

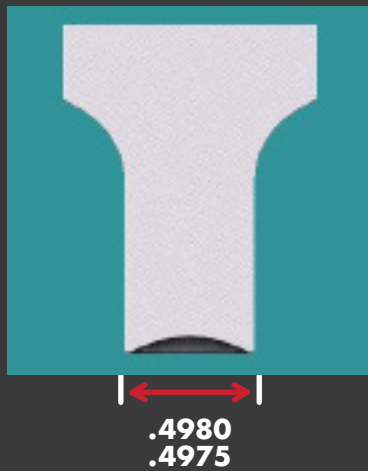
TSM TOLERANCE STANDARDS

TROUBLESHOOTING TOOLING SERIES



TSM TOLERANCES FOR PUNCHES

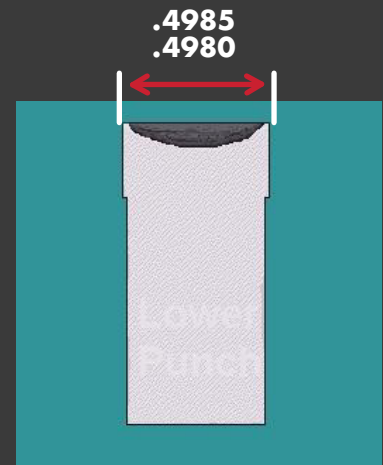
Based on a shape tool over the minor axis. All measurements are in inches. Never allow punch tip size to be greater than specified.



UPPER PUNCH .4980
actual size

HIGH LIMIT
.4980

LOW LIMIT
.4975



LOWER PUNCH .4985
actual size

HIGH LIMIT
.4985

LOW LIMIT
.4980

PUNCH TOLERANCE: + .0000
- .0005

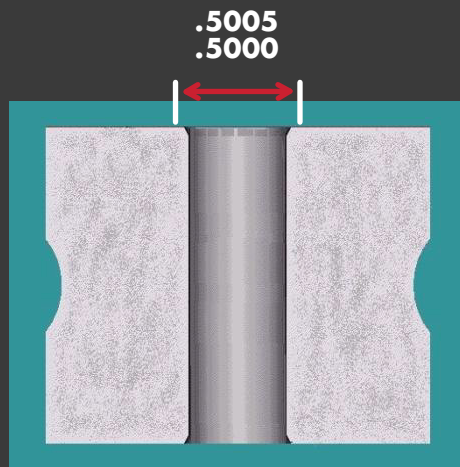
TSM TOLERANCE STANDARDS

TROUBLESHOOTING TOOLING SERIES



TSM TOLERANCES FOR DIES

Never allow die ID to be less than specified size.



ACTUAL SIZE
HIGH LIMIT .5000 LOW LIMIT .5005

DIE TOLERANCE: **+ .0005**
 - .0000

TSM TOLERANCE STANDARDS

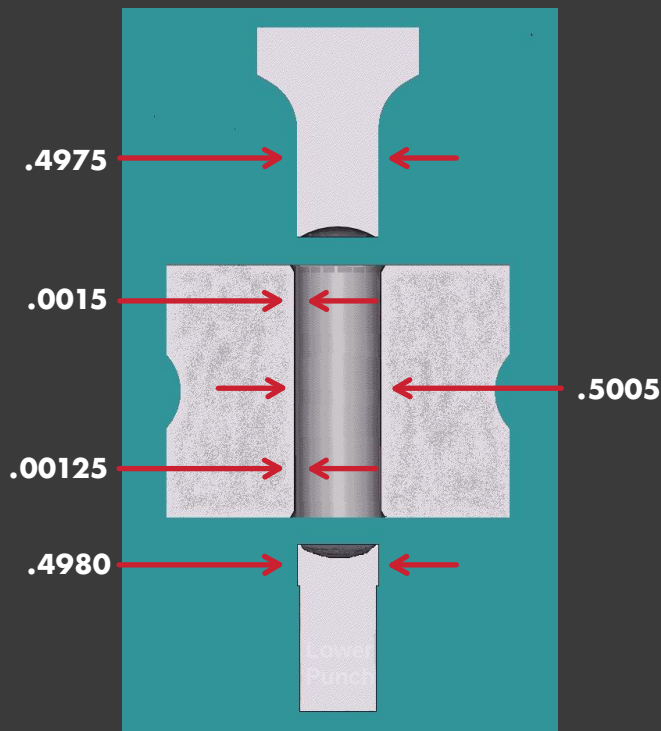
TROUBLESHOOTING TOOLING SERIES



TSM TOLERANCES - PUNCH TO DIE

Based on a shape tool over the minor axis. All measurements are in inches. Lower punch clearance normally less than upper punches. Reduce powder flow-by.

MAXIMUM CLEARANCE PER SIDE



MINIMUM CLEARANCE PER SIDE

