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Technical Release

Definition:

Totally interchangeable tooling refers primarily to punches that have an extremely tight angular tolerance on the key location. This tolerance enables any upper punch in the set to be interchanged with other upper punches and still mate properly with the die bores.



Interchangeable Tooling

Standard Tools:

When standard, non-interchangeable tools are installed in a tablet press, an upper punch is used to locate the die in a turret die pocket. Once that die is firmly seated, using a die driving rod, the upper punch that was used to position the die is installed in the upper punch guideway. The angular relationship between the key and top shape varies somewhat from punch to punch; as a result, once the punch is located using a given upper punch, that punch must be used with that die.



Interchangeable Tools:

A CNC 4-axis mill precisely cuts the keyway in the same location to allow for uniformity within a complete set of tools.

A tooling set which is totally interchangeable includes a master setting tool that is used to locate and seat all the dies in the turret die table. Once the dies have been seated and locked in place, the upper punches can be randomly installed in any station in the turret. Set-up time is reduced because that master setting tool allows the die positioning and die seating operations to be combined into a single step.



Interchangeable Tooling

Benefits:

- Any upper punch mates with a die bore.
- Master setting tool seats all dies in die table.
- Upper punches are installed in any station.
- Expedites press set-up.
- Reduces down time during cleaning.



Additional production time savings may be realized if it is necessary to routinely remove the upper punches for cleaning during a batch run.

Once removed and cleaned, punches can be reinstalled more quickly since they do not have to be matched with any particular die or station in the turret.

When replacing individual upper punches due to damage, considerable down time is eliminated since it is not necessary to remove and reset the die; a procedure that requires the removal of a feeder assembly.



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Applicability

- Available for B/BB, D and 328 shaped (caplet, oval, etc.) tooling.

For more information please contact our Tooling Design Specialists at 800 . 634 . 9910