

Trouble Shooting Carbide Reamers

| Problem | Cause | Solution |
|----------------------|--|--|
| Chatter | <ul style="list-style-type: none"> • High cutting speed • Feed rate too low • Workpiece movement • Toolholder rigidity • Tool rigidity | <ul style="list-style-type: none"> • Lower RPM or increase feed rate • Increase feed rate • Tighten workpiece rigidity • Tighten toolholder or reduce float • Use shorter tool, place further up holder |
| Tool Wear / Chipping | <ul style="list-style-type: none"> • Incorrect feed rate • Incorrect speed • Poor hole condition • Abrasive material • Poor chip evacuation • Poor coolant • Insufficient coolant • Workpiece alignment • Excessive stock removal | <ul style="list-style-type: none"> • Increase feed rate (typically) • Reduce speed (typically) • Work-hardened hole; change drilling type • Use proper coolant, coated reamer • Use/increase coolant, use helical reamer • Replace coolant or correct mixture • Increase coolant volume • Use bushing, floating holder , lead chamfer • Use larger diameter starter drill |
| Tool Breakage | <ul style="list-style-type: none"> • Incorrect feed rate • Incorrect speed • Tool wear • Bottoming of hole • Coolant conditions | <ul style="list-style-type: none"> • Increase feed rate (typically) • Reduce speed (typically) • Sharpen or replace reamer • Adjust stop depth, check preset • Increase, replace, or correct coolant |
| Poor Finish | <ul style="list-style-type: none"> • Feed rate too low • Insufficient stock removal • Poor hole condition • Poor coolant • Insufficient coolant | <ul style="list-style-type: none"> • Increase feed rate • Use smaller diameter starter drill • Work-hardened hole; change drilling type • Replace/correct coolant mixture • Increase coolant volume |
| Hole Tolerance | <ul style="list-style-type: none"> • Workpiece alignment • Incorrect tool size • Material shrinkage • Tool wear • Toolholder runout | <ul style="list-style-type: none"> • Use bushing, floating toolholder • Check diameter of tool • Adjust diameter for shrinkage; more coolant • Sharpen or replace tool • Adjust or replace toolholder |