentricity error becomes less.

The Stamper is centred when the edge of the information appears stationary and does not appear to move left or right when the Table is rotated.

Note: This final position will not necessarily be in the centre of the screen. It will depend on the position where the Optics Lock Screw (27) was initially locked.

When the Stamper has been correctly centred, close the Front Guard ready for the Punching Operation. See section 9.8 to continue Punching Operation.



Stop Turntable rotate when Information edge is estimated to be at the furthest point off screen to the right

11 Cleaning



It is recommended that inspection and cleaning to prevent a build up of dust and nickel particles should be carried out daily.

11.1 Optical Head

It is important to keep the Objective Lens (23) on the Optical Head clean to ensure a good image on the LCD screen. It should be cleaned with a clean, dry, soft cloth when the Optical Head is in the Out position

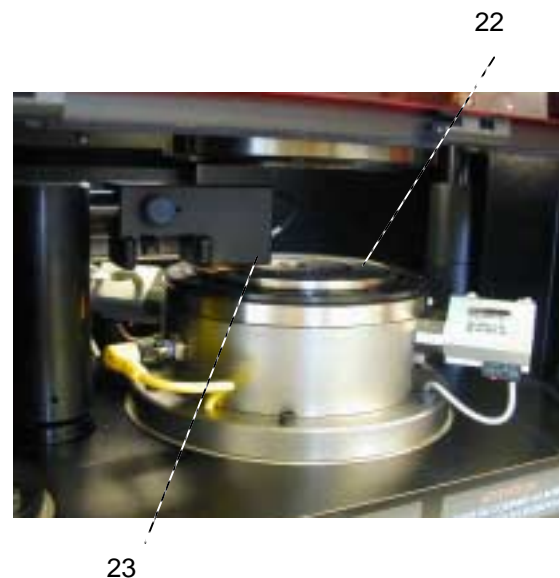
11.2 Vacuum Table



Dust and Nickel particles could inhibit the continuous use and extended life of the Punch and Die and may cause damage to the Turntable and the Stamper back finish.



The Vacuum Turntable (22) should be wiped regularly with a lint free cloth that has Isopropanol applied sparingly. This will prevent any build up of dust or nickel particles.



11.3 Wand

The wand should be wiped regularly with a lint free cloth that has Isopropanol applied sparingly. This will prevent any build up of dust or nickel particles, which could damage information face of Stamper.

Further details of cleaning operations may be found in the Commissioning and Service Manual



11.4 LCD Screen

Touch Options (18f) then touch Clean Screen (18z). All 'touch' functions (18xx) will now be un-available for 30 seconds to allow the screen to be cleaned. Use a suitable anti-static cleaner for this purpose applied sparingly to a lint free cloth.

Touch Exit Options (18p) to return to Initial default screen.



Do not use sharp objects on the LCD screen.

Do not spill any liquid onto the screen.

18p

18z



18xx



12 Documentation

12.1 Test Certificate

Omicrøn SERIAL NO:

CUSTOMER:

COLOUR:

	ELECTRICAL	PNEUMATIC
SUPPLY / CONSUMPTION:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
FUSE RATING:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
SCHEMATIC DRAWING NUMBER:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
SCHEMATIC ISSUE NUMBER:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
LAYOUT DRAWING NUMBER:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
LAYOUT ISSUE NUMBER:	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

PUNCH AND DIES

PUNCH AND DIE 1 SERIAL NO:

SIZE:

MEASURED ID HOLE OF STAMPER: mm

PUNCH AND DIE 2 SERIAL NO:

SIZE:

MEASURED ID HOLE OF STAMPER: mm

INSPECTED BY STAMP:

SIGNED:

DATE:

TEST STAMPERS ENCLOSED:

YES	NO
-----	----

12.2 CE Declaration of Conformity

DIRECTIVE (89/392/EEC) AMENDED BY (91/368/EEC) AMENDED BY (93/44/EEC)

Name of manufacturer: Sibert Instruments

Full postal address including country of origin: Centre House
The Pines
Broad Street
Guildford
Surrey
Postcode: GU3 3BH
England

Description of product: Auto Centring Punch for punching inner and outer diameter holes in CD Matrix Stampers.

Name , type or model, batch or serial number: Omicrøn

Standards used:

BS EN 292-1:1991	BS 4168-7:1982	BS 4278:1984	BS EN 60127
BS EN 292-2:1991	BS 4320:1968	BS EN 13602:2002	BS 2950:1958
BS EN 294:1992	BS 4320:1968	BS 3692:2001	BS 5584:1978
BS EN 418:1992	BS EN 10270-1:2001	BS EN 10270-3:2001	BS EN 61347:2001
BS EN 60204-1:1998	BS 970-1:1996	BS 5378: 1980	BS EN 60921:1991
BS EN 1050:1997	BS EN 485	BS EN 5499-5: 2002	
BS EN 953:1998	BS EN 515:1993	BS EN 954-1:1997	
BS EN 983:1996	BS EN 573:1995	BS EN 982:1996	
BS EN ISO 4762:1998	BS EN 12020-1:2001	BS ISO 6432:1985	
BS 4168-3:1994	BS EN 12020-2:2001	BS ISO 6431:1992	
BS 4168:1994	BS EN 755:1997	BS 5200:1997	
BS EN ISO 7380:1998	BS EN 754		
BS EN ISO 10642:1998	BS 5200:1997		

Place of issue: Sibert Instruments, Guildford

Authorised representative Paul Sibert Executive Chairman

Name and Position of authorised signatories:

James Gray	Managing Director
Stephen Knight	Product Manager
Allan Harvey	Operations Manager
Ian Locke	Project Manager
Richard Lewis	QA Supervisor
David Humm	Chief Inspector
David Gardner	Purchasing Co-ordinator

Declaration

I declare that as the authorised representative, the above information in relation to the supply/manufacture of this product is in conformity with the stated standards and other related documents following the provisions of 93/44/EEC Directives.

Signature of authorised signatory **Date**

For further information Telephone +44 (0) 1483 739100
Facsimile +44 (0) 1483 302699

12.3 EU Declaration of Conformity

89/336/EEC Electromagnetic Compatibility Directive, amended by 92/31/EEC and 93/68/EEC
72/23EEC Low Voltage Equipment Directive, amended by 93/68/EEC

Name of manufacturer: Sibert Instruments

Full postal address including country of origin: Centre House
The Pines
Broad Street
Guildford
Surrey

Postcode: GU3 3BH
England

Description of product: Auto Centring Punch for punching inner and outer diameter holes in CD Matrix Stampers.

Name , type or model, batch or serial number: Omicrøn

Standards applied:

EN 55011:-	1991/MEASUREMENTS IN RADIO INTERFERENCE ON IND. EQUIP./RAD'D. EM.
EN 55011:-	1991/MEASUREMENTS IN RADIO INTERFERENCE ON IND. EQUIP./COND. EM.
BS EN 61000-4-2 (Level 4):-	1995/EMC FOR INDUSTRIAL EQUIPMENT/ELECTROSTATIC DISCHARGE REQ.
BS EN 61000-4-4 (Level 4):-	1995/EMC FOR INDUSTRIAL EQUIPMENT/ELEC. FAST TRANSIENT REQ.

Other standards required:

BS EN 50081-2:-	1994/ ELECTROMAGNETIC COMP. GENERIC EM. STD./IND. ENVIRONMENT.
BS EN 50082-2:-	1995/ ELECTROMAGNETIC COMP. GENERIC IMM. STD./IND. ENVIRONMENT.
BS EN 60204 PT 1:-	1993/M/C SAFETY FOR ELEC. EQUIP./SPEC. FOR GENERAL REQUIREMENTS.

Declaration

The technical documentation required to demonstrate that the product meets the requirements of EMC, which includes the Low Voltage Directive, has been confirmed by the signatory below and is available for inspection by the relevant enforcement authorities. The CE mark was first applied in 1995.

Place of issue: Sibert Instruments, Guildford

Authorised representative Paul Sibert Executive Chairman

Name and Position of authorised signatories:	James Gray	Managing Director
	Stephen Knight	Product Manager
	Allan Harvey	Operations Manager
	Ian Locke	Project Manager
	Richard Lewis	QA Supervisor
	David Humm	Chief Inspector
	David Gardner	Purchasing Co-ordinator

Signature of authorised signatory **Date**

For further information Telephone +44 (0) 1483 739100
Facsimile +44 (0) 1483 302699