



ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing



Drilling



Reaming



Burnishing



Threading



Specials



Wohlhaupter®

► **BORING**

Special Boring Solutions

WOHLHAUPTER®

The background of the entire page is a solid red color. Overlaid on this are several concentric circles and a grid of thin, light-red lines. The circles are centered on the left side of the page and expand towards the right. The grid lines are horizontal and vertical, creating a pattern that resembles a technical drawing or a map. The text is positioned in the upper right quadrant of the page.

SECTION

B10-K

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

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 for the most up-to-date information and procedures.

Applicable Industries



Aerospace



Agriculture



Automotive



Firearms



General
Machining



Oil & Gas



Renewable
Energy

Wohlhaupter® Special Boring Solutions Table of Contents

Special Tooling Solutions

ES-Bore Fine Boring Lay Down Cartridge	2
EK Groover Lay Down Cartridge	3
Anti-Vibration Multistep Boring Tool	4
OD Turning Tool Padded Line Boring Tool	5
3ETECH+ Special Tools	6
DigiBore Special Boring Tools	7
Combi-Line Special Boring Tool	8

Online Tools	9
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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^{TECH+} and adapter plate. The ES-Bore cannot be used with 3E^{TECH}.

NOTE: 3E^{TECH+} adjustment accuracy of 0.0001" or 0.001 mm on diameter

ANALOG ES-BORE



LAY DOWN CARTRIDGES

ES-BORE

- ▶ Mounts to custom designed boring tools
- ▶ Available with digital 3E^{TECH+} or analog adjustment
- ▶ Accurate adjustments with easy-to-use settings
- ▶ Versatility in many different application types over 1.102" (28.00 mm)

A

B

C

D

E

F

G

H

I

J

K

L

M

INDEX



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



Anti-Vibration | Multistep Boring Tool



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

OD Turning | Padded Line Boring Tool



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



Multistep Boring Tool | Line Boring Tool



NOTE: 3E^{TECH+} adjustment accuracy of 0.0001" or 0.001 mm on diameter

3E^{TECH+} BORING TOOL

MULTISTEP BORING TOOL

- ▶ Easy diameter adjustments with 3E^{TECH+}
- ▶ One digital readout module to use on all steps



NOTE: 3E^{TECH+} adjustment accuracy of 0.0001" or 0.001 mm on diameter

3E^{TECH+} BORING TOOL

LINE BORING TOOL

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

DigiBore Special Boring Tools



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



NOTE: Imperial item pictured

NOTE: Digital adjustment accuracy of 0.0001" or 0.002 mm on diameter

FINISH BORING TOOLS

DIGIBORE SPECIAL

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



Combi-Line Special Boring Tool



ROUGH, FINISH, and CHAMFER BORING TOOLS

COMBI-LINE

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

A

B

C

D

E

F

G

H

I

J

K

L

M

INDEX



Online Tools

ToolMD® | Wohlhaupter® Boring Insert Selector

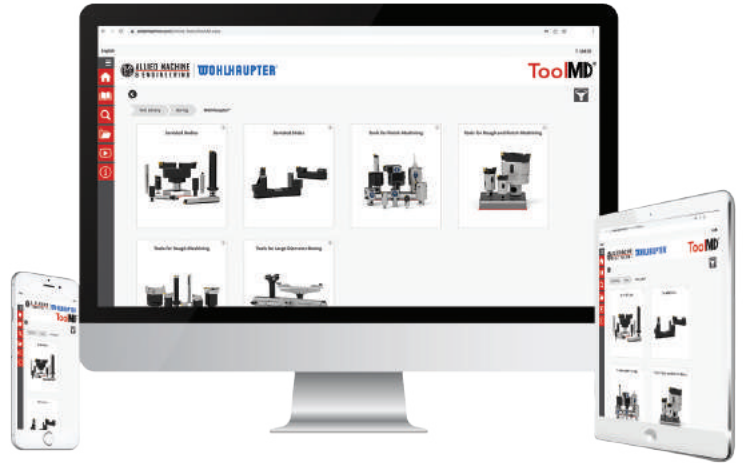
ToolMD®
www.toolmd.com

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.

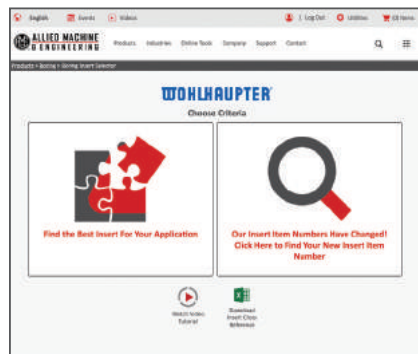
Designing your tools with ToolMD saves you time and allows you to instantly obtain the right tool for the job.



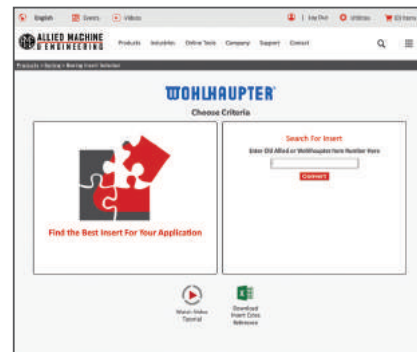
Design anytime from anywhere.
Available online 24/7.

WOHLHAUPTER® | Boring Insert Selector

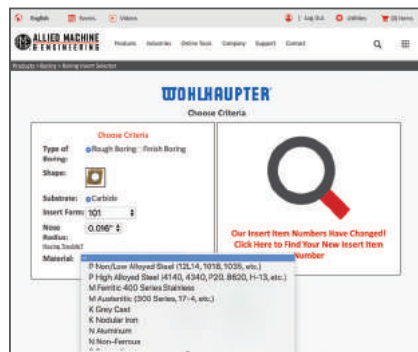
www.alliedmachine.com/bis



- 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

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: _____ Builder: _____ Model #: _____
(Lathe / Screw machine / Machine center / etc.) (Haas, Mori Seiki, etc.)
Shank Required: _____ Power: _____ HP/KW
(CAT50 / Morse taper, etc.)
Rigidity: Orientation: Tool Rotating: Thrust: _____ lbs/N
☐ Excellent ☐ Vertical ☐ Yes
☐ Good ☐ Horizontal ☐ No
☐ Poor

Coolant Information

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

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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