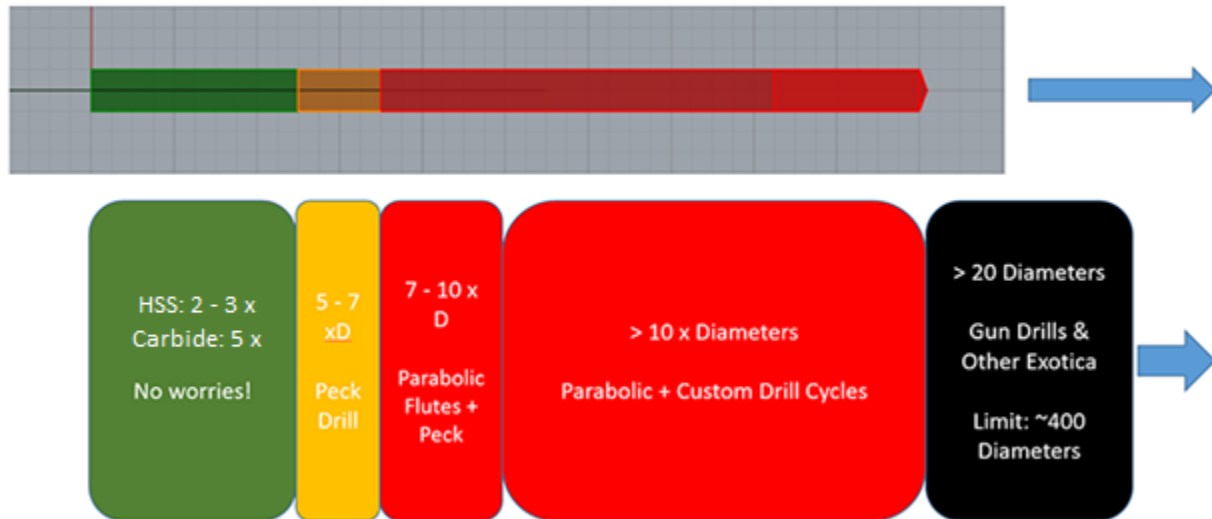


Deep Hole Drilling:

Deep Hole Techniques



Peck Drilling Strategies: > 5 Diameters

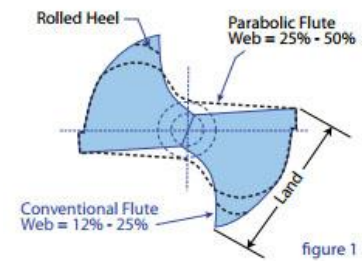
- For CARBIDE: Above 5 diameters, start peck drilling
- For HSS: Above 2-3 diameters, start peck drilling
- Short pecks up to 10 Diameters
- Long Retract > 10 Diameters
 - Use a stub drill to start the hole.
 - Enter the hole at 300 - 500 RPM's, increase the spindle speed once the drill bit is below the surface of the material.
 - Don't retract clear of the hole, keep the drill point below the surface of the material.
 - Slow feed rate by 50% before breaking through the bottom of the material to reduce heat load and the risk of heat treating the material in that region. Typically do this at about 0.1" from the bottom of the part.



- Do NOT peck carbide drills

Parabolic Drills: > 7 Diameters

- Geometry altered for better chip extraction
- Better Feeds & Speeds
- Deeper Holes
- *Remember, don't retract clear of the hole*



What to Do After 20 Diameters?

- Gun Drills & Similar Approaches
- Through tool high pressure coolant
- Lots of chip clearance
- Requires no reaming or honing
- Up to 400x diameters deep!

