



MODEL DM50 SPECIFICATIONS

Minimum drill \varnothing	0.9 mm	0.035 in.
Maximum drill \varnothing	12.7 mm	0.50 in.
Maximum drill depth	As required	
Spindle type	Motorized	
Spindle power (@ 3000 rpm)	1.7 kW	2.3 Hp
Spindle power (@ 7800 rpm)	2.8 kW	3.8 Hp
Spindle power (@ 22,500 rpm)	1.5 kW	2.0 Hp
Spindle rpm range	1,000 - 24,000	
Coolant capacity	450 l	120 gal
HP pump power	3.7 kW	5.0 Hp
Maximum coolant pressure	207 bar	3,000 PSI



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**Gundrilling Solutions
 for
 Small Diameters**

**Machinery
 Tooling
 Technology**



NAGEL WORLDWIDE

With more than 1200 employees and manufacturing facilities in Germany, the United States, Brazil, and India, each member of the worldwide Nagel Group has access to a vast engineering and production knowledge base.



TBT TIEFBOHRTECHNIK

Founded in 1966 in Dettingen Erms, Germany, the company specialized right from the outset in the manufacturing technology of deephole drilling. The company's prime goal has always been to supply machines, tools, service and professional expertise from a single source.



NAGEL PRECISION

Nagel Precision incorporated in the United States in 1982, moving to Ann Arbor, Michigan in 1988, designs, manufactures, and supports Nagel honing, polishing, and TBT gundrill and deephole drilling machinery. Our 110+ employees and 140,000 ft² modern manufacturing facility are dedicated to providing our customers with the highest quality machinery and tooling.



ideal for medical component gundrilling

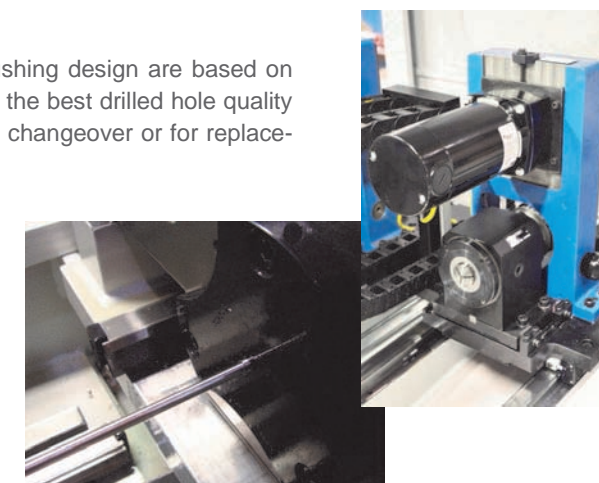
CUSTOM MACHINE & FIXTURE DESIGN PROVIDES THE ULTIMATE SOLUTION.

FIXTURE DESIGN

Workpiece location and gundrill bushing design are based on proven concepts known to produce the best drilled hole quality possible, while providing quick part changeover or for replacement of wearable details.

Counter rotating tailstock(s) are standard with either precision collet type spindle, precision chuck, or clamping cone for workpiece holding.

Every attempt is made in the tooling design phase to utilize existing customer components and / or "standard" commercially available details, such as drill bushings and collets.



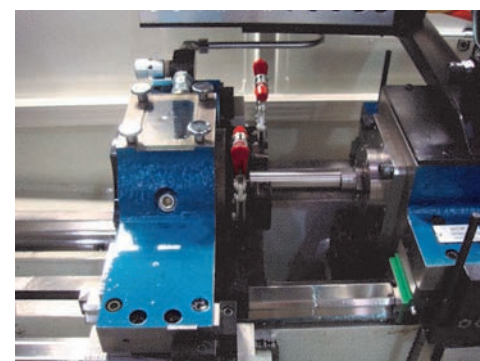
Technology at work

Nagel Precision Inc. and TBT Tiefbohrtechnik GmbH are the market leaders in gundrilling. We pride ourselves in being the only manufacturer in the market that practices the "system approach". Nagel-TBT manufactures both gundrilling machines and gundrilling tools and has a profound understanding of gundrilling technology. We have been involved in more that 5,600 gundrilling machine projects worldwide and produce over 220,000 drills per year.

MACHINE DESIGN

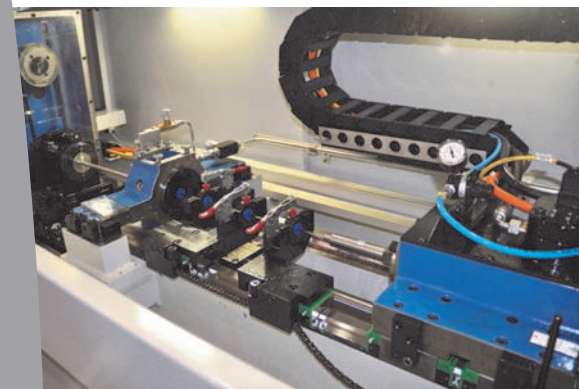
The **DM50 Series** gundrill machines were specially designed for the North American market, where **accuracy, flexibility, robustness, and low cost** are key customer requirements

The machines are available in single or dual spindle versions. Special care has been taken to minimize "lost length". Up to 4 tool steadies are available, each requiring only 3/4" of additional drill length. When no tool steadies are utilized, the lost length can be reduced to as little as 1/2". Drilling of extreme long holes up to 200 times drill diameter is routine for these machines.



STANDARD DM50 MACHINE FEATURES

- Precision "oversized" linear rails and carriages.
- 40mm "oversized" ball screw with fine pitch.
- 24,000 maximum rpm motorized spindle.
- Cast iron spindle housing.
- Cast iron chip box.
- Temperature compensating machine design.



TOOLING SOLUTIONS

- IN-HOUSE DESIGN AND MANUFACTURE.
- STOCK DRILL PROGRAM.
- REGRIND SERVICE.
- SALES, SERVICE, AND SUPPORT FOR CUSTOMER REGRINDING

