

Regular service of Sibert SPS Punch & Die sets

The main features of an SPS Punch & Die (P&D) are –

- 1. ID cutting parts & matched P&D strippers (4 part tooling)**
- 2. Separate OD cutting parts & strippers/ejectors**
- 3. Turntable linear movement accuracy & vacuum system**
- 4. Turntable rotation accuracy (including the high precision angular contact bearings)**
- 5. ID Turntable pre-centring system**

Each of the 5 above features must work together to ensure that successful Punching continues. The Sibert P&D service covers all 5 of the above, not just simply resharpening the cutting parts as a local company may promise.

There is little gain to be had by resharpening the cutting parts locally if the vacuum system is restricted due to nickel dust contamination or the damping system needs attention. Local companies will not have the precision engineering capability & experience required when servicing P&Ds to micron tolerances.

NOTE: Attention to cleanliness in the 'SPS' room is very important. The clearances between the 4 part tooling are closer than that of any previous Sibert Punching design. Ensuring that the P&Ds are kept clean is a necessity to achieve the correct hole size/geometry. Experience on high yield BD sites have proven that such hole profile/accuracies are necessary.

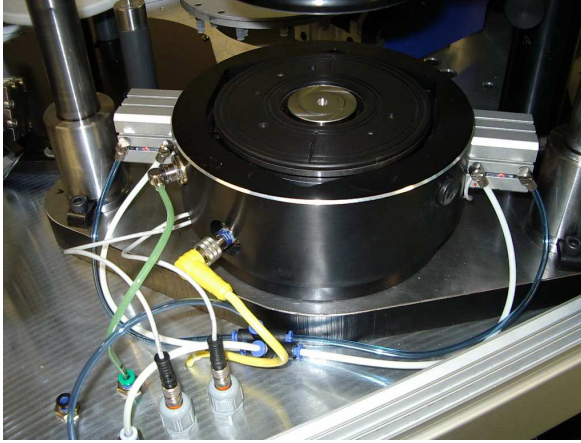
Sibert strongly recommend regular servicing of the SPS P&D sets. To assist the customer there are preset Preventative Maintenance levels contained within a password protected area of the SPS Punch.

NOTE: On new installations Sibert suggest that the initial shot count changes are reduced & the P&Ds returned to Sibert for evaluation so that we can feedback to the customer the condition the P&Ds and if necessary make any suggestions. This also allows direct feedback on Technician Preventative Maintenance re-training that may be necessary.

Past experience has proven that the P&D cutting parts & vacuum system etc last longer if serviced regularly, subject to correct alignment/use & are regularly maintained (as trained by the Sibert installation engineer).

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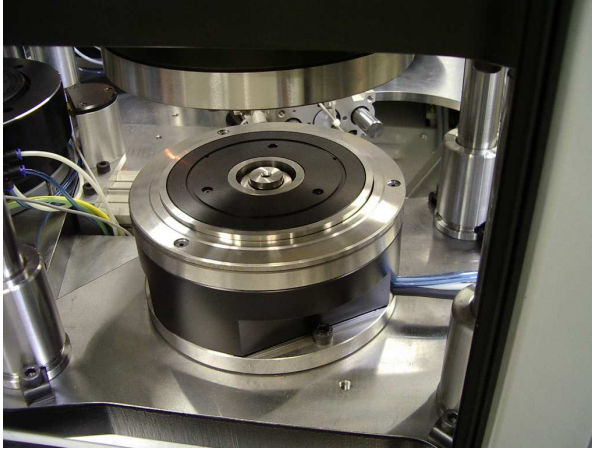
A standard SPS ID P&D service will include amongst other checks/testing/qualification:



- Inspection and sharpen of I/D 4 part tooling
- Notification given to customer when cutting parts are approaching end of serviceable life & need replacing on next service
- Check vacuum of turntable (vacuum seals & turntable flatness) during rotation
- Check concentricity/alignment of cutting parts to bearing hub
- Check concentricity/alignment of upper & lower 4 part tooling
- Check condition and action of strippers
- Replacement of all consumable parts such as damping grease, vacuum tubes & seals
- Check condition of brass turntable transfer drive gear
- Check tightness of all screws, particularly the stripper retaining screws
- Check SPS ID P&Ds pre-centring / auto centre / nudging system is functioning correctly
- Check SPS ID P&D's manual nudging system is functioning correctly
- Test punch customers sample stampers, once centred, to within specified limits
- Inspect & measure the I/D (quality of cut, ECC etc)
- Optional - supply Sibert stamper certificate (with stamper hardness) if required by customer (see blank sample stamper certificate on page 4)
- Supply of a customer feedback form to enable direct feedback to Service team from customer in readiness for next service

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A standard SPS OD P&D service will include amongst other checks/testing/qualification:



- Inspection and sharpen of O/D tooling
 - Notification given to customer when cutting parts are approaching end of serviceable life & need replacing on next service
 - Confirm vacuum on turntable (check vacuum seals)
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- Check concentricity/alignment of upper & lower set
 - Check all screws are tight
 - Check condition and action of OD ejectors
 - Check movement of dual diameter centre spigot in its various positions & associated sensors
 - Testing / qualification carried in Sibert SPS test Punch equipment
 - Check tightness of all screws, particularly the OD lower ejection ring screws
 - Test punch customers sample stampers with OD punched ready for inspection
 - Inspect & measure the O/D (quality of cut etc)
 - Supply of a customer feedback form to enable direct feedback to Service team from customer in readiness for next service

Test punching with customer stampers (to production standards - back finished with protective film applied if used) allows accurate ID hole sizes etc to be produced and measured & correct tolerance confirmed

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Punch and Die / Stamper Test Certificate

Certificate Number :
Customer :
Stamper Identification :
Stamper Hardness HV0.3 Front :
Stamper Hardness HV0.3 Back :
Punch and Die Assembly Number :
ID Punch and Die Serial Number :
Punch and Die Type :
Works Order Number :
Nominal ID :
Measured ID of Stamper :
Concentricity of ID to Data :
Nominal OD :
Measured Outside Diameter :
Roundness of ID :
Surface Finish of Stamper :
Date :
Inspected By :

The above measurements have been carried out using a 5D Macro Measurement System serial number 00013904.



Signature _____

Please email chris.mosley@sibert.co.uk or call +44 1252 813310 direct for further details