

310 Product Overview

310 FINE BORING

Engineered with wear and tear in mind.

310 Wohlhaupter boring heads are made from steel for \varnothing 20.00 mm - 103.00 mm and coated Alu-Line material for \varnothing 100.00 mm - 205.00 mm boring heads to protect against corrosion and wear. The insert holder can be rotated quickly for reverse machining.

- Diameter range: 20.00 mm - 205.00 mm
- Alu-Line diameter range: 100.00 mm - 205.00 mm
 - Special coating on Alu-Line provides hard, durable surface
 - Alu-Line body reduces tool weight by 50%, reducing stress on the spindle
- Through coolant
- Vernier diameter adjustment of 0.002 mm
- Max cutting speed: 1,000 M/min



IMPORTANT: Max spindle speed refers to maximum possible speed for an individual boring head and is not a recommended parameter. Refer to page B10-M: 12 for recommended application-specific parameters. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: engineering.eu@alliedmachine.com

WOHLHAUPTER® 310 BORING HEAD with NOVI^{TECH}

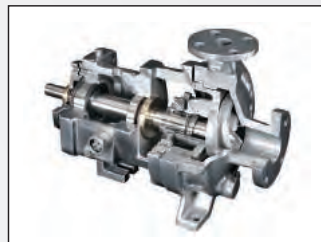
Time is money, so make it count.

If you want to improve your machining processes, cycle time is a key factor to examine. Our customer was experiencing lengthy cycle times while machining pumps from grey cast iron. The parts required three bored holes, each with a 304.8 mm depth and a 558.8 mm reach.

In order to free up machine time, the customer questioned if their process could be more efficient. The main objectives were to decrease the current cycle time and to maintain a 4 Ra finish, which was required to perform the burnishing process that followed.

The previous tooling ran at a slow 11.938 mm/min and a slow 84-minute cycle time to bore the three holes on each part. With our **Wohlhaupter 310 boring head** utilising the **NOVI^{TECH} vibration dampening module**, the customer increased to a more efficient 95.25 mm/min and slashed the cycle time to 10.5 minutes (an 87% decrease). Along with the increased speed, the Wohlhaupter tooling also achieved a 4 Ra finish, accomplishing everything the customer needed.

The Wohlhaupter solution reduced the process cycle time by 74 minutes. Improvements in speed and cycle time can free up machine hours, which means more throughput and higher profit for your company. **Are you losing money on applications with substantially long cycle times?**



		Measure	Competitor Boring Head	310 Boring Head w/ NOVI ^{TECH}
Product:	Wohlhaupter 310 Boring Head with NOVI ^{TECH}	RPM	39	469
Objectives:	(1) Decrease cycle time (2) Maintain 4 Ra hole finish	Speed Rate	17.069 M/min	205.74 M/min
Industry:	Oil & gas/petrochemical	Feed Rate	0.305 mm/rev	0.203 mm/rev
Part:	Pump	Penetration Rate	11.938 mm/min	92.25 mm/min
Material:	Grey cast iron	Cycle Time (per hole)	27 min 54 sec	3 min 32 sec
Hole Ø:	139.7 mm	Hole Finish	4 Ra	3.8 Ra
Hole Depth:	304.8 mm			

► Boring head
310 series
Item No. 310008

► NOVI^{TECH}
vibration dampening
intermediate module
Item No. 519005



The Wohlhaupter 310 boring head with the NOVI^{TECH} vibration dampening module provided:

- ✓ Increased penetration rate
- ✓ Decreased cycle time
- ✓ Excellent finish in deep hole application

74 minute
cycle time reduction