

Holemaking Solutions for Today's Manufacturing





Reaming



Burnishing



Threading





Boring

► WOHLHAUPTER®

High Precision Boring Systems



WOHLHAUPTER®

North America

Allied Machine

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Allied Machine

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Allied Machine & Engineering is a worldwide leader in holemaking and finishing solutions. We are committed to providing practical and dependable solutions to our customers through innovative designs and superior customer and technical support.

We continue to expand our product offering in order to provide new and different solutions. With Field Sales Engineers located around the world, we position ourselves to provide technical support on site, right at your spindle.



www.alliedmachine.com



Holemaking Solutions for Today's Manufacturing

Wohlhaupter® Boring Solutions

The Foundation

Since 1941, Allied Machine & Engineering has provided dependable and practical holemaking solutions to the world. What was once a small job shop in Ohio is now a worldwide leader in cutting tool technology. With three manufacturing facilities in Ohio, one in Georgia, another in Germany, and headquarters in both the United States and Europe, Allied Machine is positioned to bring innovative solutions and technical expertise directly to the customers' hands.



The Innovation

Since the development of the T-A, Allied Machine has expanded its product offering to support a vast range of customer applications, including large diameter and deep hole drilling, boring, reaming, burnishing, porting, and threading.

The Beginning

Harold E. Stokey founded Allied Machine & Engineering to aid the war effort, manufacturing taper bearing lock nuts for the production of M1 tanks. Years later, after a sales meeting gone wrong, Stokey possessed a warehouse stocked with spade drill inserts. He set forth into the industry that would become Allied Machine's thriving identity: holemaking.



The People

Allied Machine understands that high quality products are only one facet of success. Our customer support is crucial to what we do, and that's why we make sure the best engineers and customer service associates are in place to assist our customers around the world.

The T-A®

When Harold's son, William H. Stokey, became the president and CEO, he developed the Throw Away, or T-A, spade drill insert system. The T-A revolutionized the holemaking industry, launching Allied Machine ahead of the competition. Since then, numerous innovations and advancements have been created from the T-A's inspiration.



The Future

With over 75 years of experience, Allied Machine has encountered the challenges of growth and success. By investing in cutting edge technology and the brightest and sharpest minds, our knowledge and capabilities continue to expand and grow every day.











Replaceable Insert Drills

- Reduce costs by decreasing set-up time and utilizing a single holder for the lives of multiple inserts
- Provide flexibility to quickly switch between inserts with different geometries
- Products:
 - GEN3SYS® XT | GEN3SYS® XT Pro
 - Original T-A® | GEN2 T-A®
 - High Performance | Universal







Indexable Insert Drills

- Protect your investment and reduce your inventory with replaceable cartridges that allow the same holder to be used repeatedly
- Indexable inserts increase productivity and tool life while reducing costs
- Products:
- 4TEX™ Drill
- Revolution Drill®
- Opening Drill®

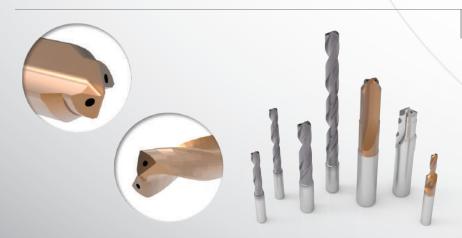


Replaceable / Indexable Insert Drills

- Allow for higher spindle speeds and take advantage of the power curve on modern CNC machines
- Achieve maximum penetration rates in deep hole drilling applications
- Holders cover a range of sizes with the replaceable heads determining the cutting diameter
- Products:
- APX Drill







Solid Carbide Drills

- Offer greater strength and stability when drilling tougher materials
- Available in diameters from 3mm 20mm
- Can be made-to-order specifically for your application (Superion™ quoted specials)
- ASC 320®
- Superion™



Structural Steel Solutions

- Deliver outstanding performance and durability in structural steel applications
- Designed to produce optimal results in difficult-tomachine materials
- · Available in multiple lengths and diameters
- T-A® style drills have different insert geometry options to improve performance depending on material
- Products:
- Original T-A® | GEN2 T-A®
- GEN3SYS® XT Pro

BTA (STS) Machining Solutions

- The internal ejection system flushes chips and debris from the hole with no interference to the cutting process
- Utilizes the advantages of the T-A® drill insert
- Designed to significantly increase penetration rates over brazed heads and traditional gun drills
- Products:
 - BT-A Drill









Hydraulic Port Contour Cutters

- Save significant time and money by performing four processes in one step
- Replaceable insert design reduces costs, inventory, and set-up times
- Available in 4 industry specifications:

Imperial: SAE J-1926
 Metric: ISO 6149-1:2006
 Military: SAE AS5202
 John Deere: JDS-G173.1

• Products:

- AccuPort 432®



Enhanced Special Drilling Capabilities

- Allied Machine Engineers are available to meet with you to evaluate your application and recommend the best solution for you
- Special drilling solutions can incorporate advanced features such as adjustable diameter locations, multiple steps, additional coolant designs, special lengths and diameters, and more
- Special drills can drastically reduce your cost-per-hole and increase your overall productivity by eliminating multiple processes and increasing tool life











WOHLHAUPTER®

High Precision Boring Systems

- Designs available for high volume applications that increase rigidity to improve performance
- Versatile boring heads that are flexible with changing applications while maintaining excellent performance
- Provides high precision with absolute repeatability to ensure every part is held to tolerance
- Offers an industry leading modular shank connection that maintains rigidity and reduces inventory on your boring system
- · Available with both digital and analog settings
- Products:





CRITERION

Modular Boring Systems

- The modular capabilities are ideal for use across multiple different projects
- Offers versatile boring heads suitable for all job shops and tooling rooms
- Provides an economical solution for low volume and/ or short-term production applications
- · Offers both rough and finish boring solutions
- Products:
 - Criterion™ Boring Tools

S.C.A.M.I.°

Expandable Reaming Solutions

- Expandable cutting diameters accommodate for wear, which extends tool life
- Replaceable cutting heads and rings reduce waste and improve production time versus solid high speed steel and carbide reamers
- Hold tight tolerances to ensure processes are performed to accurate specifications
- Reduce tooling costs because many items are available for recondition
- Products:
 - ALVAN® Reamers







S.C.A.M.I.

Roller Burnishing Solutions

- Produce excellent surface finishes
- Provide accurate size control
- Increase surface hardness
- Solutions for both through hole and blind hole applications
- Products:
 - S.C.A.M.I.® Roller Burnishing Tools



Solid Carbide Thread Mills

- Available with coolant through options
- · Cover a wide range of thread forms
- Provide optimal solutions for both high production projects and short-run applications
- Products
 - AccuThread™ 856
- AccuThread™ T3
- ThreadMills USA



Replaceable Insert Thread Mills

- 3 insert lengths are available that cover a wide range of thread forms
- Holders can utilize inserts with different pitches and thread forms
- Repeatability is achieved by both the bolt-in style and the pin style locking systems
- Increase tool life by 25 50% with Allied Machine's AM210® coating
- Products
 - AccuThread™ 856: Bolt-in Style
 - AccuThread™ 856: Pin Style







SPECIAL CAPABILITIES

When it comes to designing and developing special solutions for customers, Allied Machine is the top choice. If your application requires special tooling, give us a call. Our engineered specials are developed by the brightest engineers in the industry. Most of our standard tooling can be altered as specials, or we can create entirely new concepts for particularly unique applications.

One special tooling solution is Insta-Quote $^{\text{TM}}$, the online system that allows you to design your own special tooling 24/7. Receive a quote and drawings within minutes just by following the steps.

And with the addition of Superion™ technology and capabilities, we can customize made-to-order solid carbide tools to achieve optimal results for your applications.

Whatever your application, Allied Machine has the answer.



Wohlhaupter® High Precision Boring Systems

▶ Diameter Range: 0.016" - 128.150" (0.4mm - 3255mm)



Precision at Its Finest

From high precision to high production, Wohlhaupter has the right solution for your hole finishing applications. The Wohlhaupter product line offers the widest range of in-stock boring tools and the most precise and flexible modular systems on the market. With the most reliable digital readout tools and the ability to design and build special tools, Wohlhaupter is the solution for your boring challenges.

Also available to assist your application needs is the online tool modeling software, Tool-Architect. You can find your tooling, configure your system, and validate your selection all within the program. With the Wohlhaupter tool configurator, you will find the right tool with just a few clicks.

Rough and finish boring

Reliable digital readouts

Precise and flexible modular system

Applicable Industries









Automotive





Machining







Energy

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.

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To find more information about the complete line of Wohlhaupter® High Precision Boring Systems, visit **www.wohlhaupter.com**.

Additional information may also be found in the Wohlhaupter® MultiBore® System Tools catalog.

(Literature Order Number: WOHLCAT)



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Versatile Tooling





Balance



Digital Balance



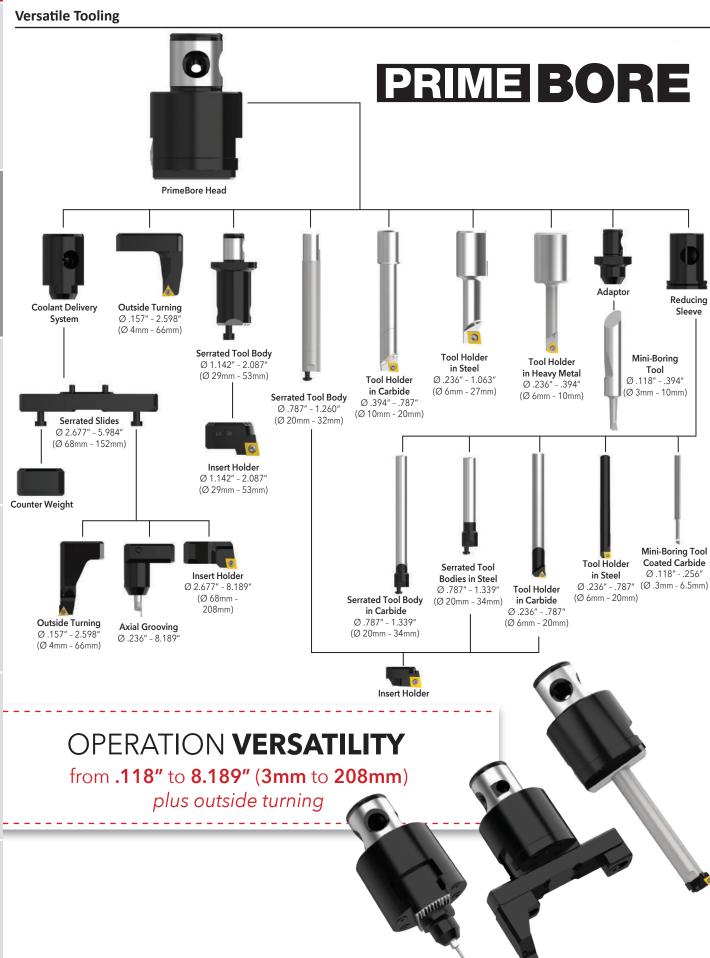
Combi-Line

Plus many more



В

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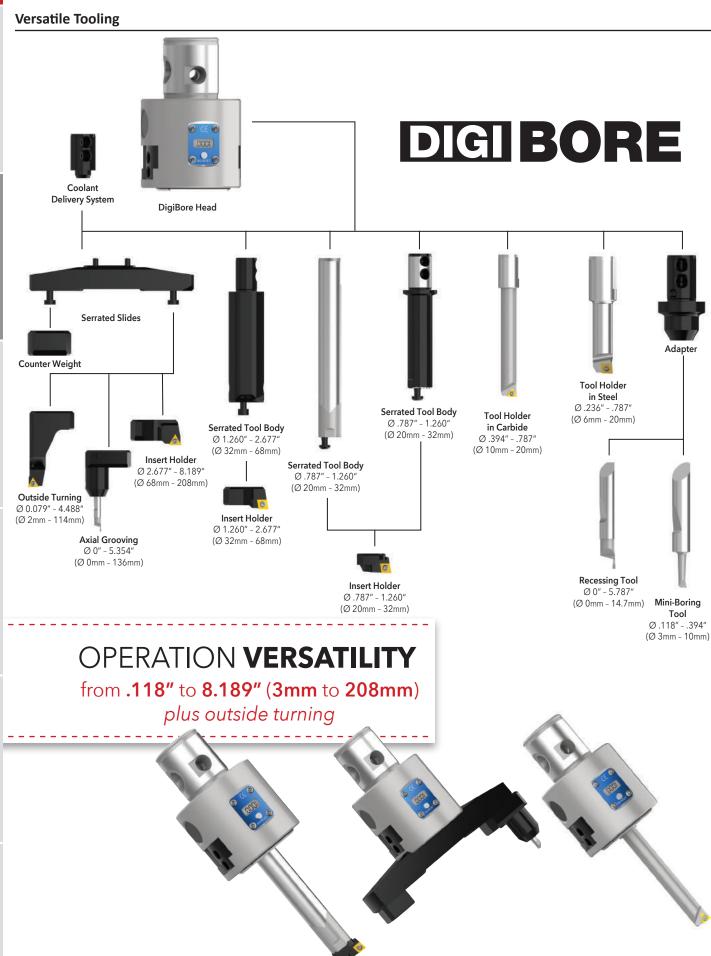
В

Versatile Tooling



В

C



BORING

Wohlhaupter Boring Kits



WE HAVE A **KIT** FOR THAT

Kits aren't for everyone, but if you work on different projects from day to day, you need to be prepared for the work tomorrow will bring.

VERSATILE SETUPS AND IMPROVED READINESS

BROAD SELECTION OF DIAMETER RANGES

EASY CONVENIENT STORAGE AND ORGANIZATION

COST SAVINGS OVER BUYING INDIVIDUAL COMPONENTS

DIGIBORE

Ultimate Accuracy



- Kits are available in imperial and metric
- Internal digital display for 0.0001" (0.002mm) adjustments
- Internal automatic balancing
- Standard ISO insert CC..0602..

Additional kits available, please inquire



.394" - 1.260" (10mm - 32mm)

- # 104 061
 - \$3,526.52 # 103 061



1.260" - 2.677" (32mm - 68mm)

- # 104 063
- \$3,374.56 # 103 063



2.677" - 5.984" (68mm - 152mm)

- # 104 065
 - \$3,442.68 # 103 065



3.780" - 8.189" (96mm - 208mm)

- # 104 081
 - \$3,819.96 # 103 081





- Kits are available in imperial and metric
- Vernier scale for 0.0001" (0.002mm) adjustments
- 3E TECH digital readout module compatible*
- Standard ISO insert CC..0602..

Additional kits available, please inquire



.394" - 1.181" (10mm - 30mm)

- # 104 046
- # 103 046

\$2,068.49



.394" - 4.016" (10mm - 102mm)

- # 104 048
- # 103 048

\$3,365.39



Portable Digital Display Use with multiple boring heads equipped with a **3E**^{TECH} port

- # 563 010
- # 536 010

\$423.13



MASTER SHANKS WITH MVS (sold separately)

CAT | BT | HSK | PSC | NMTB | MT

249 (248) Boring Head

Ø 0.118" - 1.189" (3mm - 30.2mm)



Features

- Compact construction
- 0.0005" (0.010mm) dial adjustment on diameter
- Variable length adjustment with accessories
- · Coolant through



511 (510) Boring Head

Ø 0.016" - 0.472" (0.4mm - 12.0mm)





Features

- 0.0001" (0.02mm) digital adjustment on diameter
- Lengths and diameters achieved through the use of boring tools and bars
- 4 balancing elements for precision



320 (310) Boring Head

Ø 0.787" - 8.070" (20mm - 205mm)





Features

- 0.0001" (0.002mm) Vernier adjustment on diameter
- Tools with Ø 0.787" 4.05" (20mm 103mm) are made of steel
- Tools with Ø 3.937 8.070" (100mm 205mm) are made of aluminum
- Insert holder can be rotated for reverse machining
- Coolant through
- Can be used with AluLine serrated slides for large diameter OD turning



365 (364) Boring Head **Balance**

Ø 0.787" - 8.070" (20mm - 205mm)





Features

- 0.0001" (0.002mm) Vernier adjustment on diameter
- Internal auto-balancing
- Tools with Ø 0.787" 2.579" (20mm 65.5mm) are made of steel
- Tools with Ø 2.559" 8.070" (65mm 205mm) are made of aluminum
- Insert holder can be rotated for reverse machining
- Coolant through
- Can be used with AluLine serrated slides for large diameter OD turning



B10: 10



Ø 1.968" - 8.070" (50mm - 205mm)





Features

- 0.0001" (0.002mm) digital adjustment on diameter
- · Internal auto-balancing
- Tools with Ø 1.968" 2.579" (50mm 65.5mm) are made of steel
- Tools with Ø 2.559" 8.070" (65mm-205mm) are made of aluminum
- Coolant through
- Insert holder can be rotated for reverse machining
- Can be used with AluLine serrated slides for large diameter OD turning



338 (337) Boring Head

Ø 3.937" - 128.150" (100mm - 3255mm)



Features

- 0.0001" (0.002mm) Vernier adjustment on diameter
- · Aluminum light-weight construction
- Ø 3.937" 8.071" (100mm 205mm) on serrated tool body
- Ø 7.870" 128.150" (200mm 3255mm) on AluLine slides
- Insert holder can be rotated for reverse machining



538 (537) Boring Head

Boring Tools

Ø 3.937" - 128.15" (100mm - 3255mm)

Features

- 0.0001" (0.002mm) digital adjustment on diameter
- Aluminum light-weight construction
- \emptyset 3.937" 8.071" (100mm 205mm) on serrated tool bodies
- Ø 7.870" 128.150" (200mm 3255mm) on AluLine slides
- · Insert holders can be rotated for reverse machining





COMBILINE

Ø 0.965" - 7.913" (24.5mm - 201mm)

A true rough and finish 1-pass boring tool

Features

- Rough and finish boring in one operation
- 0.0001" (0.002mm) Vernier adjustment on finishing insert holder
- Available in height displaced and same level cutting
- Coolant through
- Standard ISO inserts



Cuts processing time in half!



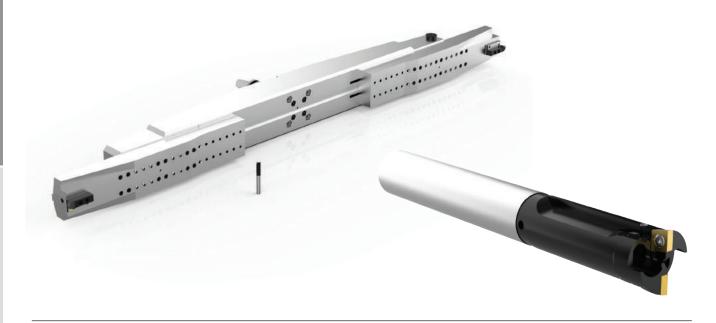


Twin Cutter Roughing

Ø 3.937" - 128.15" (100mm - 3255mm)

Features

- Available with cylindrical shanks or MVS shanks
- Same level to double feed
- · Height displacement to double material removal
- · Coolant through
- Standard ISO inserts



Grooving Tools



Grooving Tools for Circular Milling Ø > 0.787" (20mm)

- Groove widths from 0.050" (1.27mm)
- 2 8 inserts (depending on diameter)
- 2-sided inserts
- · Coolant through



Axial Grooving Tools 0.787" - 8.070 (20mm - 205mm)

- Groove widths from 0.137" 0.295" (3.5mm 7.5mm)
- 3-sided inserts
- Utilizes the same serrated tool body as other roughing tools

Boring Tools

Chamfering Tools

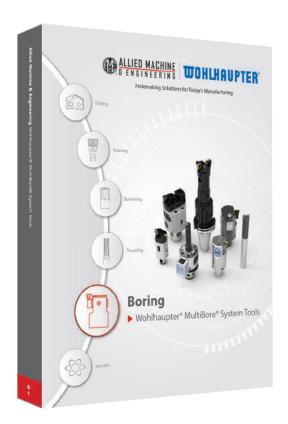
 $\emptyset > 0.748$ " (19mm)



Features

- Utilizes the same serrated tool holder as other roughing tools
- Chamfer angle of 15°, 20°, 30°, and 45°
- Coolant through
- Standard ISO inserts





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Additional information may also be found in the Wohlhaupter® MultiBore® System Tools catalog.

(Literature Order Number: WOHLCAT)

THREADING

Tool-Architect

www.tool-architect.com



Design Your Own Solutions

Tool-Architect 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 inventory at your fingertips. It provides a digital bank of every individual part that Wohlhaupter manufactures in either inch or metric measurements.

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. Each project can be saved for future editing.

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



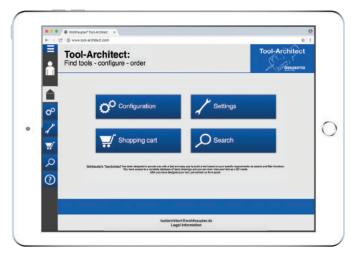


Design anytime from anywhere. Available online 24/7.

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Find the right Wohlhaupter® solution for your application

- 1. Configure your complete tool assembly
- 2. Compile an order list to be quoted
- Search and quickly find components using various criteria
- 4. Adjust your language and measurement preferences





Find specific item details and download 2D and 3D drawings



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DRILLING

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BORING

C REAMIN

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THREADING

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SPECIALS

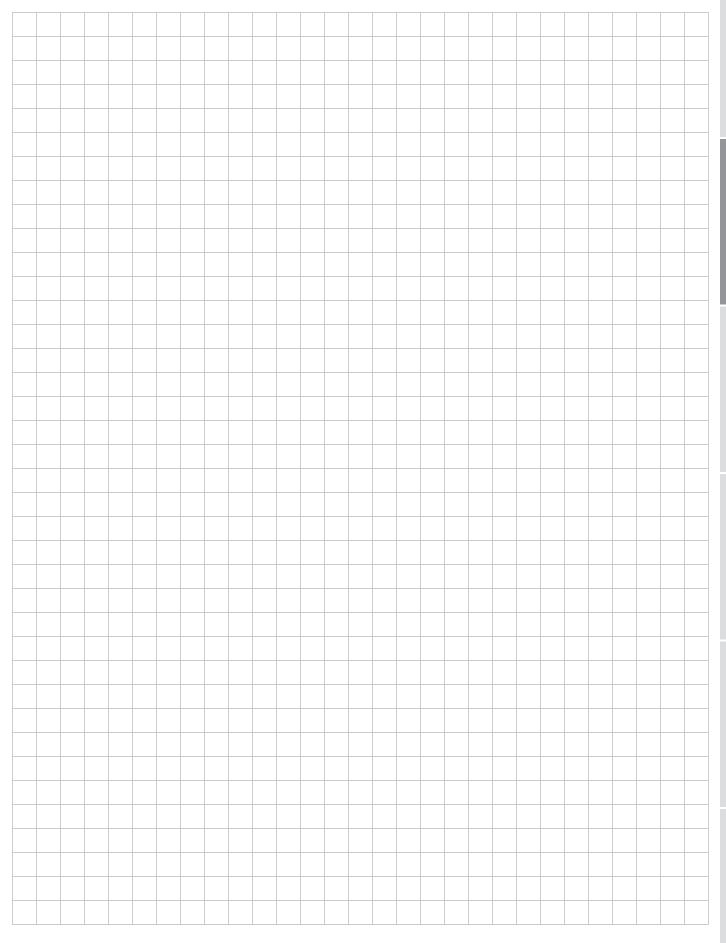
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Guaranteed Test / Demo Application Form

Distributor PO #

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

Phone: _				(End User Information Company Name: Contact: Industry: Phone: Email: col life, and any problems you are experiencing						
Test Objective	List what would mal	ke this a succe	ssful test (i.e. p	enetration I	rate, finish, tool life,	hole size, etc.)					
Application Info	rmation										
Hole Diameter:		. in/mm	Tolerance:			Material:					
							(4150 / A3	6 / Cast Iron / etc.)			
Pre-existing Diame	eter:	in/mm	Depth of Cut:		in/mm	Hardness:		BHN / Rc)			
Required Finish:		RMS				State:					
							(Casting / F	Hot rolled / Forging)			
Machine Inform	ation										
Machine Type:			Ви	ıilder:			Model #:				
	(Lathe / Screw machine /	Machine cente			(Haas, Mori Seiki, e	tc.)					
Shank Required:							Power:	HP/KW			
	(CAT50 / Mors	e taper, etc.)									
Rigidity:	Orientation:	Tool F	Rotating:				Thrust:	lbs/N			
Excellent	☐ Vertical	☐ Y	es								
Good	☐ Horizontal		lo								
Poor											
Coolant Informa	ntion										
Coolant Delivery:					Coolant Pressure			PSI / har			
		Through tool / F	lood)		Coolant Pressure: F						
Coolant Type:				Coolant Volume:			GPM / LPM				
	(Air mist, oi	l, synthetic, wat	er soluble, etc.)								

Requested Tooling

QTY	Item Number

QTY	Item Number



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Dover, OH 44622

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Warranty Information

• • • •

Allied Machine & Engineering warrants to original equipment manufacturers, distributors, industrial and commercial users of its products that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied Machine's obligation under this warranty is limited to furnishing without additional charge a replacement or, at its option repairing or issuing credit for any product which shall within one year from the date of sale 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 materials or workmanship.

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

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied Machine shall have no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein.

ALL PRICES, DELIVERIES, DESIGNS, AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



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