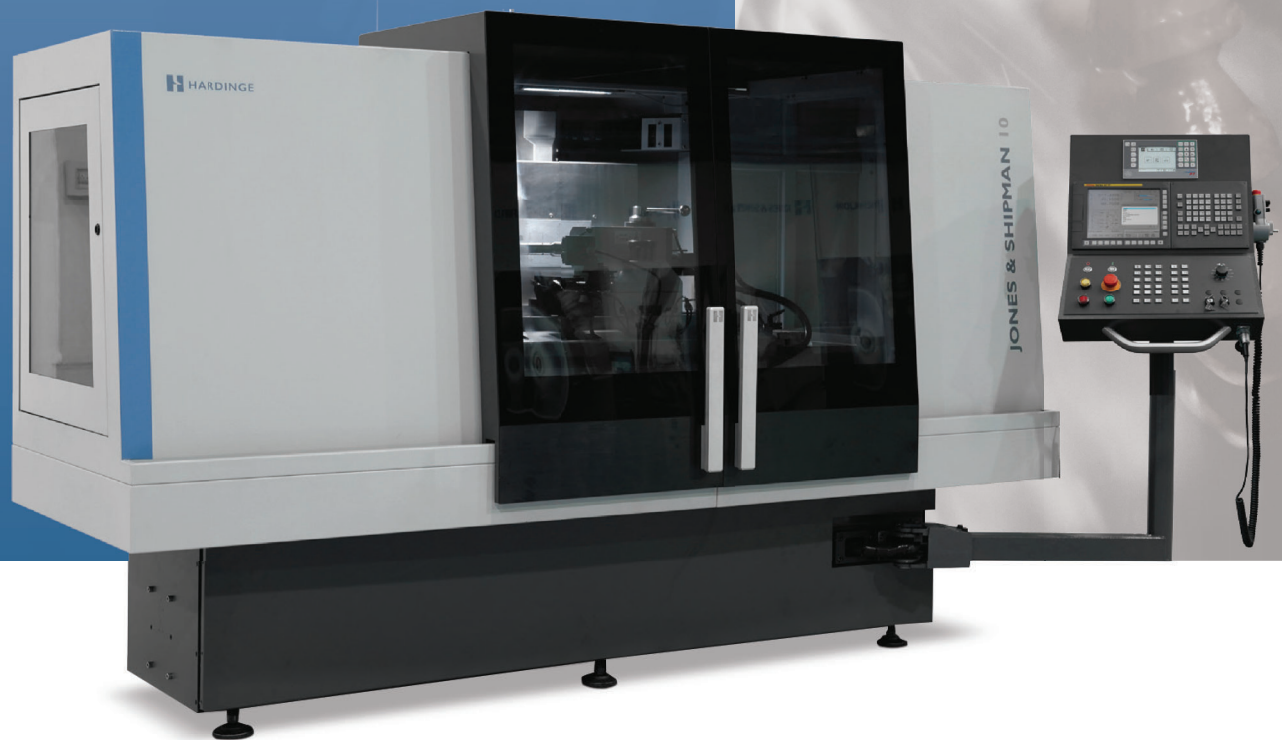


JONES & SHIPMAN 10

CYLINDRICAL GRINDING MACHINE



JONES & SHIPMAN 10

PERFECT COMBINATION OF PRECISE AND EFFICIENT GRINDING



EFFICIENT

Robust construction & innovative design of machinebed, wheelhead, and workhead ensure a higher efficient grinding process.

RELIABLE

World renowned key component guarantee the machine will work with stability and accuracy over its lifetime.

PRECISE

Hardinge globally unified standard of design, manufacturing and assembly ensures each machine is built with world-class quality.

EASY

Easy to follow set-up pages allow the operator to digitize diamond and wheel positions by means of a simple user-friendly interface.

SAFE

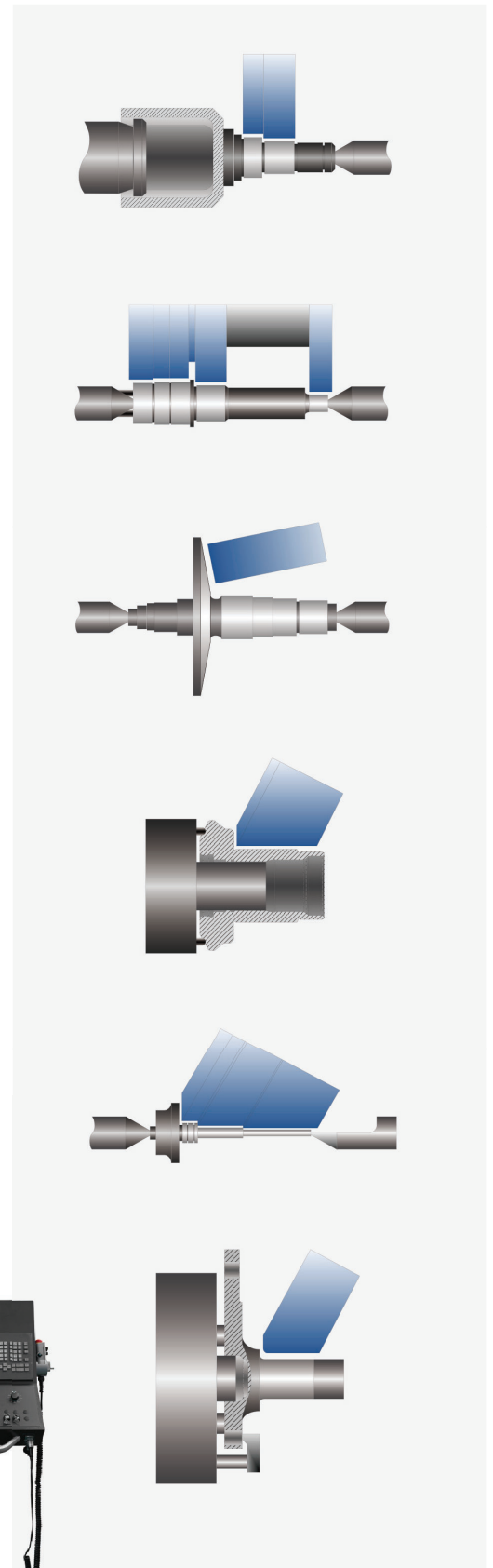
Fully enclosed, bullet-proof glass windows, wheel protection, one button fall back, emergency button and interlock etc. offer operator a safe working environment.

GRINDING SOLUTIONS

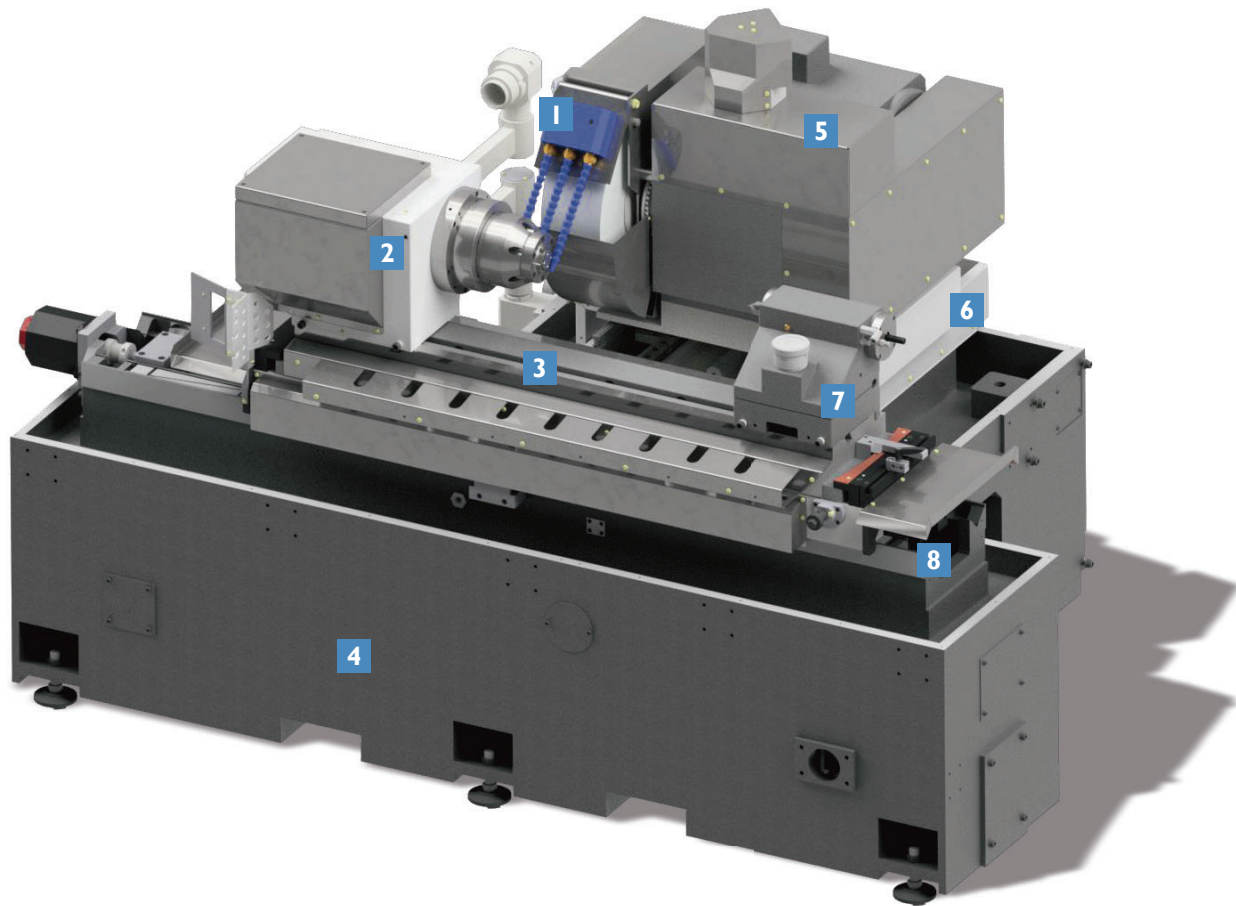
We are not just providing machines, we are providing solutions as well. The total solution is a complex system engineering, which needs cooperation with multi technologies. The high-performance machine is just a part of the chain.

A full solution to customer component involves machine, wheel, coolant, dresser, fixture, software, process parameters, inprocess or post-process gauging, monitoring, automatic loading/unloading, environment. It is very important to have scientific analysis and testing to find the best solution. We are working together with our top partners worldwide to offer our customers the best value.

- Fixture proposal
- Grinding process proposal
- Wheel dressing proposal
- Cost control proposal
- Special coolant proposal
- In-process/post-process gauging proposal
- Automatic loading/unloading proposal
- Maintenance and remote diagnosis proposal
- Operating and maintenance training proposal
- Turning/Milling & Grinding production line proposal



CONFIGURATIONS



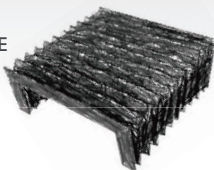
1 GRINDING SPINDLE

High rigid grinding spindle to mount max. diameter 500mm and 150mm wide wheel. Ultra-Precision ball bearing, max. speed 63m/s. Constant surface speed. Wheels are provided with retractable wheel guards for safety.

2 WORKHEAD

Both incorporate high precision taper roller bearings for unparalleled precision and superior stiffness. Belt drive and programmed speed. A2-6 spindle nose allows to mount chuck direct to get higher rigidity.

ULTRA-LONG LIFE OF FATIGUE



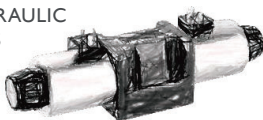
HYPERSENSITIVE PROBE



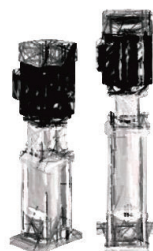
SUPERIOR ACCURACY BALL BEARING



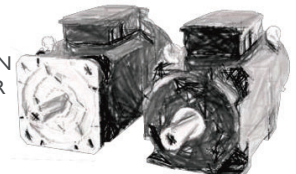
RELIABLE HYDRAULIC COMPONENTS

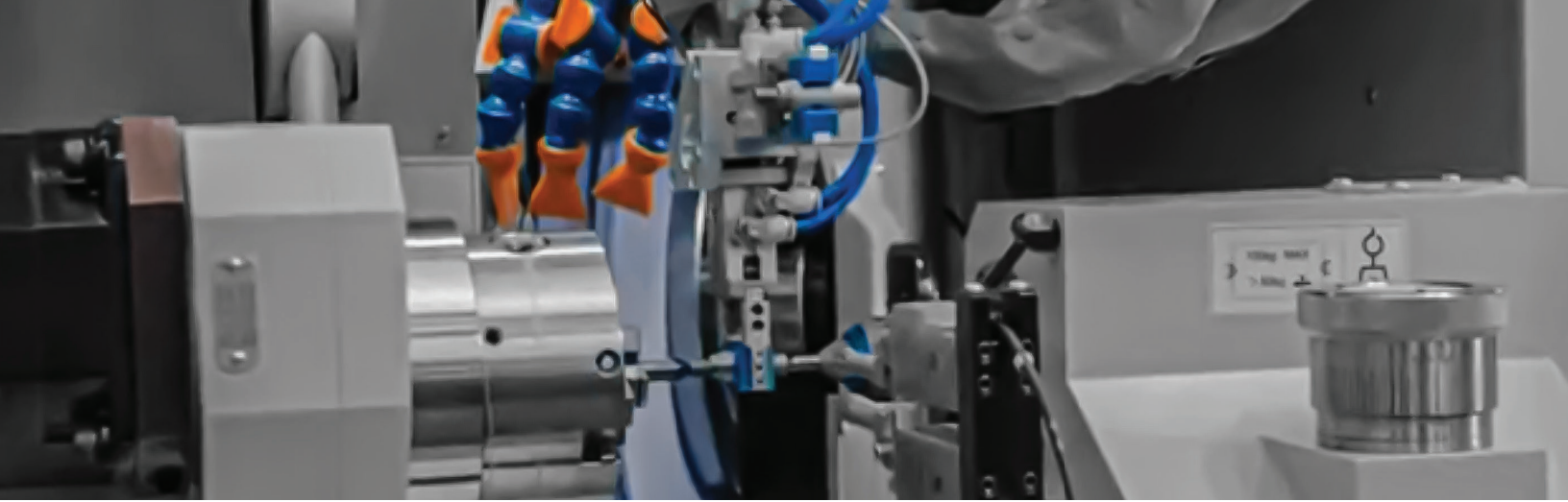


HIGH LIFT PUMP



POWERFUL MAIN SPINDLE MOTOR





3 WORKING TABLE

High-rigid full supported one-piece table designed for production. The edge of table is directly under the center line of workhead spindle to minimize any thermal growth from ground component.

4 BED SET

Optimized robust construction & innovative design with finite element analysis. Built on a large single piece cast iron bed, the rigidity and excellent damping capacity that makes it ideally suited for high volume precision grinding

5 WHEEL HEAD

Robust external only wheel head mounted on straight plunge (E model) or angular plunge (A model) featuring a belt driven motor up to 15kW. Wheel size maximum 0500 x 150mm, fixed base.

6 INFEED AXIS

Roller bearing linear guideways, designed to take loads from all directions and support extremely high capacities guarantee a high level of precision and low friction linear movement. Superb durability of ball screw, smooth movement assure high efficiency.

7 TAIL STOCK

High accuracy, plain bearing lever, pneumatic/hydraulic operated, fine taper correction with adjustment applied in 0.5 μm increments or less with a total adjustment range of ± 0.1 mm. Air cushion equipped.

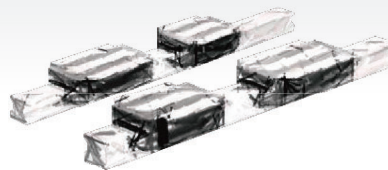
8 TABLESLIDE

The full support V-flat table slideways are precision hand scraped for smoothness of movement and the highest accuracy. Lubricated Turcite® ensures low friction, significantly reduced stick-slip differentials and minimal wear on the slideways.

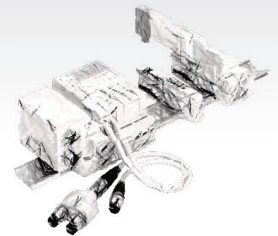
UNMATCHED RIGID GRINDING SPINDLE



EXCEPTIONAL RIGIDITY LINEAR GUIDE



MODULAR PNEUMATIC SYSTEM



TOP BRAND ELECTRICAL COMPONENTS



UNPARALLELED BALL SCREW



LEADER OF FIXTURE MANUFACTURING



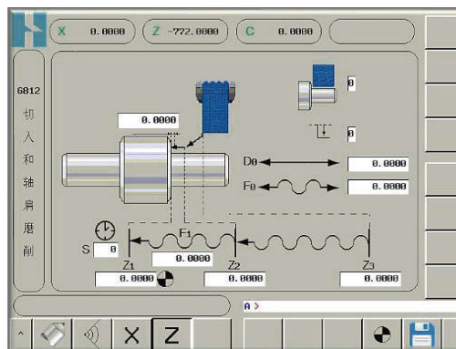
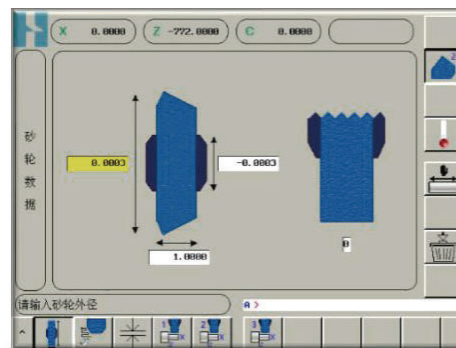
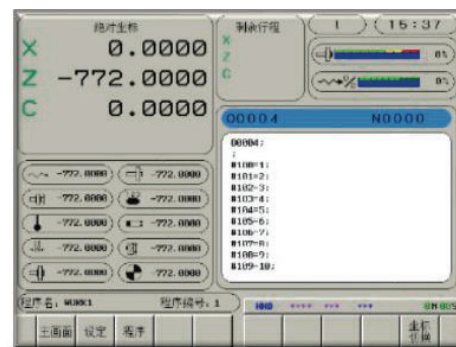
BULLET PROOF GLASS



FASTER SET-UP AND OPERATING EFFICIENCY

The software is designed to minimize set-up times, which is fundamental in reducing machined component costs while maximizing manufacturing output.

Easy to follow set-up pages allow the operator to digitize diamond and wheel positions by means of a simple user-friendly touchscreen interface. Graphical images, which represent programs and set-ups, are simply touched to program, providing quick and simple input. This graphical programming removes the requirement for operators to input complex code, subsequently reducing set-up and operator training costs. ISO programming is fully supported and codes can also be easily viewed and used at any time as each method of modification updates the other seamlessly within the program.



- Easy Graphic User Interface
- Quick and simple input
- Large capacity solid-state memory
- No hard drive
- Multi wheel datum management
- Remote diagnosis and assistance
- Ethernet and RS232 interface
- USB and flashcard
- Background edit function
- Safe code set

SPECIFICATION

CAPACITY

Center height	190 mm
Swiveling diameter	Ø380 mm
Distance between centers	650/1000 mm
Weight between centers	100 kg

WHEEL HEAD

Wheel speed	Max. 63 m/s
Wheel size	Ø500x80(150)x203.2 mm
Main motor power	9/15 kW

WORK HEAD

Speed range	0-1000 rpm
Spindle nose taper	A2-6
Motor power	1.8 kW
Output torque	11 Nm
Weight load with chuck	48 kg

TAILSTOCK

Poppet diameter	Ø50 mm
Centre travel	30 mm
Poppet taper	MT 4
Fine adjustment range	+/- 100 µm
Graduation	Ø0.0005 mm

WHEEL SLIDE

Total infeed	360 mm
Max. travel speed	10 m/min
Min. programmable increment	0.0001 mm
Resolution (Option)	0.00005 mm

TABLE SLIDE

Max. stroke length (650/1000)	900/1240 mm
Max. travel speed	12 m/min
Min. programmable increment	0.0001 mm
Resolution (Option)	0.00005 mm

CONTROL SYSTEM

CNC control	Fanuc CNC 0i
Software	GUI
Display	10.4" TF
Interface	USB/Ethernet/RS232

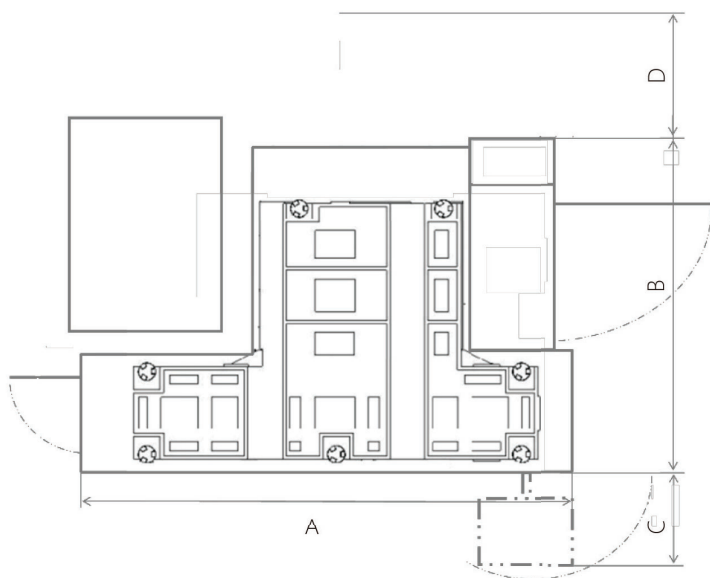
ENVIRONMENT

Noise	<75 dB(A)
Ambient temperature	0~40 °C
Humidity	≤75%

MISCELLANEOUS

Color of enclosure	RAL 7035 light gray
Color of bed	RAL7021 dark gray
Gross weight	6200/7200 kg

Note: All specifications and design are subject to alterations without notice.



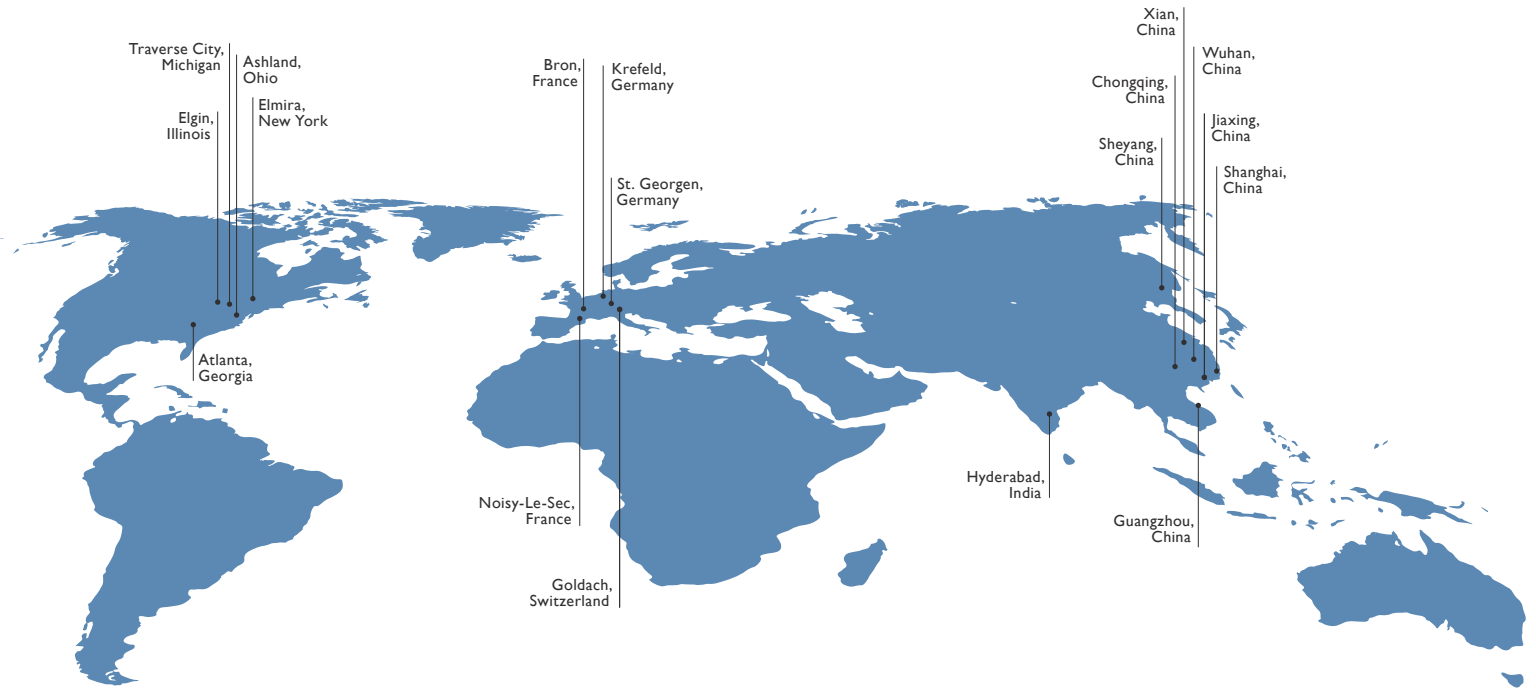
MODEL	A	B	C	D
650	2760	2150	910	1270
1000	3660	2150	910	1270

Note: For safety and convenience of operation, at least one meter space needed around the machine.



SERVICE HOTLINE:
400 006 8690

HARDINGE WORLDWIDE



Hardinge is a leading international provider of advanced metal-cutting solutions. We provide a full spectrum of highly reliable CNC turning, grinding, and honing machines as well as technologically advanced workholding accessories.

The diverse products we offer enable us to support a variety of market applications in industries including aerospace, agricultural, automotive, construction, consumer products, defense, energy, medical, technology, transportation and more.

We've developed a strong global presence with manufacturing operations in North America, Europe, and Asia. Hardinge applies its engineering and applications expertise to provide your company with the right machine tool solution and support every time.

AMERICAS

GEORGIA
Hardinge Corporate
79 W Paces Ferry Rd, 2F
Atlanta, GA 30305
P. 800.843.8801

ILLINOIS
Hardinge
1755 Britannia Dr
Unit 1A
Elgin, IL 60124

MICHIGAN
Forkardt
2155 Traversfield Dr
Traverse City, MI 49686
P. 800.544.3823
E. tcsales@forkardt.com

NEW YORK
Hardinge
1 Hardinge Drive
Elmira, NY 14903
P. 800.843.8801
E. info@hardinge.com

OHIO
Ohio Tool Works
1374 Enterprise Parkway (TR 743)
Ashland, OH 44805
P. 419.281.3700
E. sales@ohiotoolworks.com

EUROPE

SWITZERLAND
Hardinge Kellenberger AG
Thannäckerstrasse 22
CH-9403 Goldach
P. 41 71 2429111
E. info@kellenberger.net

GERMANY
Hardinge GmbH
Fichtenhain A 13c
47807 Krefeld
P. 49 2151 49649 10
E. info@hardinge-gmbh.de

J.G. Weisser Söhne GmbH
Johann-Georg-Weisser-Straße 1
78112 St. Georgen
P. +49 7724 881-0
E. info@weisser-web.com

FRANCE
Jones & Shipman SARL
8 Allee des Ginkgos
BP 112-69672
Bron Cedex, France

ASIA

CHINA
Hardinge Machine
(Shanghai) Co. Ltd.
1388 East Kangqiao Road
Pudong, Shanghai 201319
P. 0086 21 3810 8686