

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 0.001 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)



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



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



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3E^{TECH+} BORING TOOL

MULTISTEP BORING TOOL

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

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: Metric item pictured
NOTE: Digital adjustment accuracy of 0.002 mm on diameter



NOTE: Metric item pictured
NOTE: Digital adjustment accuracy of 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

A

B

C

D

E

F

G

H

I

J

K

L

M



ROUGH, FINISH, and CHAMFER BORING TOOLS

COMBI-LINE

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

INDEX

Online Tools

ToolMD® | Wohlhaupter® Boring Insert Selector

ToolMD®

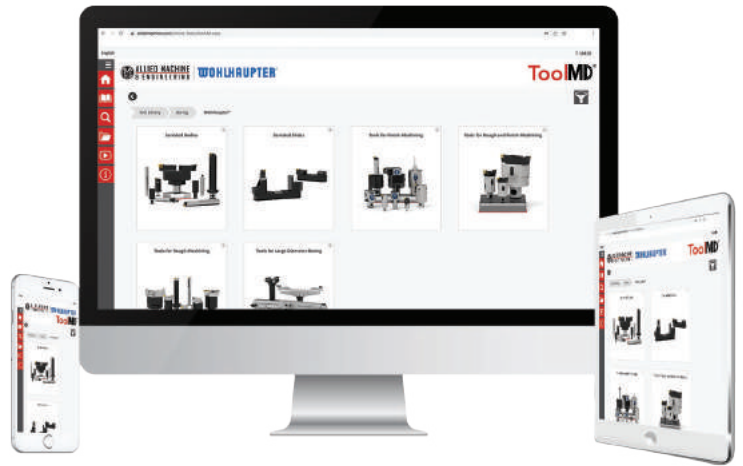
www.toolmd.com


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.

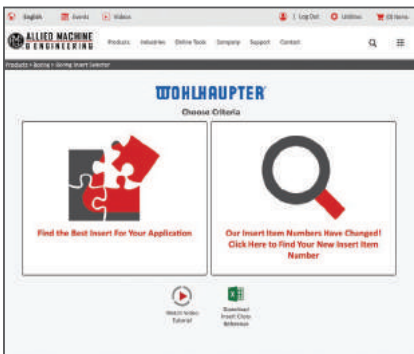
Designing your tools with ToolMD saves you time and allows you to instantly obtain the right tool for the job.



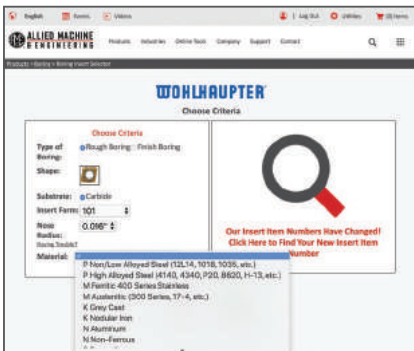
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WOHLHAUPTER® | Boring Insert Selector

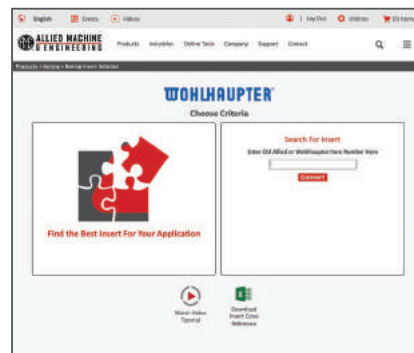
www.alliedmachine.com/bis



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



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



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

A
B
C
D
E
F
G
H
I
J
K
L
M
INDEX