

AUTO CENTRING PUNCH
Omicrøn



Commissioning and Service 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:-

SIBERT INSTRUMENTS	TELEPHONE:	+44 (0) 1483 739100
CENTRE HOUSE		
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

SIBERT INSTRUMENTS
CENTRE HOUSE
THE PINES
BROAD STREET
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ENGLAND

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+44 (0) 1483 739110 (Service)
FAX: +44 (0) 1483 302699
EMAIL: Sales@Sibert.co.uk
Technical@Sibert.co.uk

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



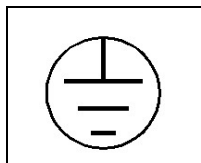
WARNING
DANGER OF INJURY FROM
EDGE OF STAMPER

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

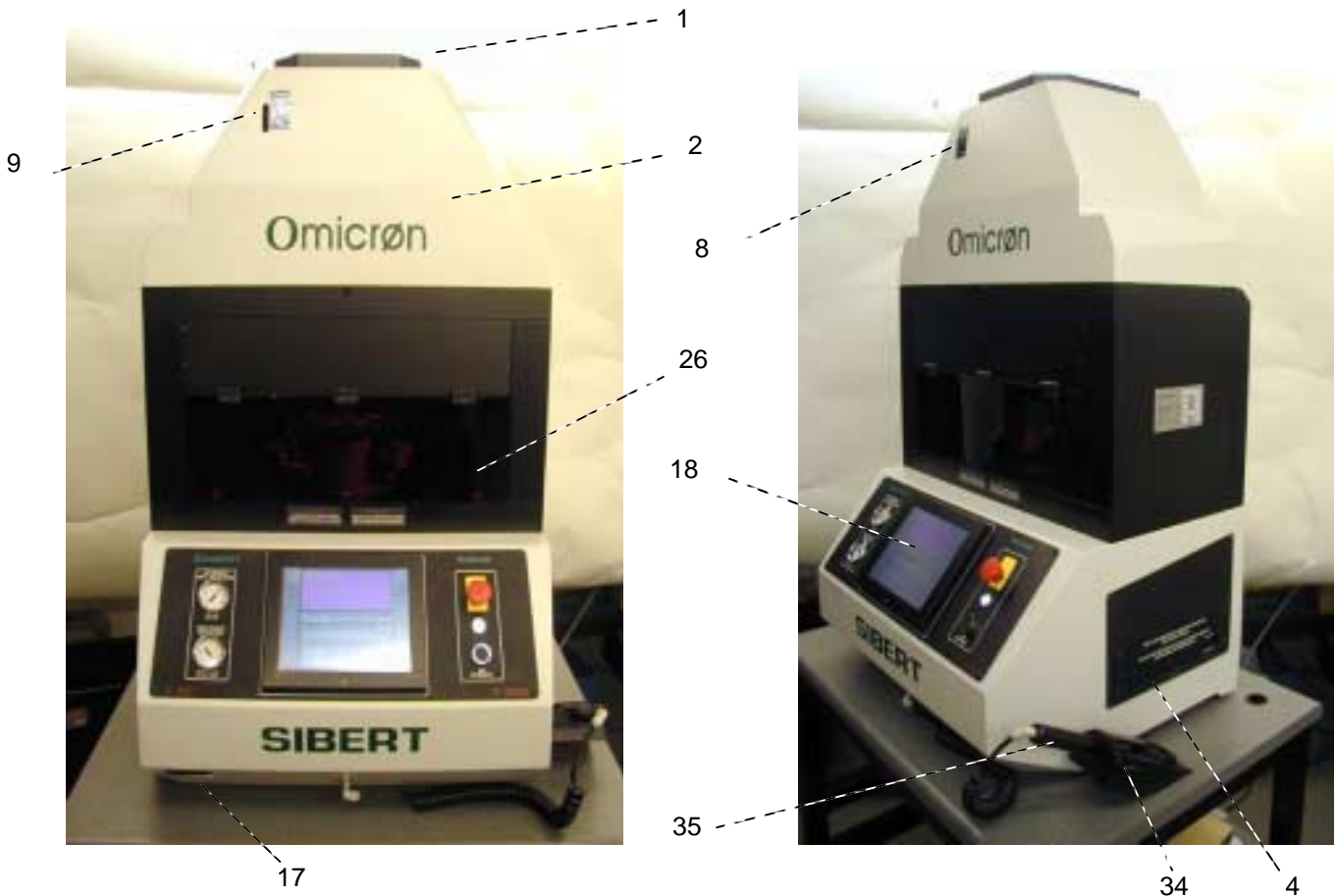


DANGER
 **DO NOT REMOVE COVER UNLESS**
DISCONNECTED FROM MAINS
SUPPLY

FOUND ON ALL REMOVABLE
COVERS PROTECTING
ELECTRICAL SYSTEMS

5 Equipment Diagram

5.1 Front and Right Hand Side



- | | |
|---|------------------------------------|
| 1 Top Cap | 16 Anti-Vibration Feet |
| 2 Top Cover | 17 Centre Hole Waste Outlet |
| 3 Back Cover | 18 LCD Touch Screen |
| 4 Right Hand Cover Plate (CD ROM and PC extension sockets) | 19 Lower Ejection Ring |
| 5 Rear Cover Plate (Hydraulic Booster) | 20 Pre-Centring Cylinder |
| 6 Pneumatic Input | 21 Nudge Cylinder |
| 7 Electrical Input, Switch and Fuse | 22 Vacuum Turntable |
| 8 Oil Level Max. And Min. Indicator | 23 Objective Lens |
| 9 Oil Level Sight Glass | 24 Upper Punch And Die Set |
| 10 Optics Adjustment Lever | 25 Lower OD Punch |
| 11 Optical Head | 26 Front Guard |
| 12 Fibre Optic | 27 Optics Locking Screw |
| 13 Lower Punch and Die Assembly | 33 Lower ID Die |
| 14 Optics Adjustment Finger Rests | 34 Wand Holster |
| 15 Left Hand Cover Plate | 35 Pre-Centre Wand |

5.2 Rear and Left hand Side



7

6

3

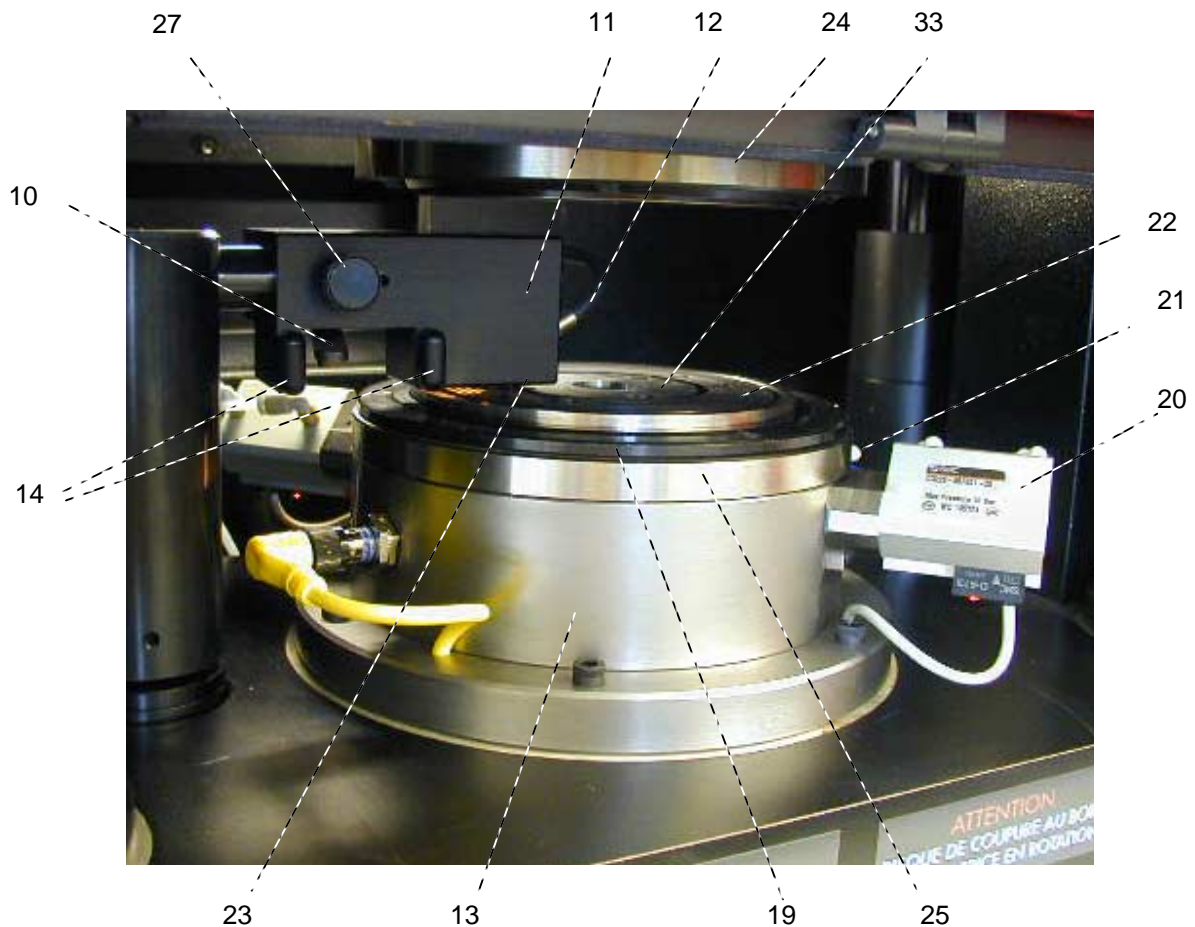
5

15

16

- | | |
|--|-------------------------------|
| 1 Top Cap | 16 Anti-Vibration Feet |
| 2 Top Cover | 17 Centre Hole Waste Outlet |
| 3 Back Cover | 18 LCD Touch Screen |
| 4 Right Hand Cover Plate (CD ROM and PC extension sockets) | 19 Lower Ejection Ring |
| 5 Rear Cover Plate (Hydraulic Booster) | 20 Pre-Centring Cylinder |
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| 9 Oil Level Sight Glass | 24 Upper Punch And Die Set |
| 10 Optics Adjustment Lever | 25 Lower OD Punch |
| 11 Optical Head | 26 Front Guard |
| 12 Fibre Optic | 27 Optics Locking Screw |
| 13 Lower Punch and Die Assembly | 33 Lower ID Die |
| 14 Optics Adjustment Finger Rests | 34 Wand Holster |
| 15 Left Hand Cover Plate | 35 Pre-Centre Wand |

5.3 Punch and Die Area



- | | | | |
|----|--|----|------------------------------------|
| 1 | Top Cap | 16 | Anti-Vibration Feet |
| 2 | Top Cover | 17 | Centre Hole Waste Outlet |
| 3 | Back Cover | 18 | LCD Touch Screen |
| 4 | Right Hand Cover Plate (CD ROM and PC extension sockets) | 19 | Lower Ejection Ring (13B) |
| 5 | Rear Cover Plate (Hydraulic Booster) | 20 | Pre-Centring Cylinder (13L) |
| 6 | Pneumatic Input | 21 | Nudge Cylinder (13I) |
| 7 | Electrical Input, Switch and Fuse | 22 | Vacuum Turntable (13E) |
| 8 | Oil Level Max. And Min. Indicator | 23 | Objective Lens |
| 9 | Oil Level Sight Glass | 24 | Upper Punch And Die Set |
| 10 | Optics Adjustment Lever | 25 | Lower OD Punch (13H) |
| 11 | Optical Head | 26 | Front Guard |
| 12 | Fibre Optic | 27 | Optics Locking Screw |
| 13 | Lower Punch and Die Assembly | 33 | Lower ID Die (13F) |
| 14 | Optics Adjustment Finger Rests | 34 | Wand Holster |
| 15 | Left Hand Cover Plate | 35 | Pre-Centre Wand |

6 Accessories

- A1 1 off Document case containing
Operation Manual
Commissioning and Service Manual
Pneumatic Schematics & Layouts
Electrical Schematic & Layouts
and Original discs
- A2 4 off 1.6A Quick blow fuse
- A3 4 off 1.6A Time lag fuse
- A4 6 off 1A Time lag fuse
- A5 2 off 1A Anti-surge fuse
- A6 2 off 6.3A Quick Acting fuse
- A7 2 off 2A Time lag fuse
- A8 1 off Hex Key Set
- A9 1 off Box Spanner and bar
- A11 1 off Regulator Filter
- A12 1 off Check Unit
- A13 1 off Moulded Mains Lead (Country dependant) *
- A14 2 off Air Pipe (800mm and 2M) *
- A15 1 off Filter-Regulator Unit *
- A16 Punch and Die protection Mat
- A17 1 off Strip Fluorescent Lamp
- A18 1 off Stylus Pen
- A19 1 off Stubby Screwdriver
- A20 Punch and Die Spacers
- A21 Punch and Die Alignment Jig inc 8mm balls
(Punch and Die option dependant)
- A22 1 off Dichroic lamp
- A23 Die Removal Screws
- A24 1 off Pack of Lint Free Cloths
- A25 Remote wand alignment jig



* These items are either fitted to the bench or packed separately in crate.

All items are available as **Sibert** supplied spares



7 Unpacking

7.1 Removing Crate Panels

When the Omicrøn arrives it will be packed in a strong pallet sized crate, together with the bench.

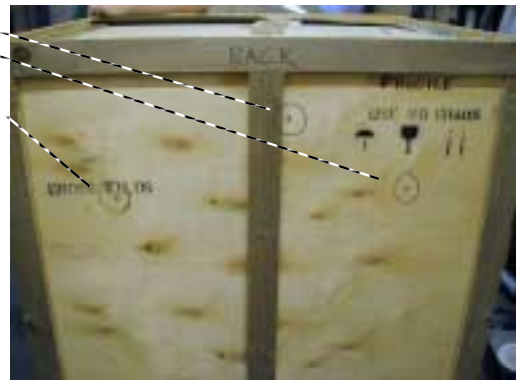
Remove the Top panel using a suitable spanner.

Identify the 3 off cross head screws on the front and back panels. Remove these screws before removing the Front and Back panels.



Do not remove the Side panels at this time.

3 off cross head screws



Remove the 3 off internal timber retainers (front to back).

Remove the loose bench shelf.

Remove all the included ancillary parts such as: Toolcase, Punch and Die sets, filter regulator (if not fitted to bench), air pipes and Wand box.

3 off timber retainers (front to back)



Identify the 2 off cross head screws securing the two timber retainers (side to side). Remove these screws before removing the side panels.

The bench and Omicrøn are now ready to be lifted from the crate.

Loose Shelf

7.2 Lifting Guidelines



The lifting device must be able to carry a minimum of 600Kg and have a lifting height of 1.9 Metres.



Weight of Omicrøn including bench and packing case is 580Kg.

2 off timber retainers (side to side)



7.3 Lifting from Crate



Keep clear of Machine or Bench while lifting is in process.

Lift bench out and clear of the Omicrøn.

Carefully open the hermetically sealed foil bag around the Omicrøn.

The Omicrøn is shipped with the lifting eye bolt already in position for use in lifting the Omicrøn out of the crate using a suitable hoist.

Lift the Omicrøn out and place on the Bench (see section 8).



Ensure lifting eye bolt is secure (hand tight only) before attaching hoist. Do not remove the lifting eye under any circumstances.



8 Locating

8.1 Mounting on Bench

The Omicrøn should be mounted on the supplied bench.

8.2 Bench Description

Sibert Instruments produce a purpose made bench for the Omicrøn. This bench accommodates the filter and regulation unit, with an aperture for the pneumatic and electrical supplies. Mounting positions for the Wand holder are also provided on either side of the bench.



8.3 Positioning

The back of the Omicrøn should be 20 cm from the wall.



Once the machine has been positioned on the bench, the Lifting Eye Mounting Plate together with Lifting Eye and Plastic Packing Piece can now be removed by unscrewing the 4 Securing Bolts using the 30mm Box Spanner supplied in the Toolcase.

After removing the Lifting Eye Mounting Plate together with Lifting Eye, the Top Cover can be screwed in position on top of the machine using the 4 off M6 Hex Cap Head screws provided.

Note: This cover plate allows access to the Hydraulic Oil Top-Up tube.



Retain all parts removed and reverse the above procedure if the machine is to be packed for transit at any future date.



9 Connecting Supplies

9.1 Electricity Supply

The Omicrøn is supplied with a mains supply lead (A13) for connection to the Power Inlet (7) at the rear of the machine.

The machine will be delivered to operate in the range:-

AC 100 - 230V \pm 10% 50 - 60 Hz



7 6

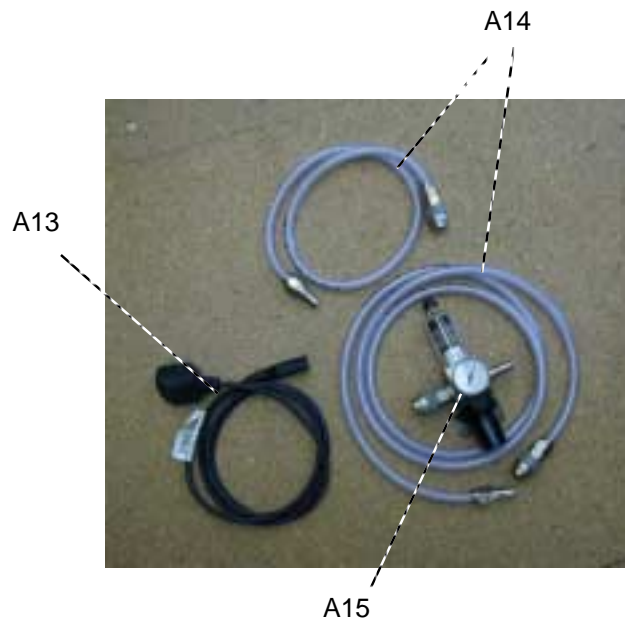


Check the specification on the side of the machine or see Section 16.

Connect machine to supply only if it conforms to specification.

9.2 Pneumatic Supply

The Omicrøn is supplied with a Filter / Regulator Unit (A15) together with an Air Hose (A14) for Connection to the Pneumatic Mains Input (6) at the rear of the machine.



The Sibert Instruments supplied Omicrøn bench has the Filter / Regulator unit pre-fitted as shown.



9.2.1 Connection

Connect the Filter/Regulator Unit to the mains air supply using the check unit provided.



All pneumatically operated equipment and machinery should only be operated by trained personnel.

Wherever possible, turn off mains air pressure to the check unit.

Make sure that the tailpiece is inserted squarely into the check unit and not at an angle. Push the check unit and tailpiece together.

When the two units are connected correctly, a 'click' will be heard and the sleeve on the check unit will engage onto the tailpiece by locking up against the hexagonal shoulder of the tailpiece.

Next, rotate the grey plastic lock ring on the check unit until the two black arrows are inline.

Check the coupling is correctly engaged by gently pulling each end of the assembly. It should be secure and not pull apart.

Mains air pressure may now be applied

The Regulator (A17) should be pulled to unlock, adjusted to within 85-115 psi (6-8 bar) then pushed to lock.

9.2.2 Release



All pneumatically operated equipment and machinery should only be operated by trained personnel.

Wherever possible, turn off mains air pressure to the coupling assembly.

Rotate the grey plastic lock ring on the check unit through about 90 degrees, until the two black arrows are separated and none of the orange body of the check unit is visible.

Pull the sleeve on the check unit backwards and the tailpiece will be released from the coupling.

Remove the tailpiece and the release is complete.

Pull top to adjust



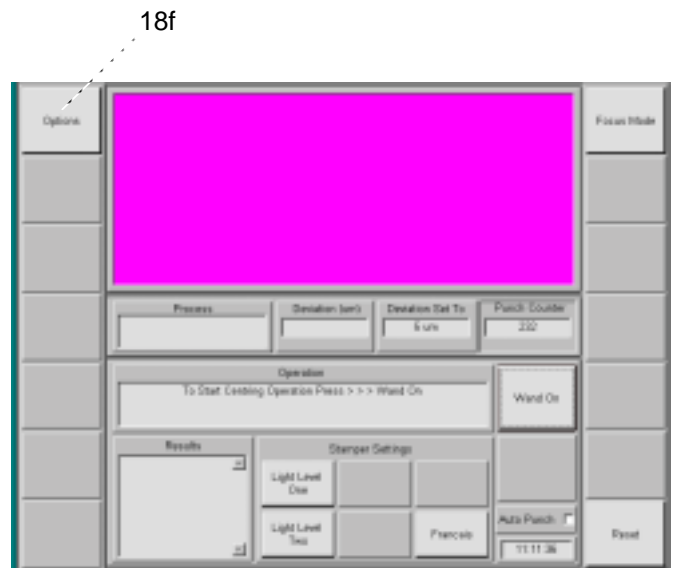
10 Service Mode

The Omicrøn service mode is used for punch and die change and set up of various machine parameters.

10.1 Entering the service mode.

Ensure that the stamper has been removed and close the front guard.

Touch Options (18f) to enter the options screen.

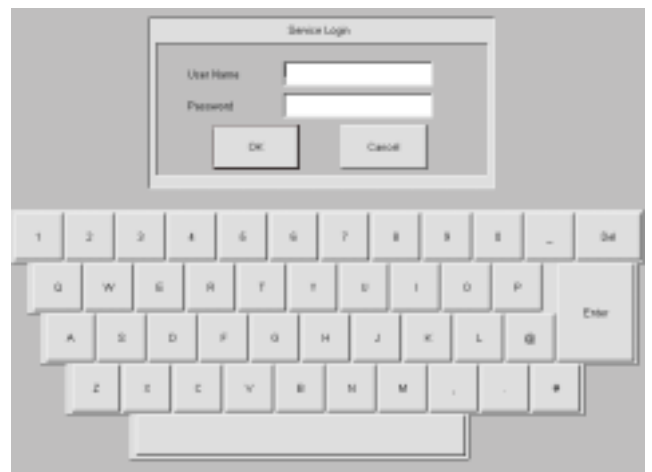


Touch Service Mode (18az) to enter the service logon screen.

18az

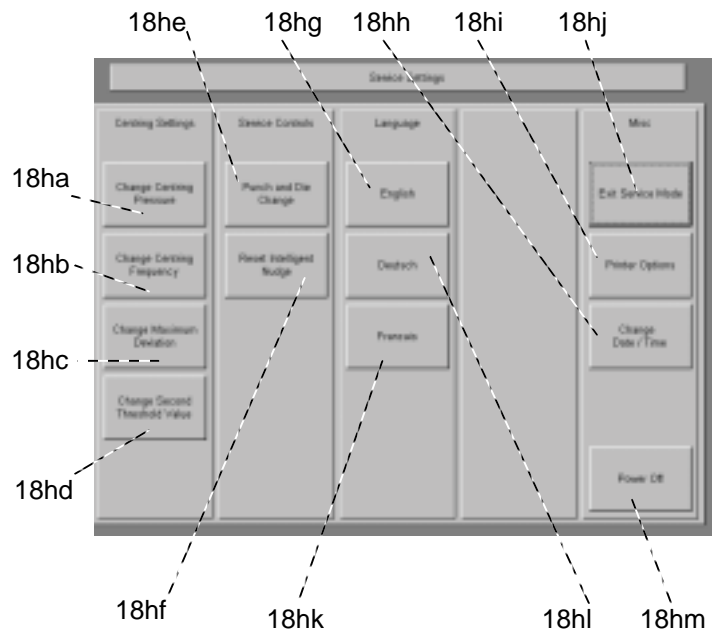


Use the displayed keypad to enter your user name and password as advised by your service engineer.



10.2 The Service Screen

- 18ha Change Centring Pressure see section 10.2.1.
- 18hb Change Centring Frequency see section 10.2.2.
- 18hc Change Maximum Deviation see section 10.2.3.
- 18hd Change second threshold value, see section 10.2.4.
- 18he Punch and Die Change see section 10.2.5.
- 18hf Reset Intelligent nudge. Intelligent nudging allows the Omicrøn to learn the current punch and die. When a punch and die is replaced use this control to reset the intelligent nudge and learn the new punch and die set.
- 18hg English language setting. This function has been replaced by item 18j (see operation manual section 9.2.3) for Omicrøn with serial number greater than 14.
- 18hh Change date and time see section 10.2.6.
- 18hi Printer options – to install printers Note print upgrade must be purchased to enable this option.
- 18hj Exit Service Mode returns the Omicrøn to front screen.
- 18hk French language setting. This function has been replaced by item 18j (see operation manual section 9.2.3) for Omicrøn with serial number greater than 14.
- 18hl German language setting. This function has been replaced by item 18j (see operation manual section 9.2.3) for Omicrøn with serial number greater than 14.
- 18hm Shut down – powers down the Omicrøn.



10.2.1 Change Centring Pressure

This screen can be used for fault diagnosis of the centring function.

Pressure 1 and Min Pressure show the last intelligent nudging pressure change saved by the Omicrøn.

The off screen pressure setting is not adjusted by intelligent nudging. This is set by an engineer for optimum table travel from an off screen position.



10.2.2 Change Centring Frequency

Centring frequency can be used to alter the behaviour of the punch and die.

A high frequency value will enable a slow table travel.

A low frequency value will enable a rapid table travel.



10.2.3 Maximum Deviation

Used to set the maximum deviation level that the Omicrøn will punch.



10.2.4 Second Threshold Value

Used to set the second deviation level that the Omicrøn will punch at.

Second threshold become active if the machine can not obtain a result below the maximum deviation level.

The second threshold is added to the deviation level.

I.E. If maximum deviation is set to 5 and second threshold is set to 6 when second threshold is active the machine will accept a centred value of 11 microns and below.



10.2.5 Punch and Die Change

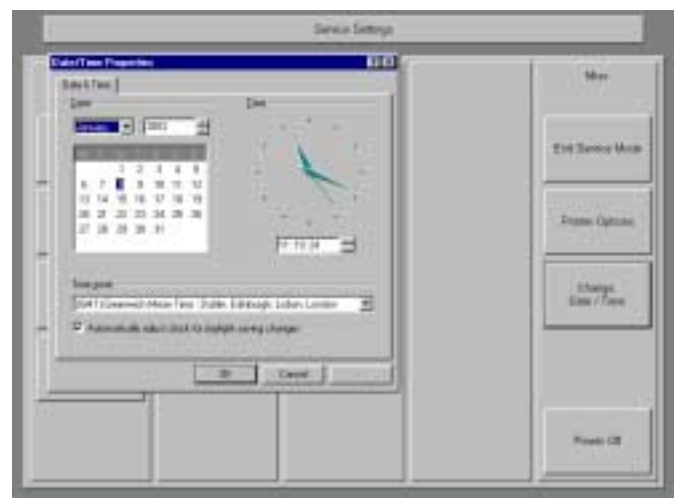
Punch and die change – use in conjunction with section 12 and 13 depending on type of punch and die purchased.

The punch and die change text has been removed on Omicrøn with serial number greater than 14.

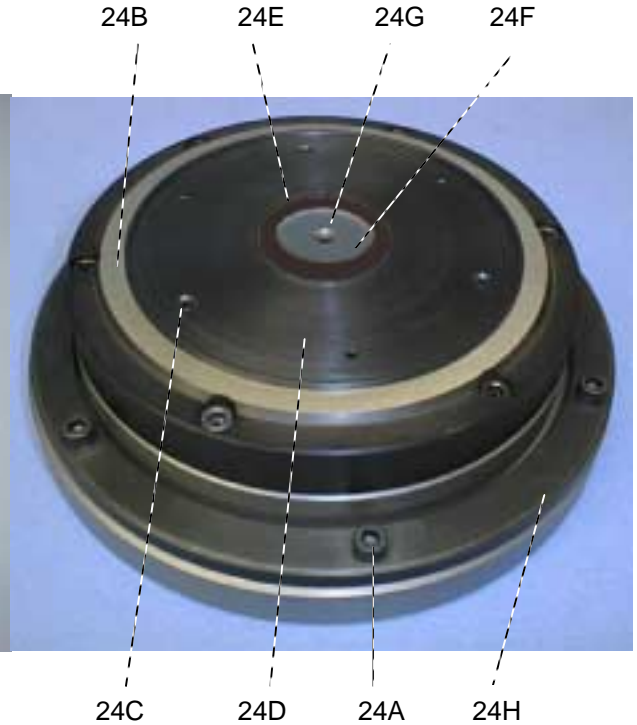
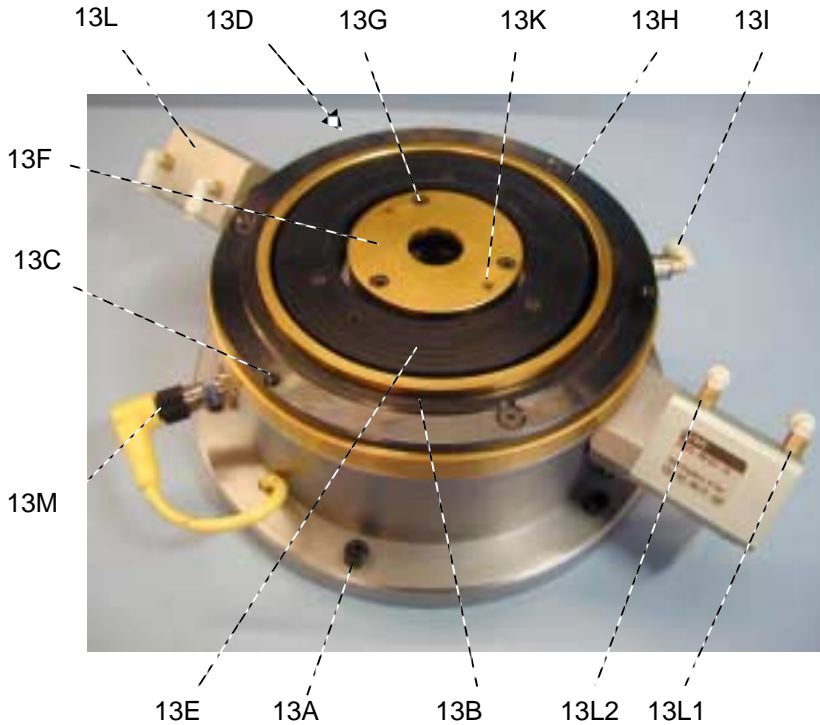


10.2.6 Change Date and Time

Change date/time allows setting of the system clock.



11 Standard Punch and Die Sets (Removable I.D Die)



Lower Punch and Die Assembly		Upper Punch and Die Assembly	
13A	6 Off Lower Set Retaining Screws	24A	6 Off Upper Set Retaining Screws
13B	Lower Ejection Ring (also see item (19) in section 5.3)	24B	Outer Diameter Die
13C	3 Off Punch and Die Spacer Location Threads	24C	3 off Outer Stripper Plate Retaining Screws
13D	Vacuum Table Drive Transfer Gear (at rear)	24D	Outer Stripper Plate
13E	Vacuum Table (also see item (22) in section 5.3)	24E	Inner Stripper Plate
13F	Inner Diameter Die (Standard type) (also see item (33) in section 5.3)	24F	Inner Diameter Punch
13G	3 off Inner Diameter Die Retaining Screws	24G	Punch And Die Alignment Centre
13H	Outer Diameter Punch	24H	Upper Set Clamp Ring
13I	Nudge Cylinder (also see item (21) in section 5.3)		
13K	2 off Die Removal Threads		
13L	Pre Centre Cylinders (2 off)		
13L1	Pre Centre IN		
13L2	Pre Centre OUT		
13M	Turntable Rotational Sensor		

11.1 Type of Punch and die set

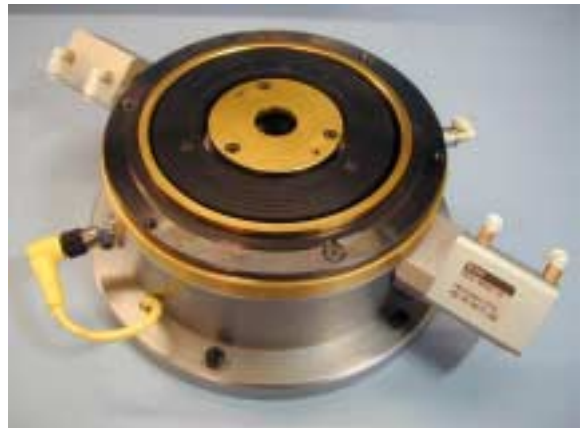
The Omicrøn can be supplied with various punch and die types contact Sibert sales department for further details.

Standard type :- with removable I.D Cutting parts see this section.

Fixed type :- with fixed I.D die, see sections 12.



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



11.2 Initial Use of Punch and Die Sets

The Omicrøn is usually supplied with a Punch and Die set already fitted. The Punch Plate is supported in position by four red spacers, one at the top of each pillar as shown. These must be removed using the following procedure.

11.2.1 Transit Spacer Removal

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

With the front guard closed, operate the Mains Power Switch (31), the top punch plate will rise to its upper position.



Transit Spacers (one per pillar)

(See also Operation Manual – section 9.1)

The red packing spacers that support the Punch plate in the transit position can now be removed.

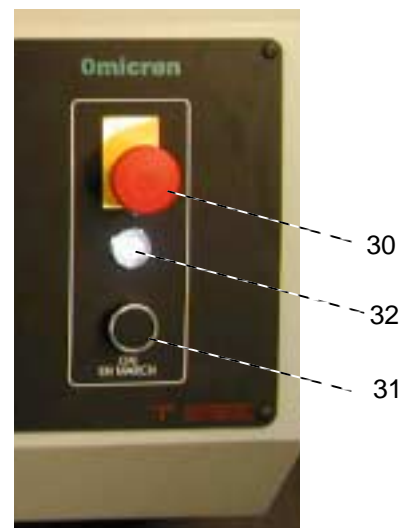
Note: Ensure that all four spacers are removed.



Retain all parts removed and reverse the above procedure if the machine is to be packed for transit at any future date.



Do not attempt further operation of the machine unless the Alignment? Procedure (see Section 11.6, 11.10 & 11.13) has been carried out to ensure smooth movement without binding.



11.3 Additional or Replacement Punch and Die Sets

Additional Punch and Die sets (if supplied) are packed in a separate packing box.



When replacing a Punch and Die set, it is advisable for your records, to note the quantity of punch operations, indicated on the Punch Counter (18m) at the time of replacing the Punch and Die set.



11.4 Removal of Punch and Die Sets



Weight of Punch and Die Set
Lower – 16Kg
Upper – 8 Kg

Note: Service mode Procedure (10.2.5) is applicable to this section.

Login to Service screen and select 'Punch and Die Change'.

Remove back cover.

The air supply and hydraulics to all lower parts of the Omicrøn will be disabled, whilst allowing Upper Punch Plate to move.

Place the Punch and Die Protection Mat (supplied in the Toolcase) on the Lower Punch Set. This will protect both Top and Bottom Sets when they are removed from the Omicrøn.

Disconnect all the air pipes and the rear sensor connection from the lower set. (The top of the air connector should be pushed in the opposite direction to the pipe being withdrawn).

Refer to Section 5.4 (Lower Punch and Die Assembly) for the following:-

13L1 – Blue pipe to each side cylinder
(Pre Centre IN)

13L2 – White pipe to each side cylinder
(Pre Centre OUT)

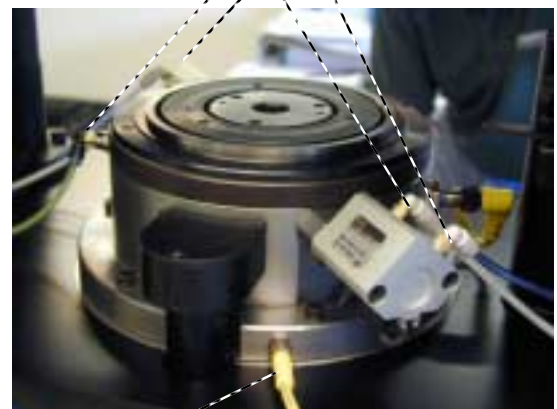
13I – Green pipe (Nudge)



18m



Remove all air pipes



Remove sensor connection

Touch 'Punch Plate down' until the Punch and Die top set is just touching the punch and die protection mat.



For safety reasons, although the plate is moved pneumatically under low pressure and not hydraulically, injury can still be caused if fingers are trapped between the two sets.

24A



Remove the 6 off M6 Upper Set Retaining Screws (24A) from the Top Set Clamp Ring.

Allow the Clamp Ring (24H) to rest on the Punch and Die Protection mat.

24H



Touch 'Punch Plate Up' momentarily, in order to raise the Punch Plate - ensure clean separation of Plate and Upper Assembly as shown, before touching 'Punch Plate Up' again to raise the Punch Plate fully.



NOTE: To avoid the Upper Punch and Die Set dropping too far, ensure separation occurs before the Punch Plate has raised 5-10mm from the Lower set.

24



The Upper Punch and Die Set (24) can now be lifted clear of the machine.

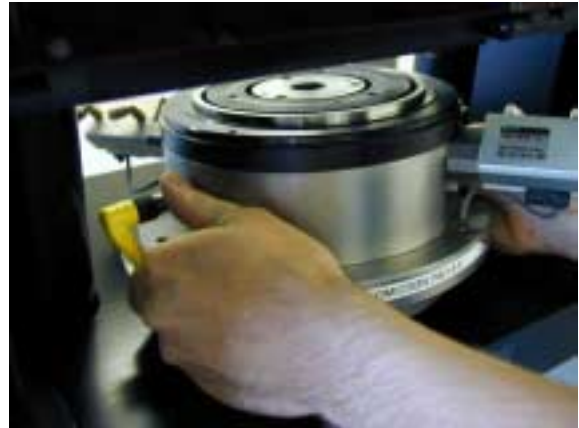


Note: Upper Punch and Die Set weight is 8 Kg.

The 6 off M6 Lower Assembly Retaining Screws (13A) should now be removed and the Lower Punch Set carefully lifted out forwards from the Bottom Punch Plate.



Note: Lower Punch and Die Set weight is 16 Kg.



11.5 Examination of Punch and Die Sets

With the Punch and Die Sets removed from the Omicrøn they can be examined for wear or damage. It is easier to examine the Top Set when the Upper Stripper Plate (24D) is removed see section 11.10.

The cutting edges marked (X) should be sharp and free from chips and irregularities.

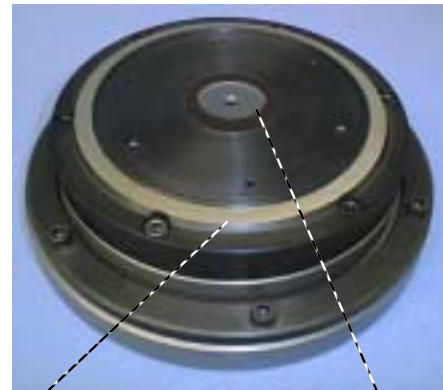
The Standard Inside diameter Punch and Die can be removed and replaced with a new, re-sharpened or different sized set. (See sections 11.9 & 11.10.)

If the Outer Diameter Punch and Die Set require sharpening the whole Punch and Die assembly must be returned to Sibert Instruments.

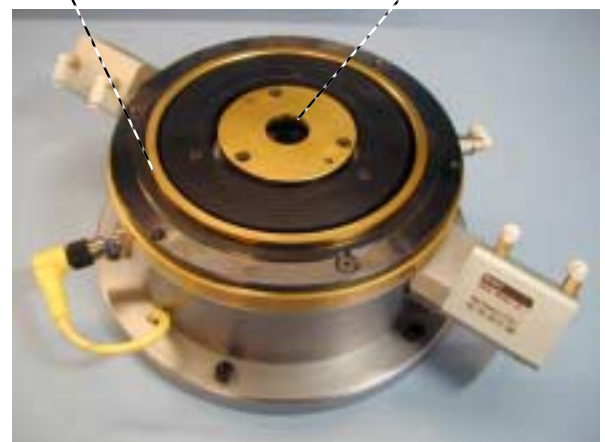
A routine inspection of the Turntable Vacuum Seals and an alignment check will be carried out at the same time.



Do not remove the screws under Lower Ejection Ring holding the outer diameter Punch or Die to the assembly.



X X



11.6 Fitting and Alignment

11.6.1 Installing Lower Assembly

Login to Service screen and select 'Punch and Die Change'.

Remove back cover.

The air supply and hydraulics to all lower parts of the Omicrøn will be disabled, whilst allowing Upper Punch Plate to move.

The Lower Set should be carefully placed (do not slide) into position and the 6 off Lower Set Retaining Screws (13A) replaced.

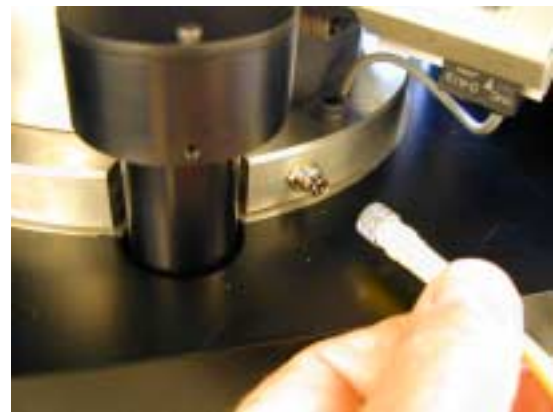


Pull the Punch and Die towards the operator (away from gear) as shown to ensure binding does not occur, before fully tightening the Lower Set Retaining Screws (13A) .



Avoid applying too much hand pressure to the Vacuum Turntable. 13A

Connect all the air pipes and the sensor connection as shown – note orientation of sensor connection plug and socket.



Refer to Section 5.4 (Lower Punch and Die Assembly) for the following:-

13L1 – Blue pipe to each side cylinder
(Pre Centre IN)

13L2 – White pipe to each side cylinder
(Pre Centre OUT)

13I – Green pipe (Nudge)

Check security of connections.

Touch 'Turntable Rotate' button for at least one revolution to check that Turntable gear does not bind during rotation.



11.6.2 Installing Upper Assembly

The three Punch and Die Spacers (A20) should be screwed into the top of the Outer Stripper Plate.

Remove the Inner Diameter Die (13F) (for Die Removal see section 11.9 and replace with the Punch and Die Alignment Jig and Ball (A21).

Lift the Upper Punch and Die Assembly including the Top Set Clamp Ring (24H) into the Omicrøn and place it carefully so that it rests level on the three Punch and Die Spacers (A20) and the ball locates into the centre of the Inner Diameter Punch.

Note: The serial number of the Upper Set must be aligned with the Lower Set serial number.



It is important that the Punch and Die sets and the jig are free from dirt and dust.

11.7 Aligning Upper and Lower Punch and Die Sets

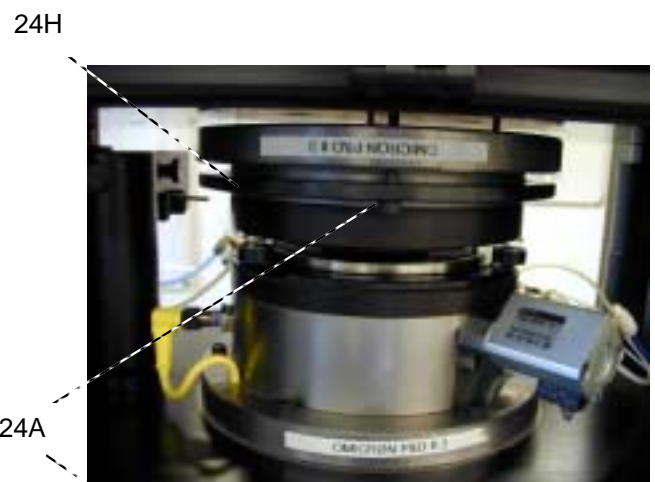
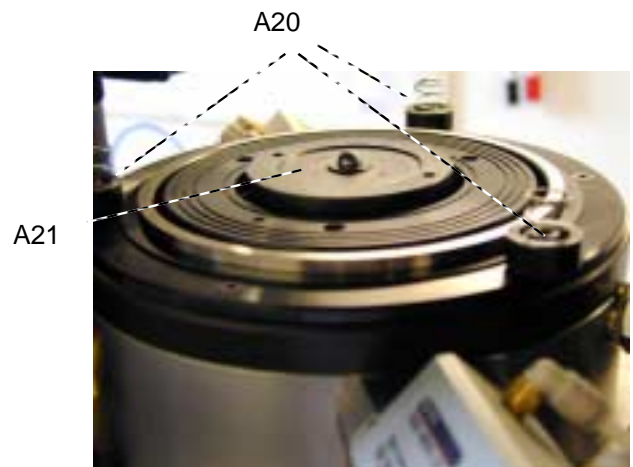
Touch 'Punch Down' button, to lower the Top Punch Plate until it is approximately 5mm above the top set, then insert the Upper Retaining Screws (24A) so they are just located in their threads.

The Top Punch Plate can now be lowered until it touches the top set and the two units become aligned by the Jig and Ball. Ensure the Punch Plate is fully down (expel all air from the Punch Plate cylinders by repeated operation of the Punch Down button) before fully tightening the Upper Retaining Screws (24A).

Touch 'Punch Plate Up' until Top Plate is in the fully raised position.

Remove the three Punch and Die Spacers (A20) and Punch and Die Alignment Jig and Ball (A21).

Replace the Die, ensuring seating is clean and tighten the three screws. See Section 11.9.



11.7.1 Checking Alignment

Touch 'Punch Down' until Top Plate is in the fully lowered position - ensure the Top Plate is fully down.

Ensure Upper Punch Plate reaches the fully lowered position, by exerting manual pressure from above.

Touch 'Check Alignment' – the Service Screen will indicate if the alignment is correct and to replace the covers if required.



If alignment fails then repeat Sections 11.6.2 and 11.7, before proceeding.



Exit Punch and Die Change.

Exit Service mode.

11.8 Inner Punch and Die Replacement



If the Inner Punch and Die require replacing for re-sharpening or a change of centre hole size, the complete Punch and Die Sets should be removed as described in the previous section (Punch and Die Assembly Replacement).

11.9 Replacing the Inner Die – Standard type only.

Remove the 3 off M4 Die Retaining Screws (13G). The Die can then be extracted by screwing the 2 off Knurled Die Removal Screws (A26) through the Die Removal Threads (13K).

Note: The maximum amount of material that can be removed when sharpening is 0.38 mm (0.015"), which allows for re-sharpening approximately 7 times.

Ensure the Die seating and Die have been cleaned thoroughly prior to relocating the Die on to the seating. Finally replace the 3 off M4 (13G) screws.

A26

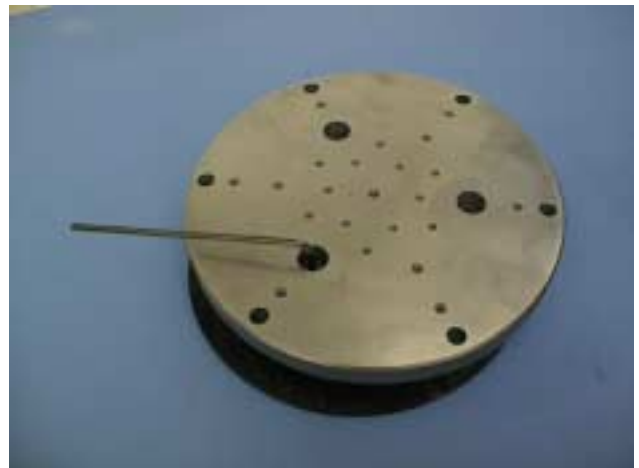


11.10 Replacing the Inner Punch (Upper Punch & Die Assembly)

Remove the top half of the Punch and Die Set.

Turn the unit onto a clean flat surface with the Punch face downwards.

Unscrew the 3 off countersunk screws from the bottom face of the Punch, evenly in turn to ensure parallel separation of Stripper Plate.



Carefully lift up the unit leaving the Stripper Plate (24D) and springs on the surface.

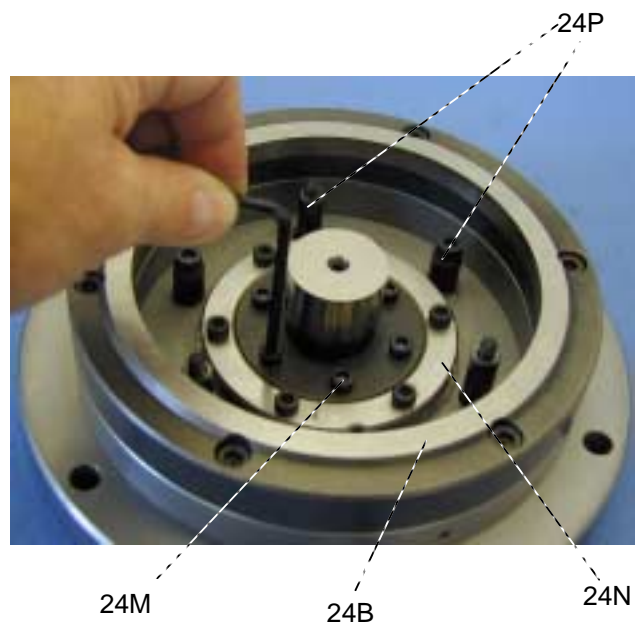
Remove 12 off springs.



Loosen and remove the 6 off inner punch retaining screws (24M).



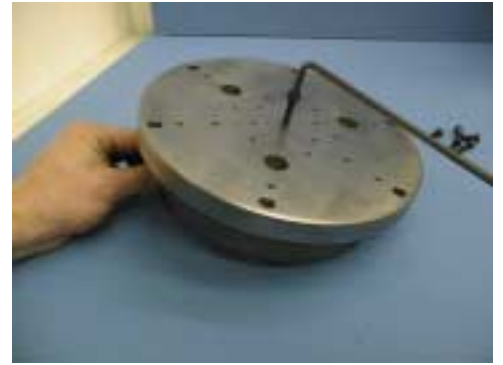
Do not remove the Inner Punch Guide Ring (24N) or the Outside Diameter Die (24B).



AUTO CENTRING PUNCH Omicrøn

The Punch can be removed by inserting an M6 screw from behind and gently turning it until the punch clears the seating.

The Punch and seating should then be cleaned before relocating and replacing the screws.



Place the 6 off short springs over the Punch Retaining Screws and the 6 off long springs over the pillars and plungers (24P).

Very carefully place the Stripper plate over the ID Punch, aligning the 3 off threaded holes with the pillars and plungers.



Carefully slide the complete upper assembly over the edge of the workbench to allow the countersunk screws to be tightened into the Outer Plate.

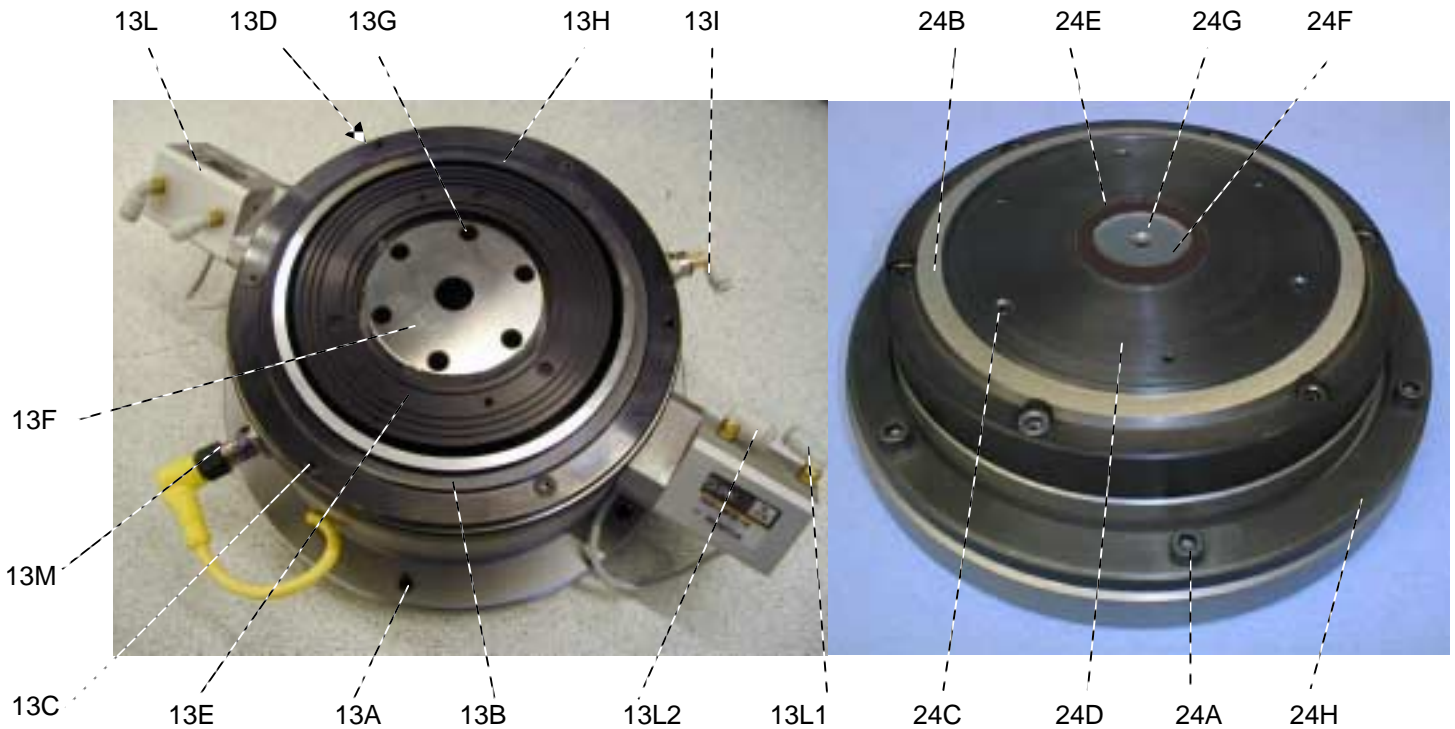
Ensure the screws are tightened evenly by small adjustments to each screw in turn (4mm hex key).



Replace Upper Set and align to Lower Set – see Section 10.4.



12 Punch and Die Set Fixed I.D Die



Lower Punch and Die Assembly		Upper Punch and Die Assembly	
13A	6 Off Lower Set Retaining Screws	24A	6 Off Upper Set Retaining Screws
13B	Lower Ejection Ring (also see item (19) in section 5.3)	24B	Outer Diameter Die
13C	3 Off Punch and Die Spacer Location Threads	24C	3 off Outer Stripper Plate Retaining Screws
13D	Vacuum Table Drive Transfer Gear (at rear)	24D	Outer Stripper Plate
13E	Vacuum Table (also see item (22) in section 5.3)	24E	Inner Stripper Plate
13F	Inner Diameter Die (Fixed Type) (also see item (33) in section 5.3)	24F	Inner Diameter Punch
13G	6 off Inner Diameter Die Retaining Screws (Non removable)	24G	Punch And Die Alignment Centre
13H	Outer Diameter Punch	24H	Upper Set Clamp Ring
13I	Nudge Cylinder (also see item (21) in section 5.3)		
13L	Pre Centre Cylinders (2 off)		
13L1	Pre Centre IN		
13L2	Pre Centre OUT		
13M	Turntable Rotational Sensor		

12.1 Type of Punch and die set

The Omicrøn can be supplied with various punch and die types contact Sibert sales department for further details.

Standard type :- with removable I.D Cutting parts see section 11.

Fixed type :- with fixed I.D die.see this section.



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



12.2 Initial Use of Punch and Die Sets

The Omicrøn is usually supplied with a Punch and Die set already fitted. The Punch Plate is supported in position by four red spacers, one at the top of each pillar as shown. These must be removed using the following procedure.

12.2.1 Transit Spacer Removal

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

With the front guard closed, operate the Mains Power Switch (31), the top punch plate will rise to its upper position.

(See also Operation Manual – section 9.1)

The red packing spacers that support the Punch plate in the transit position can now be removed.

Note: Ensure that all four spacers are removed.



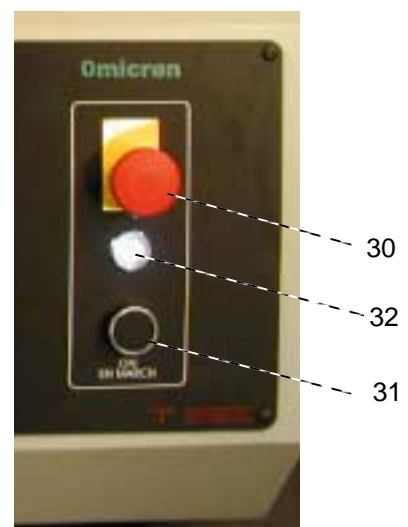
Retain all parts removed and reverse the above procedure if the machine is to be packed for transit at any future date.



Do not attempt further operation of the machine unless the Alignment? Procedure (see Section 11.6, 11.10 & 11.13) has been carried out to ensure smooth movement without binding.



Transit Spacers (one per pillar)



12.3 Additional or Replacement Punch and Die Sets

Additional Punch and Die sets (if supplied) are packed in a separate packing box.



When replacing a Punch and Die set, it is advisable for your records, to note the quantity of punch operations, indicated on the Punch Counter (18m) at the time of replacing the Punch and Die set.



12.4 Removal of Punch and Die Sets



Weight of Punch and Die Set
Lower – 16Kg
Upper – 8 Kg

Note: Service mode Procedure (10.2.5) is applicable to this section.

Login to Service screen and select 'Punch and Die Change'.

Remove back cover.

The air supply and hydraulics to all lower parts of the Omicrøn will be disabled, whilst allowing Upper Punch Plate to move.

Place the Punch and Die Protection Mat (supplied in the Toolcase) on the Lower Punch Set. This will protect both Top and Bottom Sets when they are removed from the Omicrøn.

Disconnect all the air pipes and the rear sensor connection from the lower set. (The top of the air connector should be pushed in the opposite direction to the pipe being withdrawn).

Refer to Section 5.4 (Lower Punch and Die Assembly) for the following:-

13L1 – Blue pipe to each side cylinder
(Pre Centre IN)

13L2 – White pipe to each side cylinder
(Pre Centre OUT)

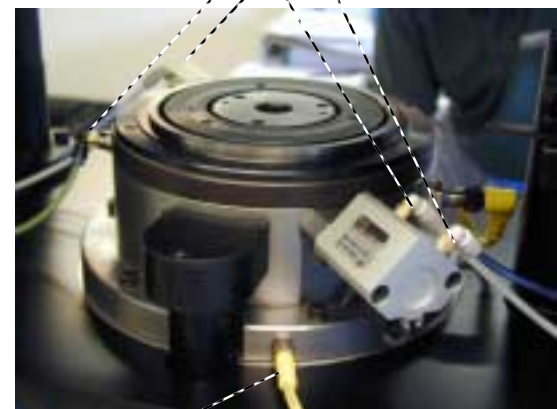
13I – Green pipe (Nudge)



18m



Remove all air pipes



Remove sensor connection

Touch 'Punch Plate down' until the Punch and Die top set is just touching the punch and die protection mat.



For safety reasons, although the plate is moved pneumatically under low pressure and not hydraulically, injury can still be caused if fingers are trapped between the two sets.

24A



Remove the 6 off M6 Upper Set Retaining Screws (24A) from the Top Set Clamp Ring.

Allow the Clamp Ring (24H) to rest on the Punch and Die Protection mat.

24H



Touch 'Punch Plate Up' momentarily, in order to raise the Punch Plate - ensure clean separation of Plate and Upper Assembly as shown, before touching 'Punch Plate Up' again to raise the Punch Plate fully.



NOTE: To avoid the Upper Punch and Die Set dropping too far, ensure separation occurs before the Punch Plate has raised 5-10mm from the Lower set.

24



The Upper Punch and Die Set (24) can now be lifted clear of the machine.



Note: Upper Punch and Die Set weight is 8 Kg.

The 6 off M6 Lower Assembly Retaining Screws (13A) should now be removed and the Lower Punch Set carefully lifted out forwards from the Bottom Punch Plate.



Note: Lower Punch and Die Set weight is 16 Kg.



12.5 Examination of Punch and Die Sets – Fixed type

With the Punch and Die Sets removed from the Omicrøn they can be examined for wear or damage. It is easier to examine the Top Set when the Upper Stripper Plate (24D) is removed (see section 12.8).

The cutting edges marked (X) should be sharp and free from chips and irregularities.



Do not remove ID die as alignment will be lost.

If any of the cutting parts require sharpening the whole Punch and Die assembly must be returned to Sibert Instruments.

A routine inspection of the Turntable Vacuum Seals and an alignment check will be carried out at the same time.



Do not remove the screws under Lower Ejection Ring holding the outer diameter Punch or Die to the assembly.



12.6 Fitting and Alignment - Fixed type

12.6.1 Installing Lower Assembly – Fixed type

Login to Service screen and select 'Punch and Die Change'.

Remove back cover.

The air supply and hydraulics to all lower parts of the Omicrøn will be disabled, whilst allowing Upper Punch Plate to move.

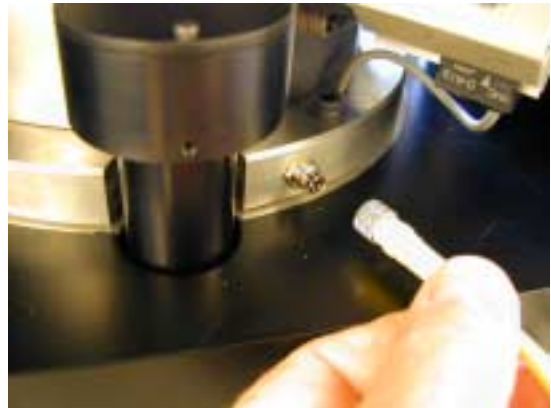
The Lower Set should be carefully placed (do not slide) into position and the 6 off Lower Set Retaining Screws (13A) replaced.



Pull the Punch and Die towards the operator (away from gear) as shown to ensure binding does not occur, before fully tightening the Lower Set Retaining Screws (13A) .



Avoid applying too much hand pressure to the Vacuum Turntable.



Connect all the air pipes and the sensor connection as shown – note orientation of sensor connection plug and socket.

Refer to Section 5.4 (Lower Punch and Die Assembly) for the following:-

13L1 – Blue pipe to each side cylinder
(Pre Centre IN)

13L2 – White pipe to each side cylinder
(Pre Centre OUT)

13I – Green pipe (Nudge)

Check security of connections.

Touch 'Turntable Rotate' button for at least one revolution to check that Turntable gear does not bind during rotation.



12.6.2 Installing Upper Assembly – Fixed type

The three Punch and Die Spacers (A20) should be screwed into the top of the Outer Stripper Plate.

Note : The serial number on the setting piece must match the serial number on the die.

Insert the setting piece in to the die squarely and with care, to avoid damage to the die cutting face. Place the setting ball into the centre of the setting piece.



Note these parts are precision ground and should be handled with utmost care!

Lift the Upper Punch and Die Assembly including the Top Set Clamp Ring (24H) into the Omicrøn and place it carefully so that it rests level on the three Punch and Die Spacers (A20) and the ball locates into the centre of the Inner Diameter Punch.

Note: The serial number of the Upper Set must be aligned with the Lower Set serial number.



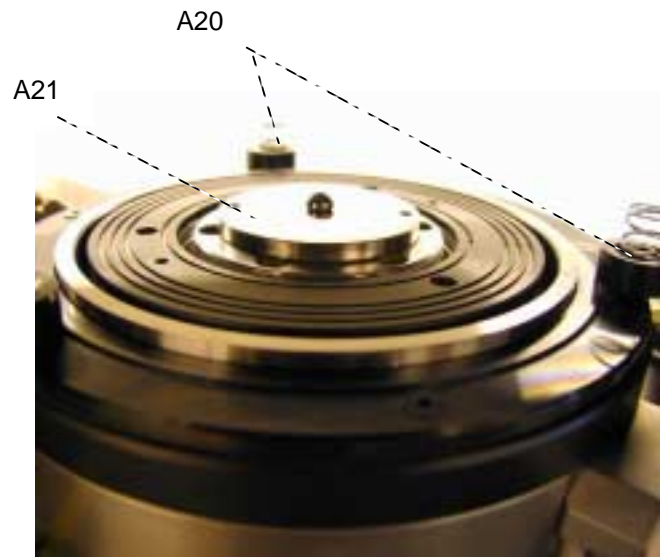
It is important that the Punch and Die sets and the jig are free from dirt and dust.

12.7 Aligning Upper and Lower Punch and Die Sets – Fixed type

Touch 'Punch Down' button, to lower the Top Punch Plate until it is approximately 5mm above the top set, then insert the Upper Retaining Screws (24A) so they are just located in their threads.

The Top Punch Plate can now be lowered until it touches the top set and the two units become aligned by the Jig and Ball. Ensure the Punch Plate is fully down (expel all air from the Punch Plate cylinders by repeated operation of the Punch Down button) before fully tightening the Upper Retaining Screws (24A).

Touch 'Punch Plate Up' until Top Plate is in the fully raised position.





Note these parts are precision ground and should be handled with utmost care!

Remove the three Punch and Die Spacers (A20) and Ball (A21).

The Die Setting tool can then be extracted by screwing the 2 off Knurled Die Removal Screws (A26) into the Removal Threads and gently twisting and lifting in a parallel fashion. If tight the die removal screws can be screwed through removal threads. Ensure that screws are tightened evenly to raise the die setting tool in a parallel fashion.

A26



12.7.1 Checking Alignment – Fixed type

Touch 'Punch Down' until Top Plate is in the fully lowered position - ensure the Top Plate is fully down.

Ensure Upper Punch Plate reaches the fully lowered position, by exerting manual pressure from above.

Touch 'Check Alignment' – the Service Screen will indicate if the alignment is correct and to replace the covers if required.



If alignment fails then repeat Sections 12.6.2 and 12.7, before proceeding.

Exit Punch and Die Change.

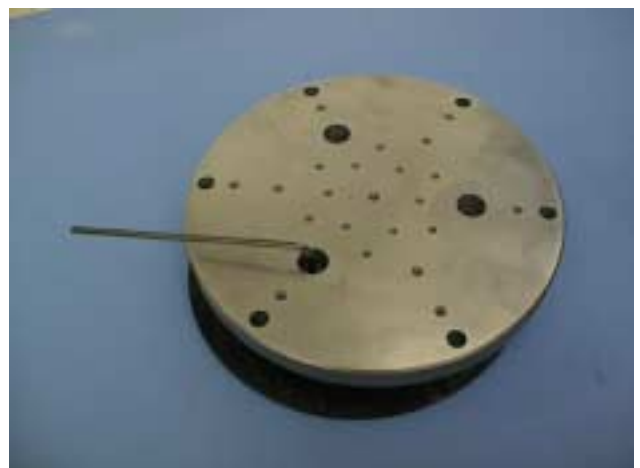
Exit Service mode.

12.8 Removal of the Upper Stripper For Cleaning purposes only

Remove the top half of the Punch and Die Set.

Turn the unit onto a clean flat surface with the Punch face downwards.

Unscrew the 3 off countersunk screws from the bottom face of the Punch, evenly in turn to ensure parallel separation of Stripper Plate.



Carefully lift up the unit leaving the Stripper Plate (24D) and springs on the surface.

Remove 12 off springs.

24D

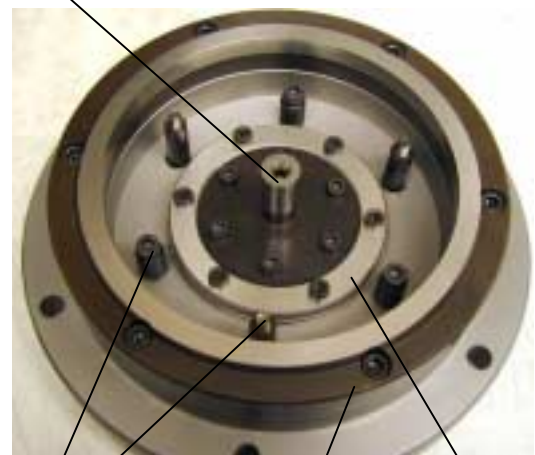


Do not remove the Inner Punch Guide Ring (24N) or the Outside Diameter Die (24B).



Do not remove the Inner Punch (24M) as this must be matched with the Fixed ID Die.

24M



24P

24B

24N

Place the 6 off short springs over the Punch Retaining Screws and the 6 off long springs over the pillars and plungers (24P).



Very carefully place the Stripper plate over the ID Punch, aligning the 3 off threaded holes with the pillars and plungers.

Carefully slide the complete upper assembly over the edge of the workbench to allow the countersunk screws to be tightened into the Outer Plate.



Ensure the screws are tightened evenly by small adjustments to each screw in turn (4mm hex key).

Replace Upper Set and align to Lower Set – see Section 10.4



13 Wand

The wand is used to place the stamper in its target area. It is important to align the wand using the setting piece to maintain accuracy.

13.1 Wand alignment

Turn the wand over to gain access to the pin locking screws (A25a) & pin adjusting screws(A25b).

Release the pin locking screws (A25a) and back off pin adjusting screws (A25b) by one turn.

Then lightly re-tighten the pin locking screws (A25a) so to allow the pin to be moved accurately by the adjusting screw.

The above applies to both left & right hand pins

A25a



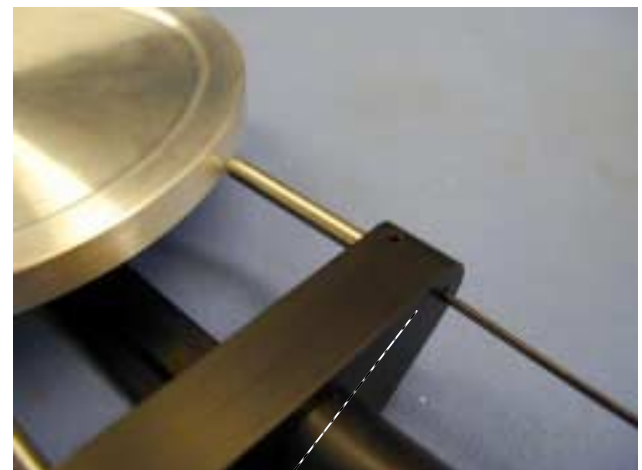
To maintain accuracy of the wand it should be placed on to the remote wand setting piece (A25) ensuring that the wand head sits flat. Turn both the wand and wand setting piece over.



Adjust both pins until the dome of the pin lightly touched on the outer diameter of the setting piece.

Finally tighten the pin locking screws (A25a) to ensure that the pin is not used during normal use.

Turn wand and setting piece over and carefully remove wand from setting piece.



A25b

In normal use and with experience the stamper should be within the screen width when applied to the punch and die set.



14 Fuses



Ensure mains supply is disconnected before attempting to replace any fuse.

14.1 Mains Fuse Replacement

There is one Mains Supply Fuse (7A) fitted externally at the rear of the Omicrøn on the left hand side.

The 20mm fuse is as follows:-

Machine	Rating
100 → 230Vac	T2 AL

There is a spare fuse contained in the fuseholder carrier (7B).

Additional fuses can be found in the Toolcase.

The fuse (7A) can be replaced by removing the Moulded Mains Lead and then pulling the small carrier out from beneath the socket.



7B

7A



If the fuse blows on replacement, the reason should be investigated immediately.

15 Preventative Maintenance

15.1 Schedule

DAILY	
1	Check sufficient supply air pressure
2	Check oil level in reservoir
3	Check Punch and Die set for quality of cut
4	General clean of Punch and Die Set

WEEKLY	
1	Check front panel / Touch screen is functioning correctly (i.e. all switches and indicators)
2	Check optics image on monitor is vertical
3	Check image for clarity
4	General clean of complete machine
5	Check condition of plastic turntable top and upper stripper plate for damage

MONTHLY	
1	Check tightness of securing screws on all guards and covers
2	Check tightness of securing screws on guide pillars
3	Check / clean and drain if necessary the filter/bowl on bench regulator

YEARLY	
Sibert can provide a maintenance package that includes an annual visit by a Sibert Service Engineer	



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



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



Repair work on hydraulic and pneumatic system, may only be carried out when relevant pressures are at zero.

15.2 Hydraulic Oil Reservoir

15.2.1 Level Inspection

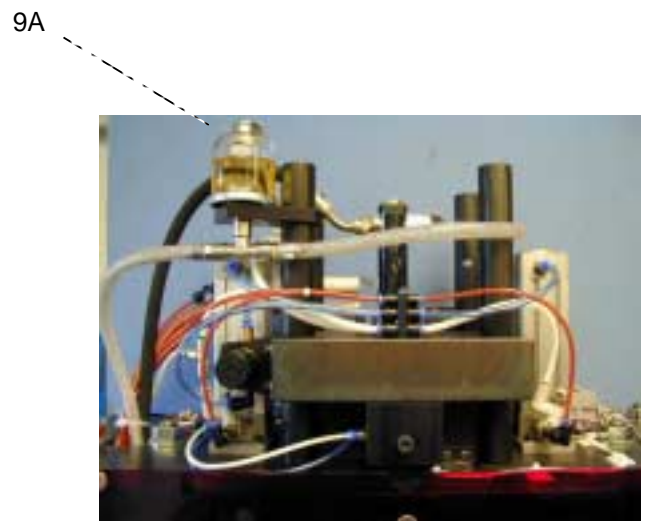
If the Reservoir oil level in the sight glass (8) falls below the marked Min. level it is important to check for oil leaks as this can be the only reason for the oil level falling.



Provided the reason for the fall in oil level is established and the problem rectified, the oil can be topped up.

15.2.2 Level Top Up

A flexible tube and funnel may be used to gain access to the reservoir. For this method, the Top Cap (1) only needs to be removed.



Alternately, the Top Cap and Cover (1&2) should be removed by undoing the 4 off M6 screws on each item and then lifting them clear.

The Reservoir (9A) can then be topped up with hydraulic oil (BP HLP 32 or equivalent).

All covers must then be replaced.



15.3 Filter Replacement



The Omicrøn must not be operated without filters fitted.

15.3.1 Vacuum Table Filter

The vacuum air from the turntable is filtered to prevent particles being sucked through the Vacuum Pumps and causing damage. If the indicated table vacuum falls below -15" Hg the filter may have become blocked and need replacement.

Contact Sibert Instruments for an Engineer visit if this Filter needs replacing.



Vacuum loss due to any other cause should be investigated immediately.

15.3.2 Air Line Filter

The Air Line Filter (17B) should be periodically checked to ensure that it remains clean. If necessary it should be replaced.

Unscrew the outer body by twisting it counter clockwise. The filter can be removed after unscrewing the retaining screw and cap.

A new filter can then be inserted as shown and the above procedure reversed.

17B



Disconnect Filter-Regulator from the Pneumatic supply before attempting filter replacement.

16 Cleaning



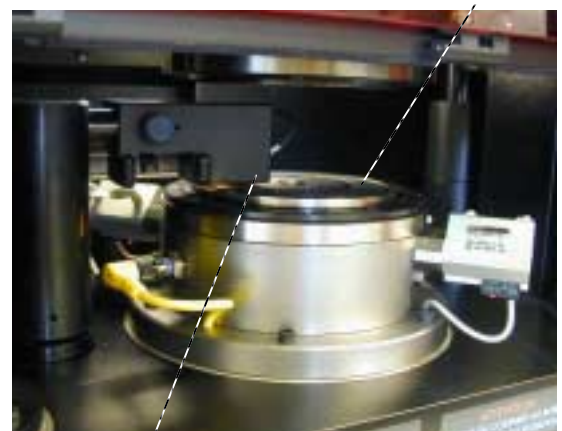
It is recommended that inspection and cleaning to prevent a build up of dust and nickel particles should be carried out daily.



16.1 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.

22



16.2 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.

23

16.3 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.



16.4 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.

After 30 seconds, touch Exit Options (18p) to return to Initial default screen.

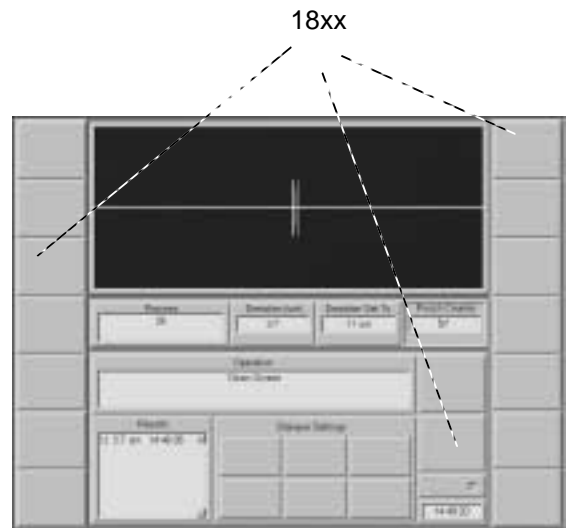


**Do not use sharp objects.
Do not spill any liquid onto the screen.**

18p



18z



17 Schematics

17.1 Pneumatic Schematic

Drawing No. 251901

17.2 Pneumatic Layout

Drawing No. 251902

17.3 Electrical Schematic

Drawing No. 251903

17.4 Electrical Layout

Drawing No. 251904

Note :- All the above documents are to be found in the document pack. See section 6 (A1)

18 Documentation

18.1 Test Certificate

Omicrøn SERIAL NO:

CUSTOMER:

COLOUR:

	ELECTRICAL	PNEUMATIC
SUPPLY / CONSUMPTION:		
FUSE RATING:		
SCHEMATIC DRAWING NUMBER:		
SCHEMATIC ISSUE NUMBER:		
LAYOUT DRAWING NUMBER:		
LAYOUT ISSUE NUMBER:		

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
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18.2 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

18.3 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