

Technical Information

APPLICATIONS
Drilling

Troubleshooting

PROBLEM	CAUSE	RECOMMENDED ACTION
Drill Breakage	<ul style="list-style-type: none"> • speeds & feeds • cutting fluid • others 	<ul style="list-style-type: none"> • Maintain constant feed rate • Reduce the cutting speed • Reduce the feed rate • Increase coolant flow • Use a machine with sufficient horsepower • Tighten workpiece clamping
Center Point Breakage	<ul style="list-style-type: none"> • tool • speeds & feeds • others 	<ul style="list-style-type: none"> • Reduce drill overhang • Maintain constant feed rate • Reduce the feed rate when starting drill • Use a machine with sufficient horsepower • Tighten work piece clamping
Peripheral Cutting Edge Breakage	<ul style="list-style-type: none"> • tool • speeds & feeds • others 	<ul style="list-style-type: none"> • Reduce drill overhang • Maintain constant feed rate • Reduce the cutting speed • Use a machine with sufficient horsepower • Tighten workpiece clamping
Chipping	<ul style="list-style-type: none"> • tool • speeds & feeds • cutting fluid • others 	<ul style="list-style-type: none"> • Reduce drill overhang • Maintain constant feed rate • Change the feed rate • Increase coolant flow • Use a machine with sufficient horsepower • Tighten workpiece clamping
Long Stringy Chips	<ul style="list-style-type: none"> • tool • speeds & feeds 	<ul style="list-style-type: none"> • Less lead angle • Increase hone • Maintain constant feed rate • Increase the feed rate
Chip Form Varies	<ul style="list-style-type: none"> • speeds & feeds • cutting fluid • others 	<ul style="list-style-type: none"> • Maintain constant feed rate • Maintain constant coolant flow • Use a machine with sufficient horsepower

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PROBLEM	CAUSE	RECOMMENDED ACTION
Over Size or Out-of-Round	<ul style="list-style-type: none"> • tool • speeds & feeds • others 	<ul style="list-style-type: none"> • Reduce drill overhang • Increase lead angle • Increase the cutting speed • Reduce the feed rate • Use a machine with sufficient horsepower • Tighten workpiece clamping
Poor Surface Finish	<ul style="list-style-type: none"> • speeds & feeds • others 	<ul style="list-style-type: none"> • Maintain constant feed rate • Increase the cutting speed • Reduce the feed rate • Use low feed rate when starting drill • Use a machine with sufficient horsepower • Tighten workpiece clamping
Galling on Drill Body	<ul style="list-style-type: none"> • tool • speeds & feeds • others 	<ul style="list-style-type: none"> • Reduce drill overhang • Reduce the cutting speed • Increase the feed rate • Use a machine with sufficient horsepower • Tighten workpiece clamping
Vibration	<ul style="list-style-type: none"> • tool • speeds & feeds • others 	<ul style="list-style-type: none"> • Use light hone • Reduce drill overhang • Maintain constant feed rate • Use a machine with sufficient horsepower • Tighten workpiece clamping