



One tooling switch can provide a smörgåsbord of benefits.

When you're searching for a new tooling solution, it's always nice when you find an answer that goes above and beyond the improvements you need. Our customer was roughing and finishing steel roller housings for the structural steel/fabricator industry. The application required 3 boring passes to complete, resulting in lengthy cycle times and sub-par hole finishes. Each pass was made by a different tool, which caused additional headaches and increased inventory costs. And on top of that, the tooling produced non-round holes and inconsistent insert wear that caused tool failures.



Our customer tested the **Wohlhaupter Combi-Line** boring system, and the results provided even more improvements than they had hoped for. For starters, the Combi-Line tool completed both the rough and finish processes in a single pass, eliminating 2 tools and our customer's inventory woes in one shot. It also eliminated the tool failures. The one pass completion also slashed cycle time from nearly 4.5 minutes to 3 minutes (a **33% reduction**).

But the benefits didn't stop there. The Combi-Line tool impressed our customer with a significant increase in tool life. Where the previous tooling produced 150 (3.81 M) linear inches, the Combi-Line produced 400 (10.16 M) linear inches (a **167% increase**). Also, the Combi-Line improved the resulting hole surface finish from 125 Ra to a much nicer 63 Ra (a **50% improvement**).

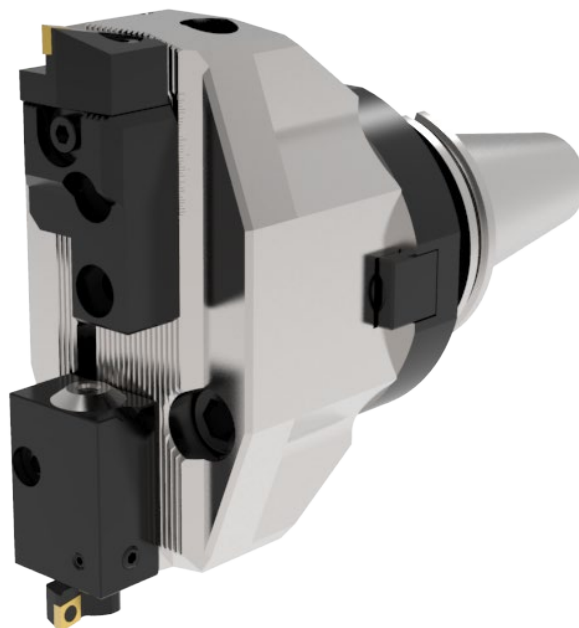
Cycle time decrease, inventory reduction, tool life increase, tool failure elimination, surface finish improvement...this smörgåsbord of benefits resulted from one switch in tooling. **Don't underestimate the impact a simple tooling change can have on your productivity; feast on the benefits.**

Product:	Wohlhaupter Combi-Line	Measure	Competitor Boring Tool	Combi-Line
Objectives:	(1) Reduce inventory requirements (2) Decrease cycle time	RPM	215	290
Industry:	Structural steel/fabricator	Speed Rate	500 SFM (152.4 M/min)	675 SFM (205.740 M/min)
Part:	Steel roller housing	Feed Rate	0.004 IPR (0.102 mm/rev)	0.004 IPR (0.102 mm/rev)
Material:	4140 alloy steel/A36 structural steel	Penetration Rate	0.86 IPM (21.844 mm/min)	1.16 IPM (29.464 mm/min)
Hole Ø:	8.858" (224.993 mm)	Cycle Time	4 min 20 sec	3 min
Hole Depth:	3.500" (88.9 mm)	Hole Finish	125 Ra	63 Ra
		Tool Life	150 linear inches (3.81 M)	400 linear inches (10.16 M)
		Tool Failure?	Yes	No

167% tool life increase

The Wohlhaupter Combi-Line tool provided:

- Decreased cycle time ✓
- Increased tool life ✓
- Reduced inventory requirements ✓
- Improved hole surface finish ✓
- Eliminated tool failures ✓



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