

KELLENBERGER VISTA

Compact universal
CNC grinding machine



800-843-8801
WWW.HARDINGE.COM

 **HARDINGE**

VISTA – The compact universal CNC grinding machine

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Workhead

- 1-1000 min-1
- 15 Nm (11.06 lb ft)
- swiveling range 110°
- positioned spindle stop



Tailstock

- morse taper 4
- sleeve 48 mm (1.88 inch)
- air cushioning



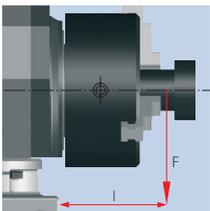
Spindle nose

- ISO702-I size 5
- morse taper 5



Micro-adjustment of tailstock

- adjustment range +/- 60 µm (0.0024 inch)



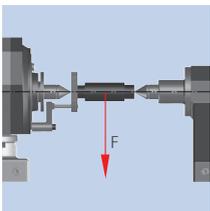
Load with chucked work

- max. 100 Nm (73.75 lb ft)



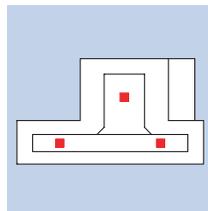
Upper table swiveling

- swiveling range 6°
- air cushioning feature



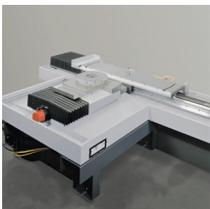
Load between centres

- max. 100 kg (220 lbs)



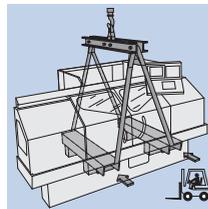
Three-point set-up

- no special foundations required for installation



Design

- separation of base and infrastructure
- no external influences on machining processes



Transportation

- hook machine
- rapid commissioning of machine



VISTA - The machine offering an optimal view on the grinding process. Economical, innovative in set-up and operation.

Designed for use in highly demanding tool- and mouldmaking, in machine and prototype construction, in maintenance workshops, laboratories, for economical small and medium batch production, or, in other words, wherever flexibility, precision and cost-effectiveness are indispensable.

The VISTA is designed to be a cost-effective CNC-alternative to hydraulically-controlled cylindrical grinding machines. Programming knowledge is now no longer necessary, thanks to the simple, user-friendly Kellenberger menu-based programming.

The VISTA has been very compactly designed with coolant tray which is separated from the machine base, an integrated transport system and swivelling upper table. The swivelling workhead is suitable for grinding between dead



centres and for chucked work, is a further example of the machine's progressive design. The thermally-optimized bearings guarantee the highest roundness and dimensional accuracy.

Also the wheelhead exhibits thermal stability thanks to optimized spindle bearings and water-cooled motors. The cooling circuit is operated with an active cooler.

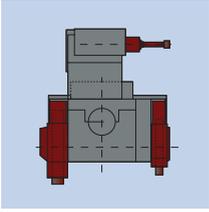
The Z-axis movement uses traditional guideways, which guarantees a high degree of damping, while the X-axis movement utilizes roller guideways, which in turn facilitates non-stick slip positioning. High-precision glass measuring rods in both axes.

The VISTA is the synonym for cost-optimized, 100% reproducible universal grinding thanks to its CNC-control system.



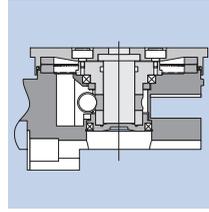
VISTA – Wheelhead

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UR-wheelhead

- for external, internal and face grinding
- v-constant for external grinding
- infinitely variable drive for external grinding



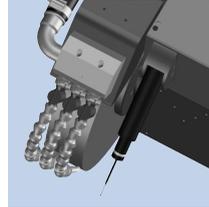
Indexing

- automatic indexing with 1° Hirth coupling



Water-cooled precision-balanced drive motors

- use of spindle bearings
- Power 7.5 kW (10.2 hp)



Active flagging device KEL-POS

- determines component position in Z-axis
- mounted on wheelhead



Spindle bearings

- high-accuracy spindle bearings, pre-stressed
- excellent surface finish
- long life time



HF-dresser

- Power 0.4 kW (0.54 hp)
- Speed range 3'000 - 16'000 min⁻¹



Internal grinding attachment

- high-frequency internal grinding spindle (grease lubricated) with Speed range 4'000 - 40'000 min⁻¹
- cooling circuit with an active cooler
- Power 6.5 kW (8.83 hp)

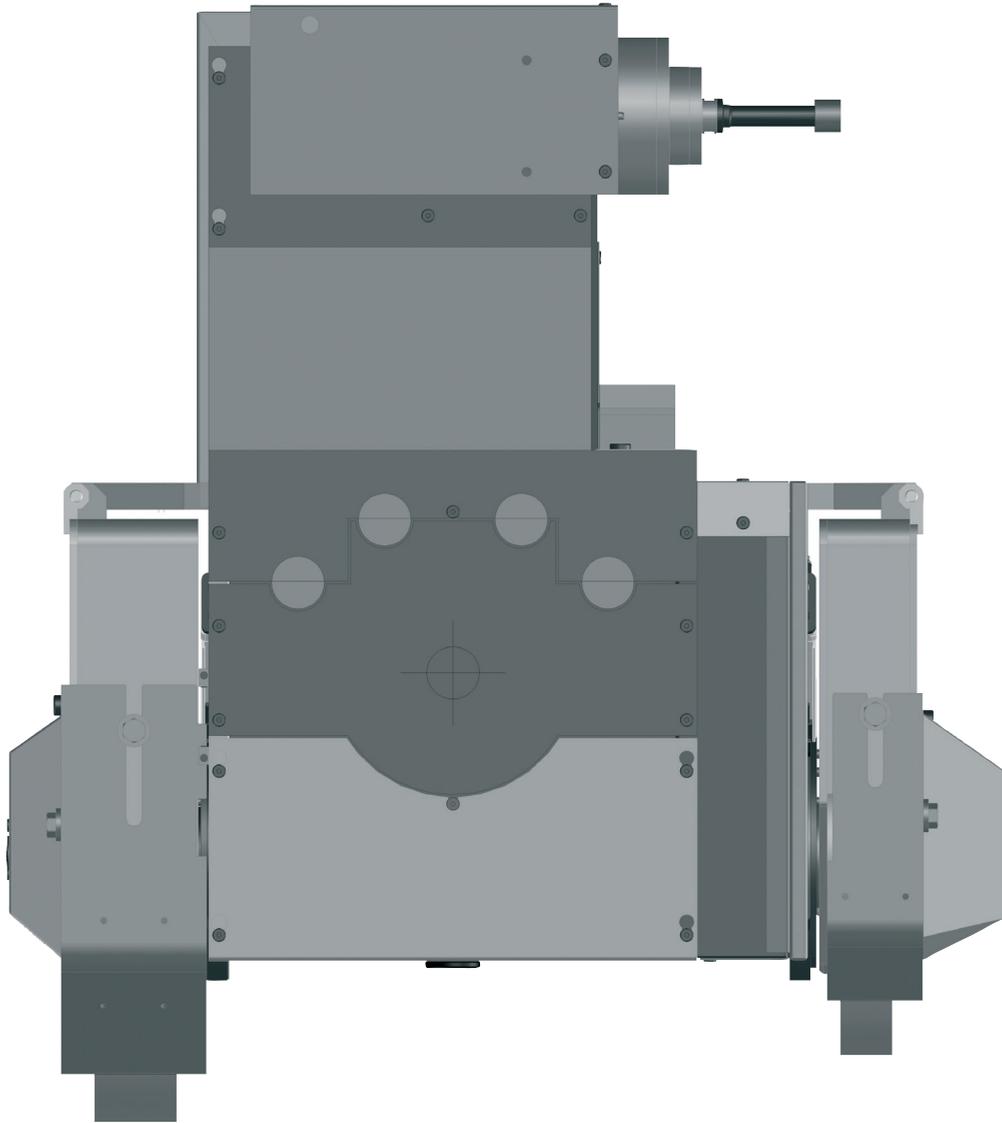


UR-Wheelhead

- Wheelhead for external and internal cylindrical, and for face grinding
- Internal grinding with variable peripheral wheel speed
- Automatic swivelling of the wheel head, 1° indexing
- Thermal stability, thanks to optimized spindle bearings and a water-cooled motor
- Motor output 7.5 kW (10.2 hp)
- Grinding wheel dimensions
 $\varnothing 450 \times 63 \times 127 \text{ mm}$ (18 x 2.5 x 5")
 or
 $\varnothing 450 \times 80 \times 203 \text{ mm}$ (18 x 3.15 x 8")

HF-dresser

- Optional HF-dresser on upper table in X-axis movable with HF-dressing spindle 0.4 kW (0.54 hp)
- Control via potentiometer



The advantages at a glance

Universal applications

The cost-effective alternative to hydraulically-operated cylindrical grinding machines

Simple operation

No programming knowledge necessary

FANUC 0i CNC control system

Super simple operation thanks to menu-prompting

Thermally stable wheelhead

Thanks to optimized spindle bearings and a water-cooled motor

Excellent visibility of grinding

Due to the ideal arrangement of the viewing windows and centre height

Optimized ergonomics

For manual loading and unloading on account of the low machine base height

The CNC-alternative

- The new definition of a universal cylindrical grinding machine
- Very short change-over times, thanks to a travelstick and a handwheel
- Comprehensive accessories for the most varied applications



VISTA – FANUC 0i Control System

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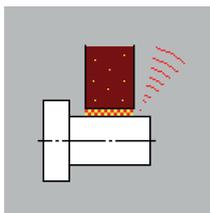


Controlling

- 10.4" TFT Monitor
- Softkeys
- USB-Interface for Program exchange



- travel stick for an easy an rapid set-up



KEL-TOUCH

- Gap Control with 1 or 2 sensors
- Display and operating on separate panel



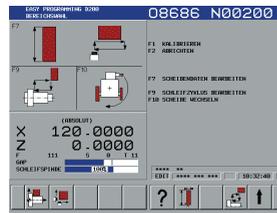
KEL-BALANCE

- Semi-automatic balancing of the grinding wheels T1 and T2
- Display and operating on separate panel



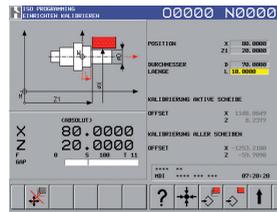
MOVOMATIC

- Measuring control ESZ 400
- Operation and display integrated in the control system



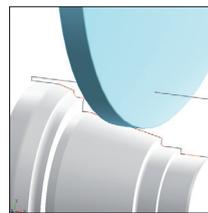
KEL-EASY

- Easy of use cycle control with teach-in function



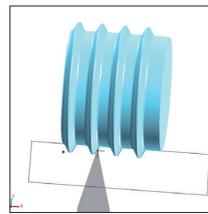
KEL-ISO

- for complete programming



KEL-SOFT-Modul Profil

- software for the preparation of contour-grinding and profile-dressing programs
- CAD import, clearing cycles



KEL-SOFT-Modul Thread

- software for thread grinding of external and internal threads



Technical Data

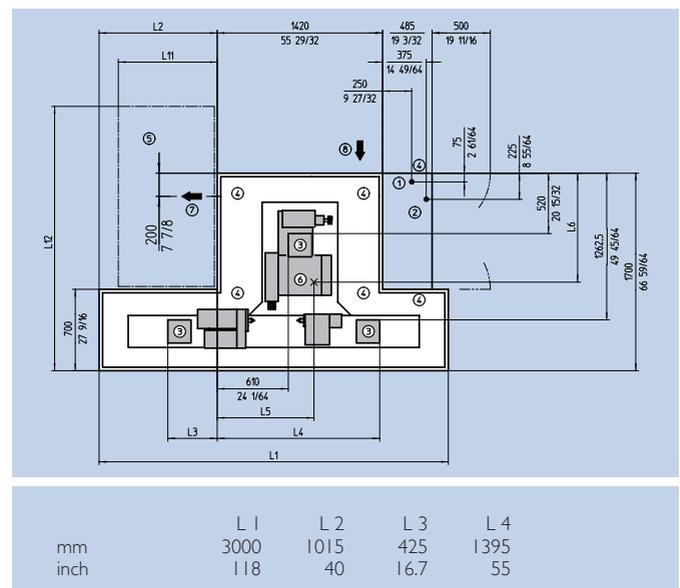
Main specifications			metric	imperial
Distance between centres	mm	inch	1000	40
Grinding length	mm	inch	1000	40
Centre height	mm	inch	175	6.88
Weight of workpiece between centres	kg	lbs	100	220
Load on chucked work	Nm	lb ft	100	73.75
Mains voltage required			3 x 400V 50 Hz	3 x 460V 60 Hz
Power consumption depending on equipment	A	A	32	32
Space required / length x width	mm	inch	3000 x 1700	118 x 67
Longitudinal / slide: Z-axis				
Travel	mm	inch	1150	45
Rapid traverse speed	m/min	ipm	12	472
Resolution	µm	µinch	0.1	0.004
Swiveling range of upper table	degree	degree	6	6
Querschlitzen: X-Achse				
Travel	mm	inch	350	13.77
Rapid traverse speed	m/min	ipm	6	236
Resolution	µm	µinch	0.1	0.004
Wheelhead				
Drive motor water-cooled	kW	hp	7.5	10.2
Peripheral grinding wheel speed by Ø 450	m/s	ft/min	45	8860
Grinding wheel dimensions, lefthand side	mm	inch	450 x 63 x 127	18 x 2.5 x 5
option	mm	inch	450 x 80 x 203	18 x 3.15 x 8
Grinding wheel dimensions, righthand side	mm	inch	300 x 40 x 127	12 x 1.57 x 5
option	mm	inch	400 x 50 x 127	16 x 2 x 5

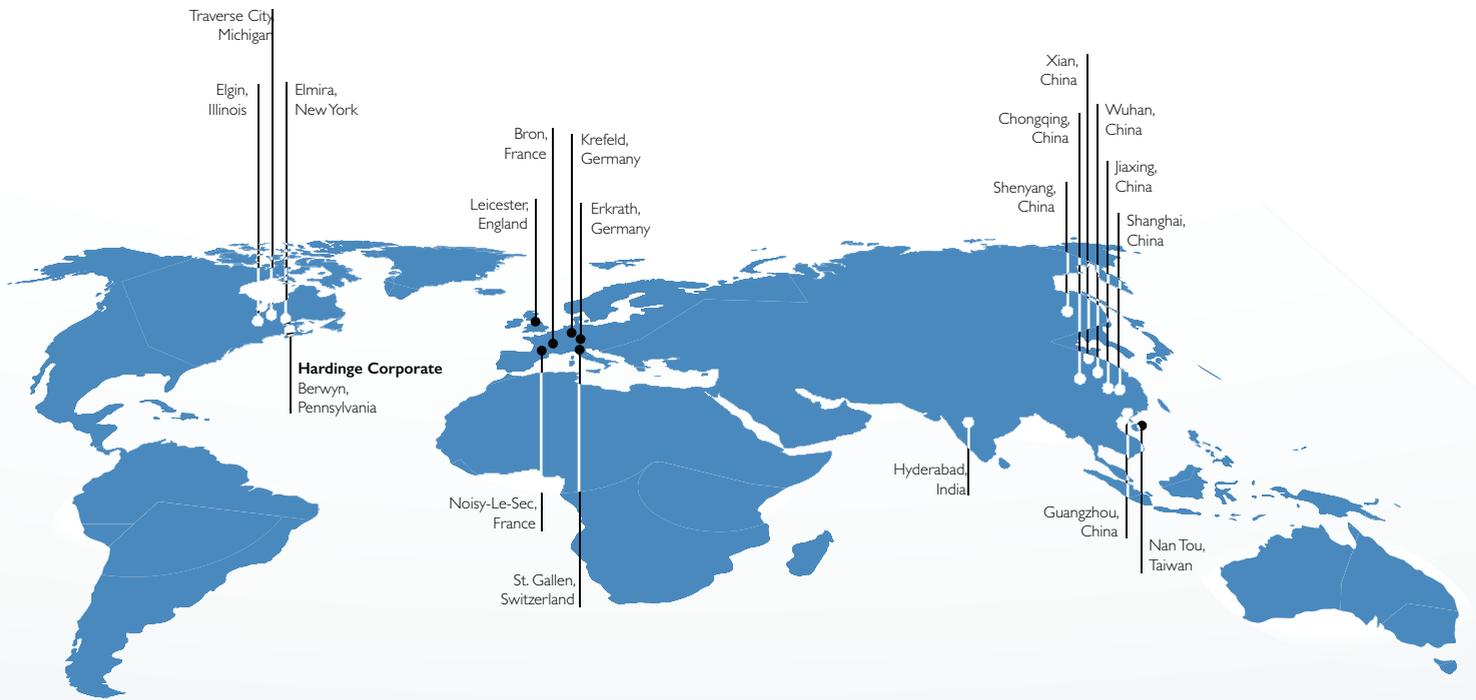


Internal grinding				
Bore for spindles up to	mm	inch	120	4.72
Rotational speed of spindle, motor infinitely variable	min-1	rpm	4'000 - 40'000	
Swivel devices				
Autom. indexing / 1° Hirth coupling			yes	
Swiveling range	degree	degree	220	220
Workhead				
Rotational spindle speed	min-1	rpm	1 - 1000	1 - 1000
Driving torque spindle	Nm	lb ft	15	11.06
Internal taper / Spindle nose	MK5 / ISO702-1 Grösse 5			
Swiveling range	degree	degree	110	110
Tailstock				
Internal taper	MT 4			
Retraction of sleeve	mm	inch	48	1.88
Micro-adjustment	µm	inch	60	0.0024
CNC control system				
Fanuc	0i			
Measuring systems				
Gap Control	KEL-TOUCH			
Active longitudinal positioning	Movomatic			
Passive longitudinal positioning	Movomatic			
In-process gauging	Movomatic			

All specifications and designs are subject to alterations without notice

Space-assignment plan





HARDINGE COMPANIES WORLDWIDE

Hardinge is a leading international provider of advanced metal-cutting solutions. We provide a full spectrum of highly reliable CNC turning, milling, and grinding 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

Pennsylvania

Hardinge Corporate
1235 Westlakes Drive
Suite 410
Berwyn, PA 19312

New York

Hardinge
One Hardinge Drive
Elmira, NY 14903
P. 800-843-8801
E. info@hardinge.com
www.hardinge.com

Illinois

Hardinge
1524 Davis Road
Elgin, IL 60123
P. 800.843.8801

ASIA

China

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

Taiwan

Hardinge Taiwan Precision
Machinery Limited
4 Tzu Chiang 3rd Road
Nan Tou City 540
Taiwan
P. 886 49 2260 536
E. cs@hardinge.com.tw

EUROPE

France

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

Germany

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

Switzerland

L. Kellenberger & Co. AG
Heiligkreuzstrasse 28
CH 9008 St. Gallen
Switzerland
P. 41 71 2429111
E. info@kellenberger.net

United Kingdom

Jones & Shipman
Hardinge Ltd.
Murray Field Road
Leicester LE3 1UW
P. 44 116 201 3000
E. info@jonesshipman.com



800-843-8801 • info@hardinge.com • parts@hardinge.com • service@hardinge.com

WWW.HARDINGE.COM • WWW.SHOPHARDINGE.COM

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