



**ALLIED MACHINE  
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing



Drilling



Reaming



Burnishing



Threading



Specials



**Wohlhaupter®**

► **BORING**

Special Boring Solutions

**WOHLHAUPTER®**



SECTION

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# B10-K

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Special Boring Solutions

# Wohlhaupter® Special Boring Solutions



## Special Design Tooling

When it comes to special solutions for customers, Wohlhaupter has unique capabilities to effectively design and develop special boring tools. Our special boring tools are designed for specific machines, processes, and materials to help save you time and money.

If you have a particularly unique or difficult application, give our Application Engineering team a call.

phone: 330.343.4283 ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

Your safety and the safety of others is very important. This catalog contains important safety messages. Always read and follow all safety precautions.



This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalog. Safety messages follow these words.

### **WARNING**

**WARNING** (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury.

**NOTICE** means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

**NOTE** and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures.

## Applicable Industries



Aerospace



Agriculture



Automotive



Firearms



General  
Machining



Oil & Gas



Renewable  
Energy

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## ES-Bore Fine Boring Lay Down Cartridge

DIGITAL ES-BORE WITH ADAPTER PLATE



**NOTE:** ES-Bore digital fine boring cartridges must be used with the new 3E<sup>TECH+</sup> and adapter plate. The ES-Bore cannot be used with 3E<sup>TECH</sup>.

**NOTE:** 3E<sup>TECH+</sup> adjustment accuracy of 0.00005" or 0.001 mm on diameter.

ANALOG ES-BORE



### LAYDOWN CARTRIDGES

## ES-BORE

- ▶ Mounts to custom designed boring tools.
- ▶ Available with digital 3E<sup>TECH+</sup> or analog adjustment.
- ▶ Accurate adjustments with easy-to-use settings.
- ▶ Versatility in many different application types over 1.102" (28.00 mm) on diameter.



*GROOVING TOOLS*

**EK GROOVER**

- ▶ Create complex grooves faster and deeper than ever before.
- ▶ Eliminate chatter in hard-to-reach internal forms.
- ▶ The electronically-controlled insert release can be adapted to most machine tools.
- ▶ Single or double grooving in one operation.

*ROUGH BORING TOOLS*

**LAY DOWN CARTRIDGE**

- ▶ Increase the productivity of your roughing tool while protecting your investment.
- ▶ If the tool is ever damaged, simply replace a cartridge and resume making chips.



*SPECIAL BORING TOOLS*

## ANTI-VIBRATION

- ▶ Vibration dampening rings.
- ▶ Optimized tool weight.
- ▶ Used to reduce harmonic vibration in deeper boring applications.

*SPECIAL BORING TOOLS*

## MULTISTEP BORING TOOL

- ▶ Fine adjustment tool for reverse machining.
- ▶ Combined with multidiameter fine adjustable cartridges for finish machining.





*SPECIAL BORING TOOLS*

**OD TURNING TOOLS**

- ▶ Multistep OD turning.
- ▶ Drastically reduce cycle time.
- ▶ Improve surface finish and feature concentricity.

*SPECIAL BORING TOOLS*

**PADDED TOOLING**

- ▶ Aids in stable part processing.
- ▶ Expands length-to-diameter capabilities.
- ▶ Improves surface finish.
- ▶ Pads are replaceable to extend tool life.

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**NOTE:** 3E<sup>TECH+</sup> adjustment accuracy of 0.00005" or 0.001 mm on diameter.

*3E<sup>TECH+</sup> BORING TOOL*

## **MULTISTEP BORING TOOL**

- ▶ Easy diameter adjustments with 3E<sup>TECH+</sup>.
- ▶ One digital readout module to use on all steps.



**NOTE:** 3E<sup>TECH+</sup> adjustment accuracy of 0.00005" or 0.001 mm on diameter.

*3E<sup>TECH+</sup> BORING TOOL*

## **LINE BORING TOOL**

- ▶ One digital readout module used on all steps.
- ▶ Easy diameter adjustment at the machine spindle.

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DigiBore Special Boring Tools



NOTE: Imperial item pictured.  
NOTE: Digital adjustment accuracy of 0.0001" or 0.002 mm on diameter.



NOTE: Imperial item pictured.  
NOTE: Digital adjustment accuracy of 0.0001" or 0.002 mm on diameter.

FINISH BORING TOOLS

**DIGIBORE WITH 249 (248)**

- ▶ Standard DigiBore head, standard 249 (248) head, and special slide for precise two-step bore.
- ▶ MVS connection.

FINISH BORING TOOLS

**DIGIBORE SPECIAL**

- ▶ Standard DigiBore boring head with OD turn and OD chamfer insert holder.
- ▶ MVS connection.

## Combi-Line Special Boring Tool

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*ROUGH, FINISH, and CHAMFER BORING TOOLS*

### **COMBI-LINE**

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- ▶ Standard Combi-Line tooling with added chamfer cartridge.
- ▶ MVS connection.

## Online Tools

ToolMD® | Wohlhaupter® Boring Insert Selector



### Design Your Own Solutions

ToolMD is a configurator for Wohlhaupter modular tooling systems that allows customers to virtually build their own solution. This online-based simulator puts the entire Wohlhaupter product line at your fingertips. It provides a digital bank of every individual part that Wohlhaupter manufactures in either inch or metric.

Once you select a component, you will be guided by a series of user-friendly prompts to select the next components until you have built your tooling system. Throughout the process, you can monitor the size of your custom tool and ensure what you're building matches your real-life specifications. Once a complete system is virtually assembled, the program will render the tool in either a 2D or 3D drawing to view on your device.

Designing your tools with ToolMD saves you time and allows you to instantly obtain the right tool for the job.



Design anytime from anywhere.  
Available online 24/7.

## WOHLHAUPTER® | Boring Insert Selector

www.alliedmachine.com/bis



- Generate the correct boring insert for your application in just six easy steps.



- Search for your new insert item number by entering your old item number.



- Choose type, shape, substrate, insert form, nose radius, and workpiece material.
- Order easily by adding the item to your cart.

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# Guaranteed Test / Demo Application Form

Distributor PO # \_\_\_\_\_

The following must be filled out completely before your test will be considered.

**IMPORTANT:** For processing, send purchase order to your Allied Field Sales Engineer (FSE). Please clearly mark the paperwork as "Test Order."

## Distributor Information

Company Name: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Account Number: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

## End User Information

Company Name: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Industry: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Current Process** List all tooling, coatings, substrates, speeds and feeds, tool life, and any problems you are experiencing.

\_\_\_\_\_

\_\_\_\_\_

**Test Objective** List what would make this a successful test (i.e. penetration rate, finish, tool life, hole size, etc.).

\_\_\_\_\_

\_\_\_\_\_

## Application Information

Hole Diameter: _____ in/mm	Tolerance: _____	Material: _____ (4150, A36, cast iron, etc.)
Preexisting Diameter: _____ in/mm	Depth of Cut: _____ in/mm	Hardness: _____ (BHN, Rc)
Required Finish: _____ RMS	State: _____	(Casting, hot rolled, forging)

## Machine Information

Machine Type: _____ (Lathe, screw machine, machine center, etc.)	Builder: _____ (Haas, Mori Seiki, etc.)	Model #: _____
Shank Required: _____ (CAT50, Morse taper, etc.)	Power: _____ HP/KW	
Rigidity: _____	Orientation: _____	Tool Rotating: _____
<input type="checkbox"/> Excellent	<input type="checkbox"/> Vertical	<input type="checkbox"/> Yes
<input type="checkbox"/> Good	<input type="checkbox"/> Horizontal	<input type="checkbox"/> No
<input type="checkbox"/> Poor		Thrust: _____ lbs/N

## Coolant Information

Coolant Delivery: _____ (Through tool, flood)	Coolant Pressure: _____ PSI / bar
Coolant Type: _____ (Air mist, oil, synthetic, water soluble, etc.)	Coolant Volume: _____ GPM / LPM

## Requested Tooling

QTY	Item Number

QTY	Item Number



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## Warranty Information



Allied Machine & Engineering ("Allied Machine") warrants to original equipment manufacturers, distributors, industrial and commercial users of its products for one year from the original date of sale that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied Machine's sole and exclusive obligation under this warranty is limited to, at its option, without additional charge, replacing or repairing this product or issuing a credit. For this warranty to be applied, the product must be returned freight prepaid to the plant designated by an Allied Machine representative and which, upon inspection, is determined by Allied Machine to be defective in material and workmanship.

Complete information as to operating conditions, machine, setup, and the application of cutting fluid should accompany any product returned for inspection. This warranty shall not apply to any Allied Machine products which have been subjected to misuse, abuse, improper operating conditions, improper machine setup or improper application of cutting fluid or which have been repaired or altered if such repair or alteration, in the judgement of Allied Machine, would adversely affect the performance of the product.

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