

INSPECTION GUIDE

COMPONENTS / PURPOSE

Components

- Dial Gauge & Stand: Least count 0.01mm
- Micrometer: Least count 0.01mm, Range 0-25mm
- Punch Height Gauge, Radius Gauge
- Die O.D. Block, Die Bore Go-NoGo Plugs
- Magnifying Glass: 4x

Purpose

- Identify faulty punches & dies
- Solve problems like tablet weight variation, tablet thickness / hardness variation, excessive powder seepage between lower punch & die, collar formation in tablet, punch jamming in die

WORKING & TOTAL HEIGHT

Procedure

- Place the 1st punch under the dial. The dial tip should be placed at the deepest point in cavity
- Set the dial to '0'
- Replace this punch with other punch
- The deviation in dial reading is the difference in working height of punches
- Total height can be checked in a similar manner by placing the punches tip down.

Limit - Working Height

- In a new set $\pm 0.025\text{mm}$



TIP TO BODY CONCENTRICITY

Procedure

- Set the punch as shown keeping the magnet ON
- Move the 'V' to set it at the highest point on tip diameter
- Set the dial to "0"
- Rotate the punch without moving the 'V' block.
- The deflection indicates bending of tips or error in concentricity

Acceptable Limit

- 0.025mm in new tooling



DIE OD

Procedure

- Place the die block under dial and adjust it to "0".
- Ensure that the block is placed on the right face
- Replace the die block with a die as shown. Roll the die to find the highest point
- The displacement in the dial is the difference in the die OD from the standard

Allowable Limit

- -0.013mm



OTHER DIMENSIONS

Punch Barrel & Tip Diameter

- Use a micrometer to measure these

Radius of concave tablets

- Measure this using radius gauges
- The gauge should match the concave surface. No gap should not be visible between gauge and tip

Punch Head & Neck Profile

- Use Head Go-NoGo gauge to check this
- Head thickness and head inside degree are the critical parameters to check

Round Die Bores

- Use a Die Go/NoGo gauge to check this

VISUAL INSPECTION

Use a magnifying glass for visual inspection

Punch Tip

- Outside of tip edges for bruising & raised burs
- Tip straight diameter for scratches

Punch Cavity

- Abrasion, corrosion, sticking or dull finish

Punch Body

- Scratches or binding on barrels or stems
- Head flat for pitting / scratches
- Punch body for corrosion

Die Bore

- For ring formation



For more information please visit 'Tool Doctor' on our website.



Pharmachine INDIA